TN TDOT Department of Transportation

Environmental Division

TENNESSEE ENVIRONMENTAL PROCEDURES MANUAL

Guidelines for Preparing Environmental Documentation for Federally Funded and State Funded Transportation Projects

June 2011

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1.0 ENVIRONMENTAL REGULATIONS AND THE ENVIRONMENTAL EVALUATION PROCESS

This chapter provides background information on the federal laws, regulations, and procedures that govern the environmental evaluation process that TDOT must follow for transportation projects that have federal funding and/or require a major federal action such as a Section 404 permit. The basis of the environmental evaluation of these transportation projects is the National Environmental Policy Act or NEPA. While the basic tenants of NEPA remain unchanged since it was signed in January 1970, numerous environmental laws, Executive Orders, and agency policies and guidelines have been put into place to aid in interpreting the mandates of NEPA. As recently as August 2005, the federal transportation act, the Safe, Accountable, Flexible, Efficient Transportation Equity Act – Legacy for Users (SAFETEA-LU), included several provisions intended to enhance the consideration of environmental issues and impacts within the transportation planning process, and it established a new environmental review process for highways, transit and multi-modal projects.

This chapter identifies the role of the TDOT Environmental Division in the environmental evaluation process, and provides an overview of the flow of work for each category or level of environmental evaluation. This chapter also introduces TDOT's policy on addressing the environmental effects of state-funded projects that do not constitute a major federal action, which is described in more detail in Chapter 10, *Environmental Evaluation of State Funded Projects*, of this manual.

1.1 Federal Regulations

1.1.1 National Environmental Policy Act (NEPA)

The United States Congress enacted the National Environmental Policy Act of 1969 (NEPA) to establish a national policy to protect the environment. The act is codified in Title 42 of the United States Code, Sections 4321 through 4347 (abbreviated as 42 USC 4321-4347).[1] On January 1, 1970, NEPA was signed into law by President Richard Nixon.

As set forth in the Act, the purposes of NEPA are:

> *[t]o declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and*

[1] The United States Code (USC) is the codification by subject matter of general and permanent laws of the United States. It is divided into 50 titles. It does not include regulations issued by the Executive Branch. Electronic access is through www.gpoaccess.gov/uscode.

> *natural resources important to the Nation; and to establish a Council on Environmental Quality.*

NEPA requires federal agencies to consider environmental issues prior to making any major decisions on projects that have federal involvement (e.g., funding or permitting). To determine a project's potential benefit or harm to the environment, NEPA requires an assessment of environmental impacts and an evaluation of alternatives to avoid any identified adverse impacts to the environment.

The foundation of the NEPA process is summarized as follows:

Agencies of the Federal Government shall --

- Utilize a systematic, interdisciplinary approach in planning and in decision-making that may have an impact on man's environment;
- Include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on --
    1. The environmental impact of the proposed action;
    2. Any adverse environmental effects that cannot be avoided should the proposal be implemented;
    3. Alternatives to the proposed action;
    4. The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and
    5. Any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented.
- Prior to making any detailed statement, the responsible federal official shall consult with and obtain the comments of any federal agency that has jurisdiction by law or special expertise; and
- Make them available to the public.

Sections 4321 through 4335 of 42 USC, which address the National Environmental Policy, are reprinted in Appendix B to this manual.

1.1.2 Council on Environmental Quality

The Council on Environmental Quality (CEQ) was created by NEPA to oversee the federal implementation of NEPA, by interpreting the law and developing regulations and guidance. The CEQ is housed within the Executive Office of the President. It has four main functions:

- Develop environmental policies for the nation;
- Monitor environmental quality;
- Prepare an annual environmental quality report; and
- Monitor federal actions relative to NEPA.

To assist federal agencies in effectively implementing the environmental policies of NEPA, the CEQ issued guidance through the *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*, which is contained in the *Code of Federal Regulation*, Title 40, Parts 1500 through 1508 (abbreviated as 40 CFR 1500 -1508) in 1978.[2] The regulations state that NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The regulations also spell out the three categories of actions (Categorical Exclusions, Environmental Assessments, and Environmental Impact Statements), as well as documentation requirements and format, the commenting process and public involvement requirements, and document filing requirements. Lastly, CEQ regulations require each federal agency to develop their own regulations for agency compliance with NEPA.

In March 1983, CEQ issued the guidance document, *Forty Most Asked Questions Concerning CEQ's NEPA Regulations.* CEQ has since issued additional guidance and other information covering a variety of issues relevant to the NEPA process. The CEQ NEPAnet website, http://ceq.eh.doe.gov/nepa/nepanet.htm, contains these guidances and references.

The CEQ regulations and the *Forty Questions* guidance document are included in Appendix B of this manual.

1.1.3 Federal Highway Administration Environmental Impact and Related Procedures

To address the NEPA responsibilities established by CEQ, two U.S. Department of Transportation (USDOT) agencies, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), have developed detailed guidance for applying NEPA to highway and transit projects. Those regulations are codified in 23 CFR 771, *Environmental Impact and Related Procedures, as amended*.

The regulations require that agencies undertaking transportation activities with federal funding or major federal action:

- Comply with all applicable environmental requirements, including NEPA and Section 4(f) of the Department of Transportation Act of 1966;
- Prepare documentation of compliance to a level appropriate to the undertaking's potential to cause significant harm to the environment;

[2] The Code of Federal Regulations (CFR) codifies the general and permanent rules for the executive departments and agencies of the Federal Government. These rules are first published in the *Federal Register*. The CFR is divided into 50 titles that represent broad areas subject to federal regulation. Title 23 relates to the FHWA, and Title 49 relates to the FTA. Electronic access is through www.gpoaccess.gov/cfr.

- Evaluate alternatives (including a no action or no-build alternative) and make decisions that balance the need for the project with the social, economic and environmental impacts of the project;
- Inform governmental entities and the public and provide them an opportunity to be involved in decision-making; and
- Implement measures to avoid, minimize or mitigate environmental impacts.

Section 771.115 of 23 CFR defined the three classes of actions that determine how compliance with NEPA is carried out and documented for transportation projects:

- Class I - Environmental Impact Statement (EIS) is prepared for projects that will cause a significant adverse effect on the environment;
- Class II - Categorical Exclusion (CE) is prepared for projects that cause minimal social, economic or environmental impact; and
- Class III - Environmental Assessment (EA) is prepared for larger scale projects that do not meet the requirements for a CE or those for which the significance of the environmental impact is not clearly established. Should environmental analysis and interagency review during the EA process find a project to have no significant impacts on the quality of the environment, a Finding of No Significant Impact (FONSI) is issued. If it is found that the project will have significant impacts, an EIS must be prepared.

The levels of environmental documents are described in more detail in Chapter 3, *NEPA Process Options* and in Chapter 6, *Prepare Environmental Documentation* of this Manual.

On October 30, 1987, the FHWA issued guidance complementing the regulations in the form of a Technical Advisory (T 6640.8a), *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (hereafter referred to as the Technical Advisory). The Technical Advisory provides detailed information on the contents and processing of environmental documents. T6640.8a is included in its entirety as Appendix D of this Manual.

In addition to the Technical Advisory, FHWA has issued a number of guidances on specific topics (for example, air quality, noise, context sensitive solutions, bicycle and recreational planning). Links for these guidances can be found at http://www.fhwa.dot.gov/hep/legreg.htm. Additional guidance and information on the NEPA process and other environmental requirements are found in the FHWA's Environmental Guidebook website at www.environment.fhwa.dot.gov/guidebook/index.asp.

1.1.4 SAFETEA-LU 2005

In August, 2005, President George W. Bush signed into law the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (known as SAFETEA-LU). SAFETEA-LU incorporated changes aimed at improving and streamlining the environmental process for transportation projects. SAFETEA-LU

established a new environmental review process for highways, transit, and multimodal projects developed as EISs; all EISs for which the Notice of Intent (NOI) was published after August 10, 2005 must follow the new requirements. The new process requirements emerging from Section 6002 of SAFETEA-LU are:

- The project sponsor must send FHWA a project initiation letter prior to initiating the NEPA process;
- The FHWA shall serve as the Federal lead agency for a transportation project. Any project sponsor that is a State or local government entity receiving federal-aid funds shall serve as a joint lead agency;
- The lead agencies must invite all Federal, State, tribal, regional and local government agencies that have an interest in the project to be participating agencies;
- Lead agencies must develop a coordination plan for public and agency participation and comment during the environmental review process; and
- Participating agencies and the public must be given an opportunity for input in the development of the purpose and need and the range of alternatives. Lead agencies must collaborate with participating agencies on the appropriate methodologies to be used.

Section 6002 also establishes a 180-day statute of limitations (SOL) on claims against USDOT and other Federal agencies for certain environmental and other approval actions. The SOL established by SAFETEA-LU applies to a permit, license, or approval action by a Federal agency if: the action relates to a transportation project; and a SOL notification is published in the *Federal Register* announcing that a Federal agency has taken an action on a transportation project that is final under the Federal law pursuant to which the action was taken. If no SOL notice is published, the period for filing claims is not shortened from what is provided by other parts of Federal law.

The SOL provision is intended to expedite the resolution of issues affecting transportation projects. Whether a SOL notice is needed or is the best way to achieve such resolution on a project is a risk management decision. A determination should include consideration of the nature of the Federal laws under which decisions were made for the project, the actual risk of litigation, and the potential effects if litigation were to occur several years after the FHWA NEPA decision or other Federal agency decisions. A SOL notice can be used for a highway project regardless of the category of documentation used under NEPA. FHWA anticipates that it will publish notices for most EIS projects and many EA projects. FHWA does not expect SOL notices to be used for projects that are CEs under 23 CFR 771.117(c). FHWA anticipates that the notice may be appropriate for documented CE projects under 23 CFR.771.117(d).

FHWA's final guidance to implement the requirements of SAFETEA-LU Section 6002 and the environmental review process was published in the *Federal Register* on November 15, 2006. The guidance can be found on the FHWA website:

http://www.fhwa.dot.gov/hep/section6002/. A copy of SAFETEA-LU Section 6002 is included in Appendix B.

1.1.5 Other Regulations Related to NEPA

The NEPA process provides a framework, or "umbrella", for compliance with other environmental guidelines and regulations. Many other federal and state regulations fall under the NEPA umbrella and are discussed later in this manual in the applicable sections. Examples include, but are not limited to:

- Title VI of the Civil Rights Act of 1964;
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970;
- Americans with Disabilities Act;
- Executive Order 12898 (Environmental Justice);
- Section 4(f) of the Department of Transportation Act;
- Clean Air Act;
- Safe Drinking Water Act;
- Farmland Protection Policy Act;
- Solid Waste Disposal Act;
- Resource Conservation and Recovery Act of 1976;
- Comprehensive Environmental Response, Compensation and Liability Act;
- National Historic Preservation Act;
- Archaeological and Historic Preservation Act;
- Archaeological Resources Protection Act;
- Section 6(f) of the Land and Water Conservation Act;
- Endangered Species Act;
- Executive Order 11988 (Floodplain Management); and
- Executive Order 11990 (Protection of Wetlands).

Appendix C of this manual presents a matrix of many of the federal regulations that must be considered in the environmental evaluation of transportation projects. For each regulation, a summary of its purpose, applicability, general procedures and coordinating agencies is included, as applicable.

In summary, all transportation projects that have federal involvement, through funding and/or permitting, must be evaluated in accordance with the environmental regulations and guidances that have emerged through NEPA. Transportation

projects proposed by TDOT that have such federal involvement are consequently subject to NEPA. This manual is intended to assist in the preparation of NEPA documents for those projects.

1.2 TDOT's Environmental Review Process

The intent of NEPA and associated regulations and guidelines that have been developed since NEPA's passage is to ensure that during project development and implementation, adequate and appropriate consideration is given to the potential impacts of the project on the natural and human environment. As a Department, TDOT must comply with NEPA and other federal and state regulations. Within TDOT, the Environmental Division has the job of ensuring that the requirements of NEPA and associated regulations are implemented throughout the Department's overall transportation project development process.

1.2.1 TDOT Environmental Division

The Division is comprised of six (6) offices, as shown in Figure 1.1 and discussed below. Throughout the manual, references are made to the responsibilities of offices and sections of TDOT's Environmental Division.

The *NEPA Documentation Office* is responsible for the preparation of the environmental documents required for federal and state funded transportation projects. This office is responsible for collecting and compiling information on social, economic and environmental areas for all transportation projects, including purpose and need; the natural, cultural, social and economic environment; land use; farm land; energy; conservation; hazardous waste; visual concerns and construction impacts. The office is also involved in conducting public meetings and ensuring that the NEPA process is undertaken in accordance with the Department's Context Sensitive Solutions (CSS) approach to project development.

The *Social and Cultural Resources Office* is responsible for the protection of, historical and archaeological resources, analysis of air quality and noise impacts, and for the analysis and avoidance of hazardous materials sites associated with transportation projects. The professional staff performs scientific and technical analyses, writes reports and legal documents, coordinates technical issues with stakeholders, and oversees the avoidance, mitigation, minimization and remediation of impacts from early planning through construction. The Office also monitors mitigation during and after construction.

The *Natural Resources Office* is responsible for the preservation of ecological resources (streams, wetlands, and protected species) associated with transportation projects and, on a statewide basis, for assessing, preparing and acquiring all environmental permits for transportation projects. Environmental permits for impacts to wetlands, streams and rivers must be obtained from various federal and/or state regulatory agencies, including primarily the U.S. Army Corps of Engineers (USACE), the Tennessee Department of Environment and Conservation (TDEC) and the Tennessee Valley Authority (TVA). This office is also responsible for the statewide

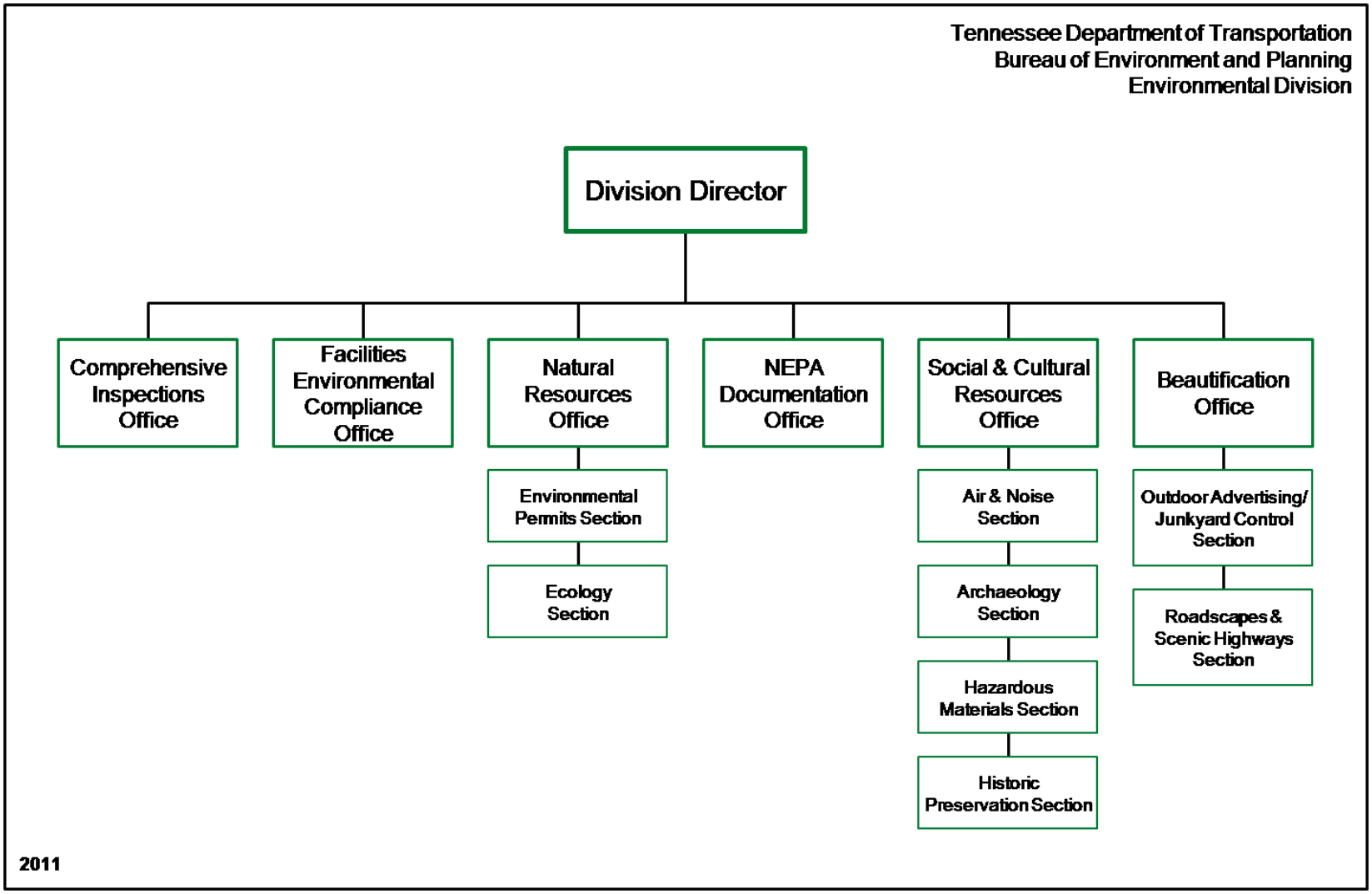
oversight and application for the National Pollutant Discharge Elimination System (NPDES) storm water permits from TDEC, for all transportation projects that will disturb more than one acre of land during construction. The professional staff performs scientific and technical analyses, writes reports, coordinates technical issues with stakeholders, and oversees the avoidance, mitigation, minimization and remediation of impacts from early planning through construction. The Office also monitors mitigation during and after construction.

The *Beautification Office* oversees the Scenic Highways Program and is responsible for the administration of statutory regulated services, such as Outdoor Advertising Control, Vegetation Control and Junkyard Control. In addition the Office is responsible for the administration of the Litter Grant Program throughout each of Tennessee's 95 counties as well as the Adopt-A-Highway Program and other public-involved volunteer services.

The *Environmental Facilities Compliance Office* has the responsibility of ensuring that the department's facilities comply with current environmental regulations. In addition, the office responds to the department's needs for investigating and, when necessary, remediation of past disposal and spill sites by providing technical expertise and oversight. It provides these services through the Resource Conservation and Recovery Act (RCRA), the Clean Water Act (CWA), the National Pollutant Discharge Elimination System (NPDES), the Emergency Planning Community Right-to-Know Act (EPCRA), the Toxic Substance Control Act (TSCA), the Comprehensive Environmental Recovery and Compensation Liability Act (CERCLA) and the Petroleum Underground Storage Tank Act.

The *Comprehensive Inspections Office* is responsible for oversight of environmental issues that may arise during TDOT's construction projects. The office is responsible for oversight of highway and bridge construction projects through implementation of the Quality Assurance/Quality Control Program. The office also works closely with the Tennessee Department of Environment and Conservation (TDEC) and other regulatory agencies involved with oversight of TDOT's construction and maintenance activities as related to National Pollutant Discharge Elimination System (NPDES) Construction Storm Water Permits, Aquatic Resource Alteration Permits (ARAP), U.S. Army Corps of Engineers (USACE) Section 404 Permits, and Tennessee Valley Authority (TVA) Section 26(a) Permits.

Figure 1.1 TDOT Environmental Division Organizational Chart



1.2.2 TDOT's NEPA Process

For each of the three classes of action under NEPA, there is a general flow of activities that must occur during the environmental evaluation process. Figure 1.2, Figure 1.3, and

Figure 1.4 illustrates the general steps that are followed for a Categorical Exclusion (CE), an Environmental Assessment (EA), and an Environmental Impact Statement (EIS), respectively.

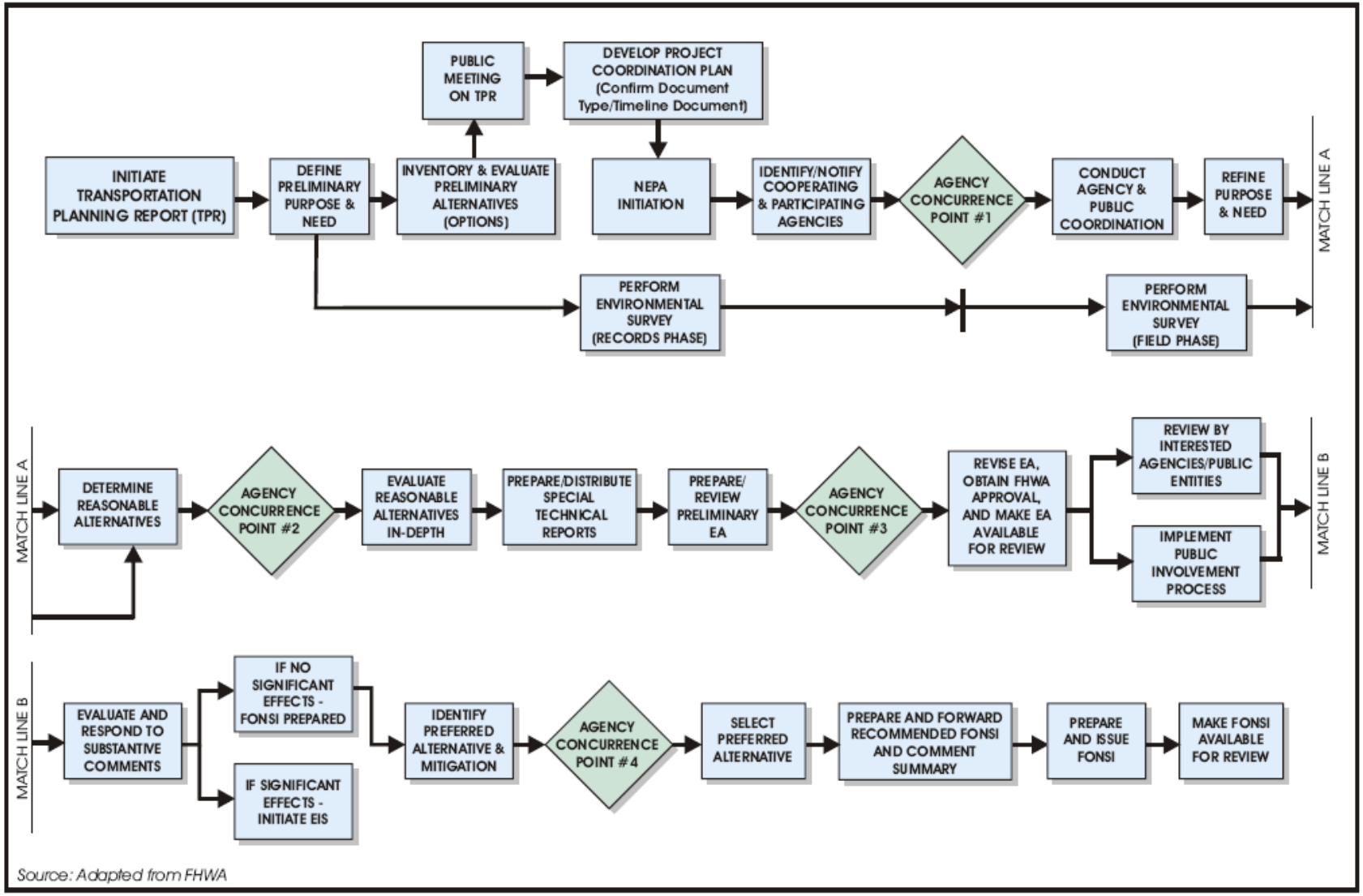
Not all of these activities are conducted sequentially; some occur simultaneously, or may be repeated as necessary. The length of time and the number of steps required to conduct the environmental review process are dictated by the classification of action, the size or complexity of the project, the level of controversy, and the amount of coordination necessary. A Categorical Exclusion (CE) is usually prepared in a much shorter time frame than an EA or an EIS, and an EA can likely be prepared in a shorter time frame than an EIS, although there are examples of EISs being completed in less time than EAs.

The steps shown in Figures 1-2 through 1-4 are discussed in more detail in the remainder of this manual.

Figure 1.2 NEPA Flow Chart – Categorical Exclusions (CE)

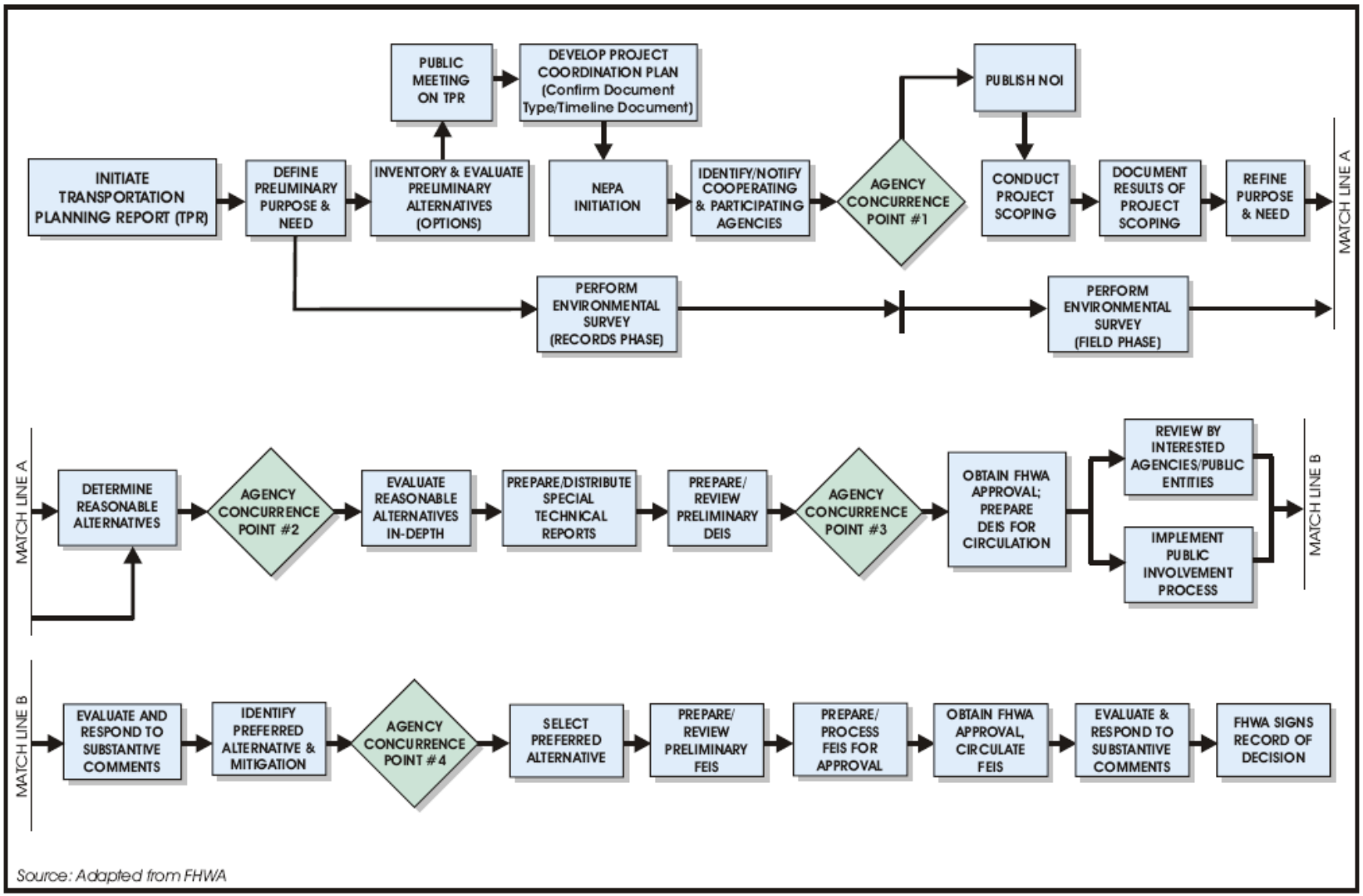
Source: Adapted from FHWA

Figure 1.3 NEPA Flow Chart – Environmental Assessments (EA)



Source: Adapted from FHWA

Figure 1.4 NEPA Flow Chart – Environmental Impact Statements (EIS)



Source: Adapted from FHWA

1.2.3 TDOT's Program, Project and Resource Management (PPRM)

In March 2002, TDOT instituted the *Program, Project and Resource Management* tool, a computer-based, interactive database that allows TDOT to track all projects through the various phases of project development. The database includes project information, funding data, staff assigned and a schedule generator. The database is intended to serve as a tool for viewing project information, sorting information, assigning staff to project tasks, updating the status of tasks and producing reports and schedules. The PPRM database includes specific tasks for the environmental evaluation of projects. The activities for which the Environmental Division is responsible are incorporated into the database for each project. The PPRM tasks that are assigned to the Environmental Division are listed in Table 1-1. The PPRM flow chart, which depicts TDOT development activities, is shown in Figure 1.5 a through d.

Table 1-1 PPRM Tasks Assigned to Environmental Division

Task #	Task Description
185	Complete Field Review with FHWA
190	Complete Environmental Scoping Process
195	Write Draft Environmental Document
200	Conduct Historical Study
205	Conduct Archaeological Study
210	Prepare Ecological Report
215	Conduct Air and Noise Study
220	Conduct Hazardous Materials Study
230	Complete Initial Technical Studies
245	Complete Draft Environmental Document
250	Obtain FHWA Approval of Draft Environmental Document
255	Prepare for Corridor Hearing
260	Hold Corridor Hearing
265	Select Alignment (Environmental)
270	Select Alignment (Project Management)
280	Finalize Technical Studies
285	Prepare Final Environmental Document
290	FHWA Review of Final Environmental Document
300	Obtain FHWA Approval of Final Environmental Document
305	Distribute Final Environmental Document
370	Provide Environmental Boundaries for Avoidance
480	Provide Noise Wall Locations
565*	Develop Mitigation Plan
570*	Prepare Mitigation Design
595	Confirm Environmental Technical Issues for ROW
640	Perform Hazardous Materials Remediation
645	Perform Archaeological Mitigation
670	Distribute Permit Requirements
675*	Apply for Permits
680	Obtain Permits
730	Confirm Environmental Technical Issues for Construction

**Environmental Division with assistance from other TDOT Divisions*

Figure 1.5 PPRM Flow Chart (a)

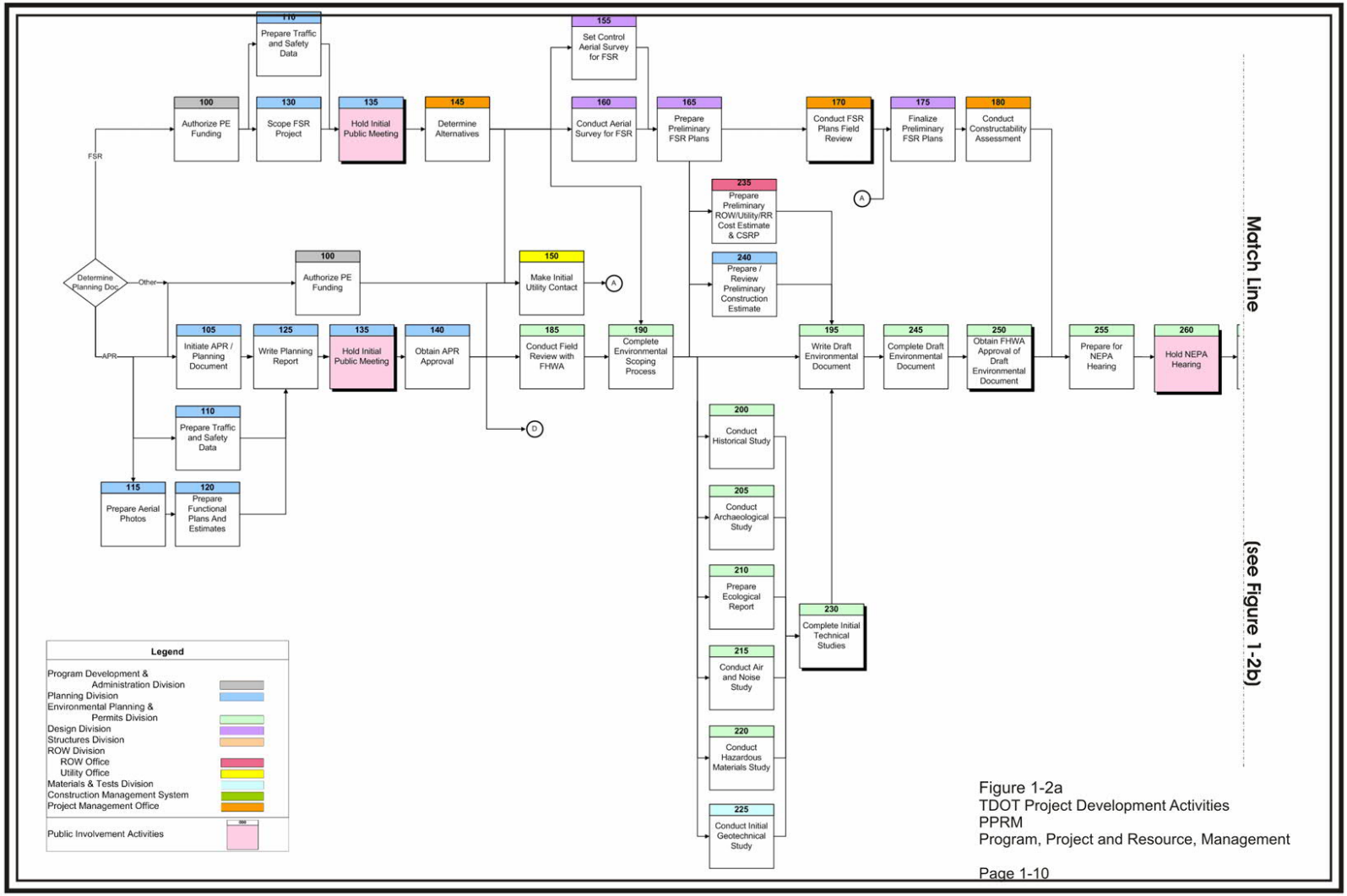


Figure 1.5 PPRM Flow Chart (b)

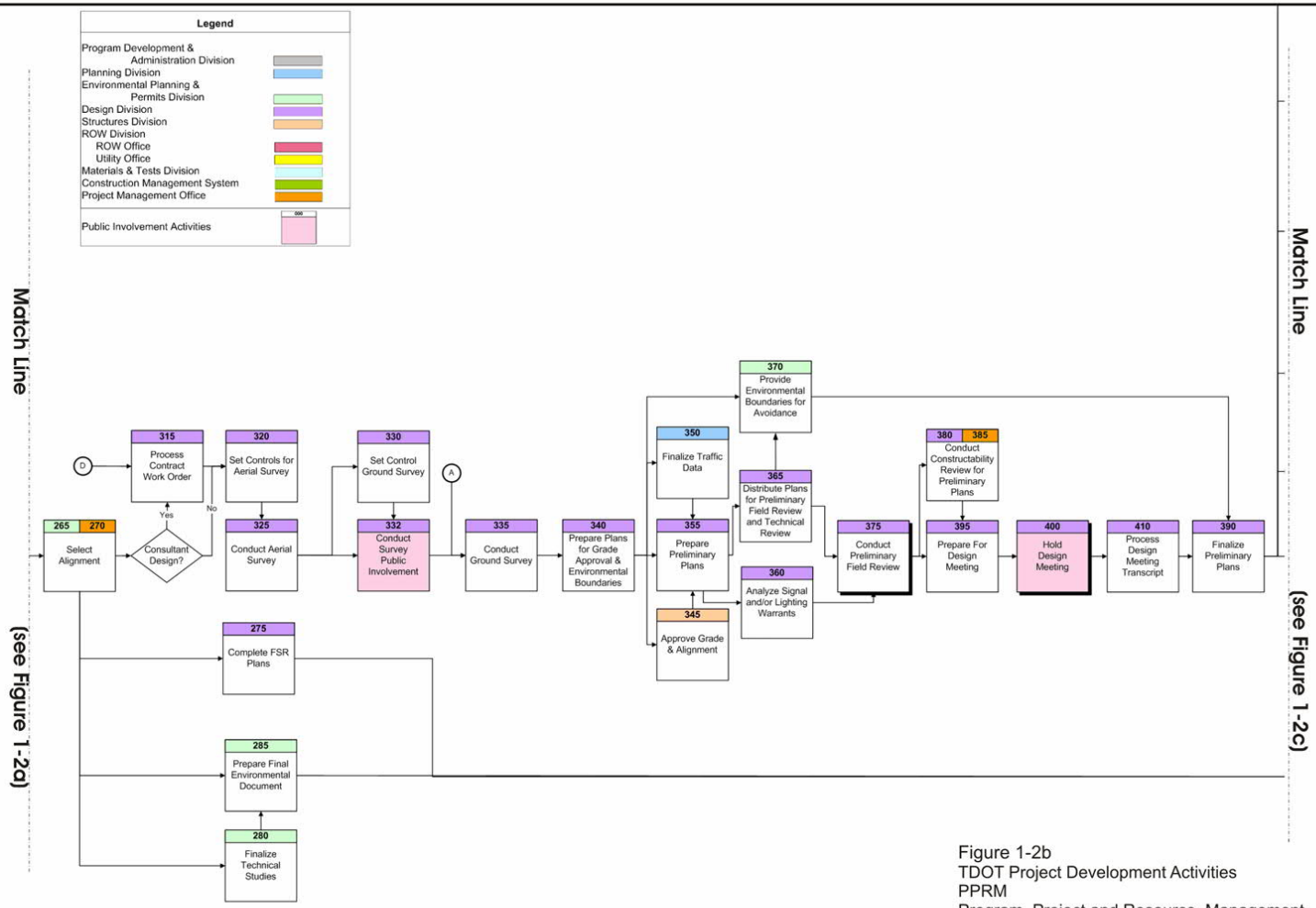


Figure 1.5 PPRM Flow Chart (c)

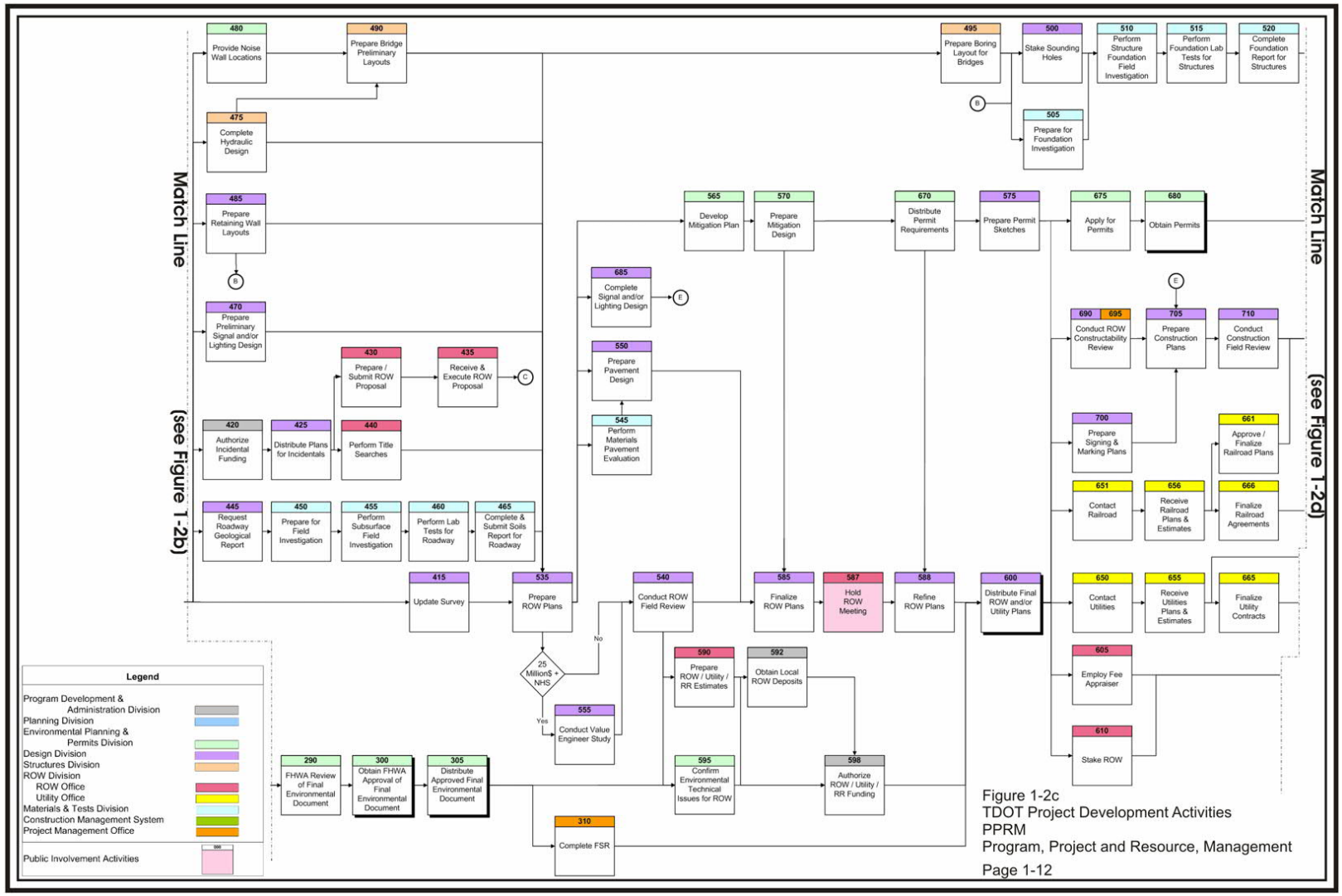
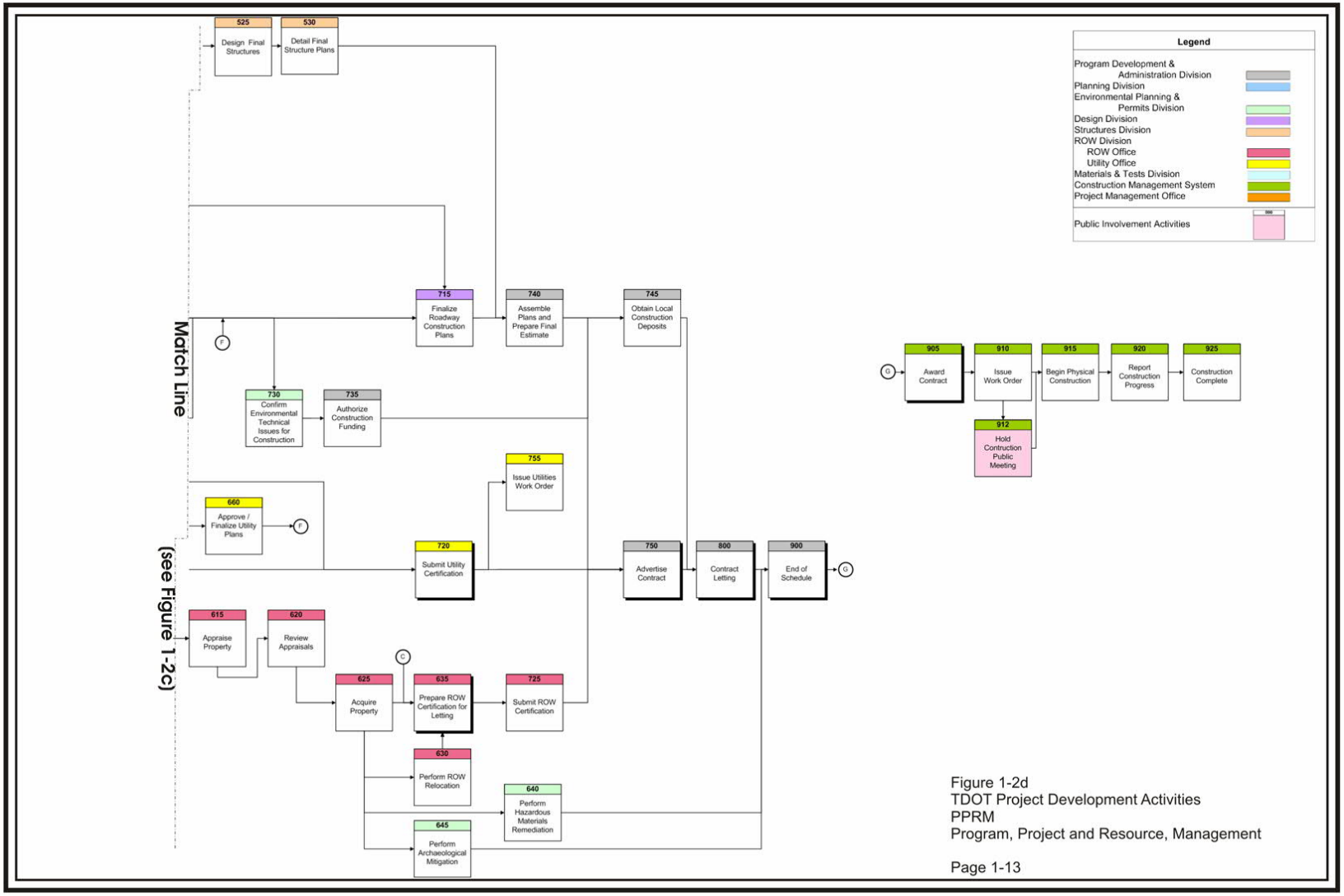


Figure 1.5 PPRM Flow Chart (d)



1.3 Environmental Evaluation of State-Funded Projects

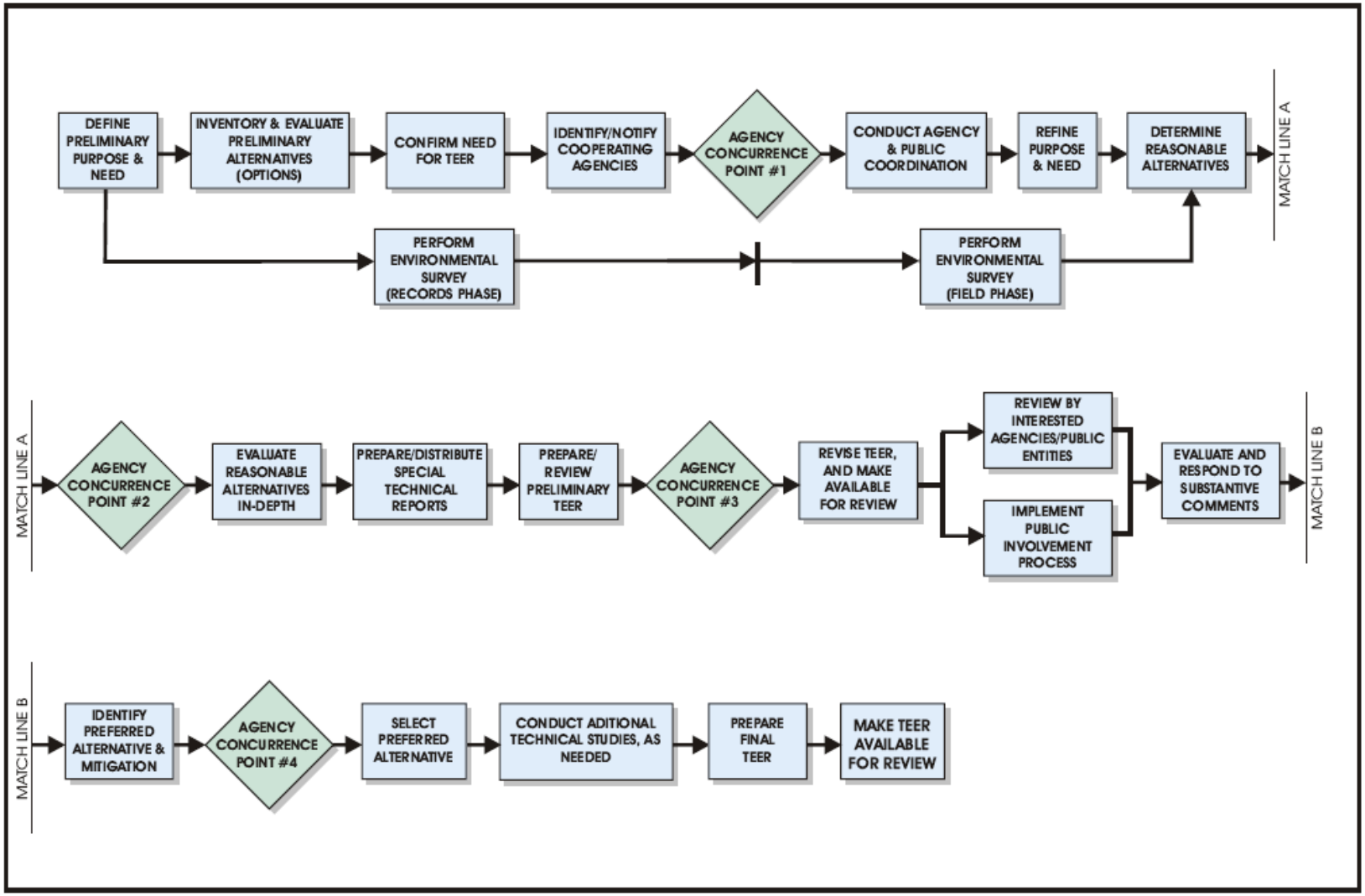
TDOT is committed to an approach to project development that provides for early and ongoing consideration of the environmental effects of state-funded projects for which NEPA does not apply. State-funded transportation projects that require the acquisition of right-of-way and/or the construction of new roadways and other transportation facilities are subjected to a rigorous environmental review that is documented in a Tennessee Environmental Evaluation Report (to be referred to as a TEER) that is made available for public review. The TDOT approach to evaluating state-funded projects includes early identification and evaluation of potential environmental consequences, consultation with affected agencies and the public, and the development of measures to avoid, minimize and/or mitigate the adverse effects of state-funded projects on the natural and human environments of Tennessee. Approval of the environmental evaluation rests with the Commissioner of Transportation.

This manual is also intended to assist in the preparation of the environmental evaluation of state-funded projects.

Figure 1.6 illustrates the general flow of activities that should occur during the environmental evaluation process. Not all of these activities are conducted sequentially; some occur simultaneously, or may be repeated as necessary. The length of time and the number of steps required to conduct the environmental review process are dictated by the size or complexity of the project, the level of controversy and the amount of coordination necessary.

The TEER process is described in greater detail in Chapter 10 of this manual.

Figure 1.6 TEER Process



Note: This flow chart includes the agency concurrence points that will be followed for major TEER projects. Minor TEER projects will not be required to use the concurrence points, but will follow the process otherwise shown in the flow chart.

1.4 SMART Delivery Management System

TDOT is undertaking a department-wide effort to improve communication with Tennessee communities and TDOT's environmental resource agency partners and engage them more proactively in the department's transportation project delivery process. Reflective of this initiative is an increased focus within TDOT on:

- Environmental stewardship;
- Integrating environmental planning expertise into the project development process earlier;
- Increasing local and regional involvement in transportation decisions; and
- Engaging state and federal resource agencies as early as possible in the transportation decision making process.

A critical component of this initiative is the SMART Delivery Management System (SDMS), formerly known as the Statewide Environmental Management System (SEMS). The SDMS program includes enhanced business processes focused on multi-agency communication and collaboration, deployment of a set of shared GIS-based analysis tools, a workflow and tracking application to facilitate key transportation decision-making processes.

TDOT initiated the planning phase for the SDMS program in January 2006. During the planning phase, TDOT identified key business drivers related to the transportation project delivery process, reviewed best practices of environmental management systems (EMS) in other states and private sector organizations, and designed new business processes to address TDOT's key business drivers, which are consistent with national best practices. The Department has focused on three core business processes for the initial deployment of SDMS:

- Integration of transportation planning and project delivery;
- Linking of the environmental review and permitting processes through a multi-agency collaborative decision making process; and
- Ensuring and monitoring the fulfillment of commitments made to resource agencies and others across the transportation lifecycle.

These core processes are described below.

1.4.1 Integration of Transportation Planning and Project Delivery

This process involves enhancing existing TDOT Planning, Metropolitan Planning Organization (MPO) and Rural Planning Organization (RPO) work processes to capture and make available various data from the transportation planning process for use in the project development process. This process will include identifying environmental and other planning level data using standardized tools and templates and storing the data within SDMS. The data is thus available through SDMS for later project level analysis and providing TDOT Long Range Planning and Project

Planning staff, MPOs, RPOs and other agencies access to the SDMS shared data repository and data analysis capability.

1.4.2 Linking the Environmental Review and Permitting Processes

In parallel with the SDMS initiative, TDOT has undertaken efforts to streamline project delivery through development and implementation of the Tennessee Environmental Streamlining Agreement (TESA) for the Environmental and Regulatory Coordination of Major Transportation Projects. The TESA was developed by TDOT and the FHWA Tennessee division office in cooperation with state and federal resource agencies that participate in, review, and approve various aspects of TDOT's proposed transportation projects under NEPA. Section 4.5 of this Procedures Manual describes the application of the TESA process to the environmental review of individual projects.

TESA demonstrates fulfillment of the provisions of Section 6002 of the federal SAFETEA-LU legislation, "Efficient Environmental Reviews for Project Decision-making." In developing TESA, TDOT is one of a handful of state departments of transportation who have taken this comprehensive, integrated approach to significantly reduce the time and, in turn the cost, of transportation project development and review.

TDOT plans to use SDMS to facilitate the implementation and use of TESA in several ways. Key features of SDMS include providing the technology and tools to capture, maintain, expand upon, and share project environmental information and details between agencies; and establishing the detailed procedures to implement and monitor performance in meeting expectations and requirements agreed to by TDOT and the various partner agencies under TESA.

1.4.3 Ensuring and Monitoring the Fulfillment of Commitments

TDOT's initiatives to enhance project delivery are dependent, in part, on the trust and understanding of its partner agencies and other stakeholders that TDOT will meet the environmental promises (i.e., commitments) that have been made during project development. It has been shown in TDOT and in virtually every state department of transportation across the United States, that consistent fulfillment of these promises/commitments is linked directly to the willingness of agencies and stakeholders to accept project development and design proposals presented by TDOT for other projects. This willingness (or lack thereof) in turn affects the time spent in and the number of reviews performed by agencies and stakeholders.

SDMS will help to ensure that TDOT will meet its environmental commitments through the following features:

- Adapting existing mechanisms to share NEPA and other project environmental commitments with all responsible parties;
- Working with a cross-functional team of TDOT and partner agency representatives to develop and apply mechanisms and tools to monitor and verify commitments implementation;

- Providing a means for resource agencies to acknowledge that commitments have been fulfilled; and
- Monitoring TDOT's commitments performance and making adjustments as required to sustain and improve performance.

1.4.4 SDMS Components

The core SDMS application will include a shared GIS-based database of environmental data, a set of GIS analysis tools, a workflow engine to drive review and decision-making activities, and a project repository and web-based collaboration environment to allow the review of data and documents.

The SDMS will have a variety of users, including TDOT staff, state and federal resource agency staff, and MPO and RPO staff among others. It is also expected that public access will be available to some of the information within SDMS to improve information sharing with citizens about the status of project development activities.

The SDMS database is also envisioned to have a substantive interface with TDOT's existing Program Project Resource Management (PPRM) system.

1.5 Environmental Document Quality Training

To help foster consistency and standardization and ensure the overall quality of the environmental documents prepared by and on behalf of TDOT, the Environmental Division is establishing a set of training courses for its staff, consultants performing work for TDOT and local agencies preparing environmental documents for transportation projects.

This training curriculum, once completed, will cover a variety of discipline areas for the purpose of complying with the National Environmental Policy Act (NEPA). Each training course will be designed to provide the latest regulatory requirements and updates on TDOT's process for completing NEPA documents for transportation projects.

Successful completion of several of these courses will be a requirement for consultants to be prequalified to prepare environmental documents for TDOT once the program is established. Prequalification to perform environmental services is a new element of TDOT's selection process, arising from the SDMS efforts. Only consultants who are prequalified will be eligible to be selected to work on TDOT environmental projects.

Many of the courses that will be listed in this curriculum are part of pre-developed curriculums offered by various national agencies such as the National Highway Institute and FHWA. These agencies may provide additional instructors with the appropriate perspective or training for the course being taught.

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2.0 PROJECT IDENTIFICATION AND DEVELOPMENT

Planning for a transportation project begins before decisions are made about the preparation of an environmental evaluation. The project development process begins with the recognition of a transportation need by TDOT through the actions of the Metropolitan Planning Organizations (MPOs) or Rural Planning Organizations (RPOs), local officials, legislators or others, or through TDOT's own Long Range Planning process. This chapter discusses the early steps in project identification and development, before a NEPA or TEER document is initiated.

2.1 TDOT's Planning Process

In consideration of the number of major transportation corridors requiring evaluation, the Tennessee Department of Transportation (TDOT) has adopted a two-step planning process as a proactive approach to evaluate transportation needs while considering the natural and built environment. The Needs Assessment, prepared by TDOT's Long Range Planning Division is used to assist TDOT in evaluating transportation needs identified by Metropolitan Planning Organizations (MPOs) and Rural Planning Organizations (RPOs) throughout the State. The Transportation Planning Report, prepared by TDOT's Project Planning Division is used to assist TDOT in identifying and evaluating preliminary alternatives or options for addressing the transportation need.

2.1.1 Long Range Planning

TDOT's Long Range Planning Division is primarily responsible for the statewide coordination of the long range transportation planning process in Tennessee's 11 Metropolitan Planning Organizations and 12 Rural Planning Organizations, conducting statewide and regional travel demand and freight modeling, overseeing statewide bicycle and pedestrian planning, and oversight of the Department's Long-Range Multimodal Transportation Plan. The Division is comprised of three offices: Systems Planning & Policy, Research, GIS Mapping & Facilities.

Federal law requires all urbanized areas of 50,000 or greater population to maintain a continuing, comprehensive, and cooperative transportation planning process. The 11 MPOs throughout the State of Tennessee are administered by an Executive Board, which provides policy direction and is comprised of locally-elected officials, and a Technical Committee, which provides technical expertise and is comprised of professional planners and engineers from local governments and other transportation related agencies.

As set forth in the Long Range Transportation Plan, TDOT established RPOs to encourage involvement of local officials in a multi-modal transportation decision-making process. Similar to the MPO structure, the 12 RPOs throughout the State of Tennessee consist of an Executive Board, which recommends priority transportation

projects to TDOT for consideration and is comprised of locally-elected officials, and a Technical Committee, which reviews project proposals and provides technical expertise. The Technical Committee is comprised of professional planners and engineers from local governments and other transportation related agencies. The priorities of each RPO are forwarded each year to TDOT and the Department considers these priorities, along with public support, environmental impacts, and funding in proposing the State Transportation Improvement Plan (STIP) that is presented to the Tennessee State Legislature for consideration and budgeting.

The RPO priorities that are submitted to TDOT are evaluated and a Needs Assessment is prepared for projects where a demonstrated need exists. The Needs Assessment outlines the transportation problem, along with existing traffic, crash, and other readily available information. The information contained in the Needs Assessment helps to establish a foundation for the project and both the MPO and RPO processes ensure transportation needs are identified and prioritized at a local level based on input from local officials and the public.

2.1.2 Project Planning

TDOT's Project Planning Division is primarily responsible for the management, development and planning of all travel data and operations, safety planning, conceptual planning and all statewide project planning studies for federal, state, and local federal aid highways. The Division is comprised of four (4) offices: Short Range Planning Office, Conceptual and National Environmental Policy Act (NEPA) Planning Office, Safety Planning Office and the Travel Data Office.

Once a Needs Assessment has been conducted and a preliminary purpose and need to address a transportation problem has been established, the Short Range Planning Office conducts a desktop data review of criteria such as average daily traffic (ADT), level of service and crash rates. Based on the preliminary purpose and need and the findings generated by the desktop data review, a memorandum of findings is prepared and distributed outlining whether the proposed project merits further consideration. If it is determined that the project would address congestion, safety, access needs or spot safety improvements, a Transportation Planning Report (TPR) is conducted. The TPR process refines the preliminary purpose and need for the project by looking at evaluation factors such as congestion relief, accessibility and mobility, economic development, goods/freight movement, and safety improvement. A set of preliminary alternatives or options for addressing the transportation needs is identified and evaluated, and preliminary environmental surveys are initiated, using desktop databases and windshield surveys. The process also includes a road safety audit review with order of magnitude costs and observations. Public and community involvement is also a part of the TPR; a public meeting is held to encourage comment on the findings of the TPR.

Once the transportation need and possible solutions are identified, the project is programmed by TDOT and included in the State Transportation Improvement Program (STIP). If the project is within an MPO area, it must also be approved by

the MPO for inclusion in the MPO's Transportation Improvement Program (TIP). The project is also assigned a PIN number (for schedule tracking and funding purposes) within the PPRM system. For a project that is programmed to begin in the next three years, programming and funding for the project is assigned, and the NEPA (or TEER) process is initiated.

2.2 Context Sensitive Solutions (CSS)

FHWA promotes Context Sensitive Solutions (CSS) as an integral part of its efforts to advance environmental streamlining and environmental stewardship. In 2006, TDOT developed a CSS Statement of Commitment that outlines its CSS approach. In summary, TDOT's CSS Statement of Commitment defines CSS as:

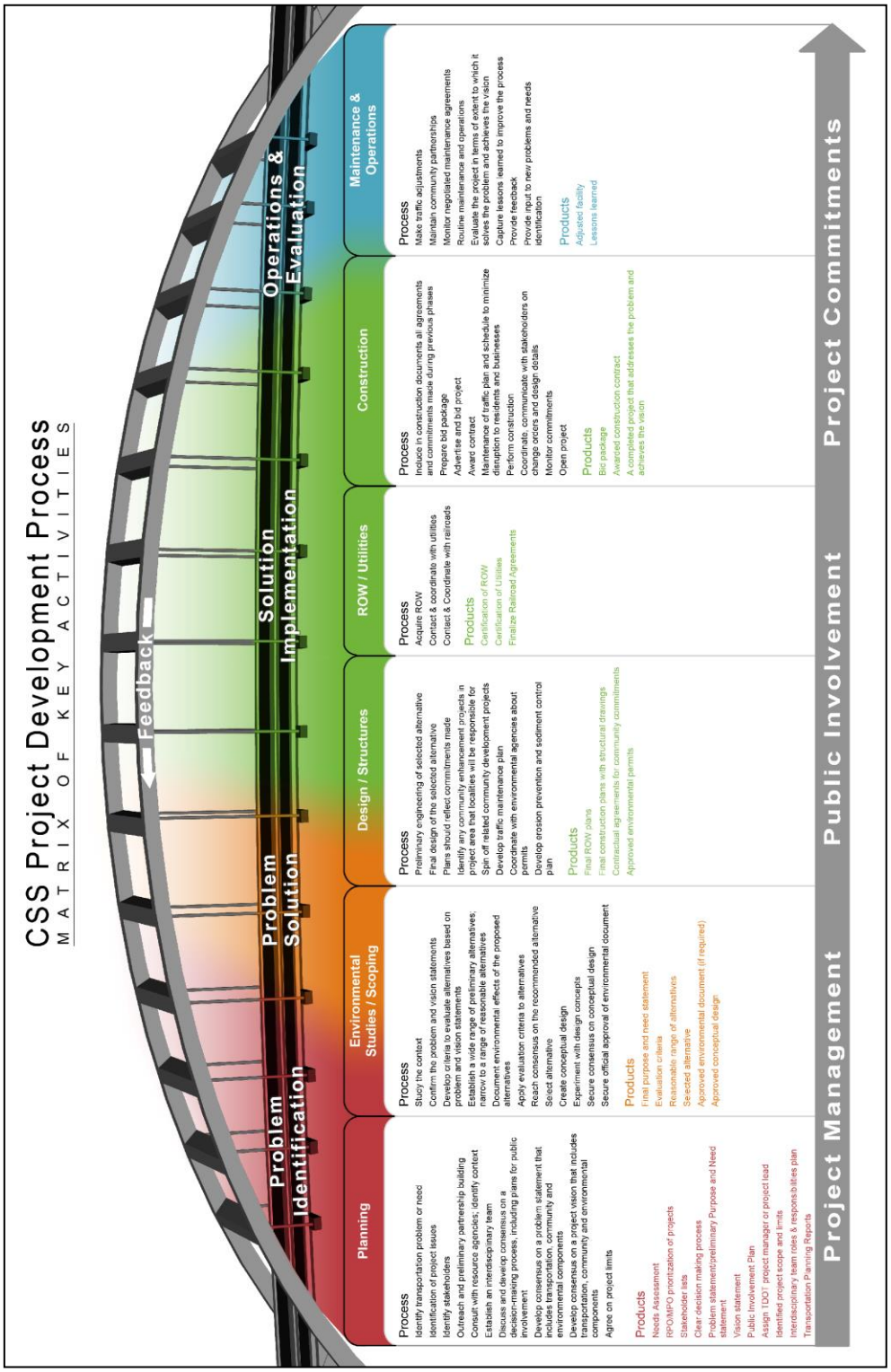
"… a process to plan, design, construct, maintain and operate its transportation system in order to establish and achieve transportation, community and environmental goals. Context Sensitive Solutions balances safety and mobility and the preservation of scenic, aesthetic, historic, environmental and other community values. CSS is a philosophy of doing business that impacts both the project development process and project outcomes."

There are four core CSS principles and they apply to transportation processes, outcomes, and decision-making (AASHTO/FHWA March 2007):

- Strive towards a shared stakeholder vision to provide a basis for decisions;
- Demonstrate a comprehensive understanding of contexts;
- Foster continuing communication and collaboration to achieve consensus; and
- Exercise flexibility and creativity to shape effective transportation solutions, while preserving and enhancing community and natural environments.

The CSS approach is integrated throughout the project development process. It begins in the planning phase, even before the NEPA process is initiated, and continues through the environmental evaluation, design, construction, and maintenance and operations phases of a project (Figure 2.1). CSS is the responsibility of all TDOT divisions, in collaboration with stakeholders, including partner agencies, local governments and the public. Key elements of the CSS process are:

Figure 2.1 CSS Project Development "Bridge Graphic"



- *Interdisciplinary Project Teams*

  An interdisciplinary project team should be established at the beginning of the project development process. Team members should represent all project phases and need to be engaged throughout the entire project development process. Not all technical disciplines may be needed for all projects. It is the responsibility of each team member to provide input throughout the process; work with each other to identify potential problems and issues early in the process; help to develop solutions; and make sure that project concerns are adequately and appropriately addressed.

- *Involvement of a Full Range of Stakeholders*

  Involving a full range of stakeholders helps to ensure that issues and concerns of members of the community, agencies and others are all heard. It aids with the development of a project solution that will best fit the context of the community and meet the purpose and need of the project. This element of CSS integrates with the process requirements of SAFETEA-LU Section 6002 for providing participating agencies and the public with an opportunity to provide meaningful input in the development of the purpose and need for a project and the range of alternatives to be studied.

- *Early, Open, and Continuous Communication with all Stakeholders*

  Early, open and continuous communication with all stakeholders, including project team members helps to insure that issues and concerns are identified early and helps to streamline the project development process.

- *Consensus Among Stakeholders*

  TDOT seeks to achieve consensus with a full range of stakeholders at key project development milestones, including problem identification, development of a project vision, development and assessment of project alternatives, through construction and maintenance. Developing consensus at key project milestones is critical for streamlining the project development process in general and the environmental review process in particular.

The way in which CSS principles are met may vary from project to project. The public involvement and outreach efforts are scaled to the size and nature of the project. For example, large, complex projects and controversial projects may utilize citizen

resource teams or focus groups. A citizen resource team is comprised of a representative group of project stakeholders familiar with the project area. The team members serve in an advisory role to TDOT and are responsible for providing input to TDOT about project issues and concerns as well as providing accurate project information to their community members. The use of citizen resource teams is one of the enhanced public involvement activities described in TDOT's Public Involvement Plan.

Involving a full range of stakeholders; early, open, and continuous communication with all stakeholders; and the development of a project that satisfies the purpose and need for the project are CSS principles that also correlate with NEPA requirements. Early and on-going coordination with the public and resource agencies should be summarized in the environmental document. The document should include a description of how the public was involved in the development of the purpose and need and the potential alternatives. This information should be summarized in the chapters on purpose and need and development of alternatives. A more detailed discussion of the public involvement that has been conducted throughout the project development process should be included in the chapter on agency coordination and public involvement.

2.3 Defining the Project

What constitutes a "project" that can advance from early planning through construction under the FHWA regulations? To be considered a project, a clear need for the project must be demonstrated. A clear need might be safety, rehabilitation, economic development, or capacity improvements. This need must be considered in the context of the social and economic environment, topography, future travel demand and other related infrastructure improvements. In addition, the project must be a "whole" or integrated project.

FHWA specifies that three general principles are used to frame (define) a highway project. Under 23 CFR 771.111(f), a proposed improvement shall:

1) Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
2) Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
3) Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The following subsections explain three critical items that must be addressed during the early phases of the project development process. These critical items are the purpose and need statement; logical termini and independent utility, and definition of the study area.

2.3.1 Purpose and Need

The transportation planning process required by 23 U.S.C. 134 and 135 and 49 U.S.C. 5303-5306 sets the stage for the development of transportation projects. As part of the transportation planning process, states and local metropolitan planning organizations (MPOs) must develop long-range transportation plans to address projected transportation needs. In addition, they must create transportation improvement programs (STIPs or TIPs, respectively), which identify a list of priority projects to be carried out in the next three years to implement the long range plan. To receive Federal funding, transportation projects must come from an approved TIP or STIP. As a result, much of the data and decision-making undertaken by state and local officials during the planning process carry forward into the project development activities that follow the TIP or STIP. This means that the planning process and the environmental assessment should work in tandem, with the results of the transportation planning process feeding into the NEPA process. Ideally, the purpose and need for highway and transit projects should come out of the long-range transportation planning process. That is the point at which systemwide needs are analyzed and projects are moved forward for programming.

The purpose and need statement, at a minimum, is a statement of the transportation problem to be solved by the proposed project. It is often presented in two parts: broad goals and objectives, and a description of the transportation conditions (congestion, safety, etc.) underlying the problem. The long-range transportation plan also includes goals and objectives similar to "purpose and need" but on a broader scale, since it typically covers a wider area and spans at least twenty years. These goals and objectives are often identified through extensive public outreach.

The need for a project must be clearly demonstrated for it to proceed in project planning and to receive federal or state funding. The purpose and need statement is a written description of the transportation problems (the need) and the solution to the problem (purpose).

The purpose and need statement drives the alternatives development and analysis tasks, but it should not be so narrowly defined as to point to a single solution only. Without a well-defined and justified purpose and need statement, the identification of reasonable alternatives would be difficult. If the project purpose and need are rigorously defined, the number of solutions that will satisfy the need can be more readily identified. The purpose and need statement is the cornerstone of the alternatives analysis. It is not, however, the place where alternatives are defined or discussed.

The purpose and need should be defined in terms that are easily understandable to the general public. It should justify why the improvement should be implemented. The information presented should be as comprehensive and specific as possible to justify the need.

Regarding project need, the environmental document text should summarize the main problem or problems that point to the need for some action. This section should describe the existing conditions and the projected problems if no action is

taken. For project purpose, the environmental document text should summarize the purpose that a proposed action should serve, i.e., describe how a potential solution should solve the identified problem or need.

Every effort should be made to develop a concise purpose and need statement that focuses on the main transportation problems to be addressed.

The elements of a purpose and need statement are outlined in the FHWA Technical Advisory T 6640.8A. (Appendix D). General direction on developing concise and discernable purpose and need statements is found in the CEQ/USDOT letter exchange found on-line at http://www.environment.fhwa.dot.gov/guidebook/Gjoint.asp and in the FHWA/FTA Joint Guidance issued July 23, 2003, found at http://www.environment.fhwa.dot.gov/guidebook/Ginterim.asp. Additional guidance is available in Executive Order 13274, Purpose and Need Work Group Baseline Report (Revised draft, March 15, 2005), found at http://www.dot.gov/execorder/13274/workgroups/purposeneed.htm#Toc98317734.

All items listed below may not be applicable to every project, but those that are should be discussed, as appropriate, to help explain and justify the project's purpose and need.

- Project Status: Provide a brief project history, including all actions taken, other state and federal agencies involved, and project schedule. Discuss the history of transportation planning in the area. Describe the actions taken and the governmental units or agencies involved. Discuss any existing transportation plans or other relevant studies.
- System Linkage: Is the project a needed connecting link in a transportation system? How does the project fit into the system—existing and future? If the project is a needed link in a roadway network, describe the existing lack of connectivity. Explain how the proposed improvement would address the needs of the community and the roadway system. Even if system linkage is not a primary justification, it may still be beneficial to provide an overview of the overall roadway network and the function the subject road serves within the system.

  If applicable, discuss the relationship of the subject roadway to any other designated systems such as the National Highway System, Strategic Highway Network (STRAHNET), National Truck Network, and emergency evacuation roads (e.g., for roadways near nuclear facilities).
- Existing and Future Conditions: Identify TDOT's roadway classification. What roadway capacity is needed, existing and future? What is the level of service for the existing and future facility? Give data for existing and future (projected) average daily traffic (ADT), peak hour characteristics and truck percentages and capacity and level of service (LOS). Include a brief explanation of LOS ratings, as described in the *Highway Capacity Manual*.

- Transportation Demand: Discuss relationship to the state's transportation plan or plans adopted by the MPO; include traffic forecasts generated by the state or MPOs.
- Legislation: Describe any federal, state or local government mandate for the action.
- Social or Economic Conditions: Identify whether the subject facility may significantly impact any identified groups. Explain how the benefits and adverse impacts to these groups were considered during the planning process. Is the new or upgraded facility needed to serve a new school, a new factory, etc.? Is unemployment high in the area and is the road needed to promote economic development and provide jobs?
- Land Use: If applicable, describe projected changes in land use that spur the need for improving the area's highway capacity. Reference the local area's land use plan and describe how it was considered in the transportation planning process. Explain how the project may impact major existing or planned development.
- Modal Relationships: Describe relationships to other transportation modes such as airports, rail and port facilities and how the project may affect other transportation modes. Is the road needed or is an upgrade warranted to get traffic to an airport? To get trucks to a port or rail terminal?
- Safety: Is the project needed to correct an existing safety hazard? For areas with high crash rates, provide data on the frequency, type, conditions, cause and increase or decrease over time in rate of crashes in comparison to the critical crash rates. Discuss any other type of safety hazard, such as substandard design or geometric deficiencies. Explain how the project might result in a lower crash rate.
- Roadway Deficiencies: Are improvements necessary to correct existing roadway deficiencies, for example, substandard geometry or lane width? How will the project correct these deficiencies? Describe any design deficiencies, such as substandard cross section or horizontal or vertical alignment.

Although most transportation projects stem from a transportation-related need (e.g., congestion problems, lack of access, safety problems), transportation agencies recognize that economic development can be a primary or secondary purpose and need for some highway projects, particularly in rural areas. In these cases, the transportation needs are inextricably linking to the underlying need for economic development in economically depressed or underutilized areas

The Technical Advisory also encourages the use of exhibits, tables, maps and other graphics to illustrate or provide backup for points that are being made. It is important to include a project location map in the Purpose and Need Statement to establish the geographic context.

The purpose and need statement generally forms the first chapter of an EA or an EIS, and its preparation should be initiated during the earliest phases of project

planning. It is important to note that the project purpose and need statement should be considered a "living document." It may be expanded as studies are undertaken along the corridor. Additional needs, beyond those originally identified, may be revealed as the project planning proceeds. The purpose and need statement should be re-examined and updated, as appropriate, throughout the project development process.

SAFETEA-LU Section 6002, Efficient Environmental Reviews for Project Decisionmaking, requires lead agencies to give the public and participating agencies the chance to be involved in the development of the project purpose and need statement in a timely and meaningful way. This opportunity can occur early during the transportation planning process before an EIS is initiated, if the project is sufficiently well defined at that time, or later during the scoping process. With a CSS approach, the opportunity for involvement will occur sooner in the process, rather than later.

The opportunity for input must be widely publicized and may occur in the form of public workshops or meetings, solicitations of verbal or written input, conference calls, postings on the Internet, distribution of printed materials or other involvement techniques. The opportunity must be provided prior to the FHWA's final decision regarding purpose and need. The Section 6002 provisions are required for EIS documents, and discretionary for EAs and CEs.

TDOT has entered in a cooperative agreement with FHWA and other federal, state, and local agencies to establish a coordinated planning and project development process for major transportation projects. This cooperative agreement, entitled "Tennessee Environmental Streamlining Agreement (TESA) for the Environmental and Regulatory Coordination of Major Transportation Projects," is discussed in greater detail in Section 4.5 of Chapter 4 of this manual. In keeping with the requirements of SAFETEA-LU, TESA includes a set of key points at which TDOT is seeking to obtain the concurrence of cooperating and participating agencies in the transportation planning and NEPA process. The first concurrence point occurs during the development of the Preliminary Purpose and Need.

FHWA and FTA issued a joint guidance, *Linking the Transportation Planning and NEPA Processes* (February 2005), to describe how the transportation planning process can be linked with the NEPA decision-making process, especially for purpose and need statements and alternatives development. The transportation planning process can provide the basis or foundation for the purpose and need statement in a NEPA document. To the extent regional or systems-level analyses and choices in the transportation planning process help to form the purpose and need statement for a NEPA document, such planning products should be given great weight by FHWA and FTA, consistent with Congressional and Court direction to respect local sovereignty in planning. For more information, see the FHWA's website on Planning and Environment Linkages at http://www.environment.fhwa.dot.gov/integ/index.asp.

As part of the process to develop the SMART Delivery Management System (SDMS), in late 2009 TDOT initiated a series of workshops to look at opportunities to better link the Department's transportation planning and environmental process. As part of this effort, TDOT is developing a more formalized Needs Assessment process which will form the basis for the Transportation Planning Report and the later environmental document.

2.3.2 Logical Termini and Independent Utility

In order to ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the proposed action evaluated in an EA or EIS must meet the following criteria:

- Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
- Have independent utility or independent significance (i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made); and
- Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

2.3.2.1 Development of Logical Termini

In FHWA's NEPA implementing regulations, 23 CFR 771.111(f)(1) states that an action evaluated in an EA or EIS shall "connect logical termini and be of sufficient length to address environmental matters on a broad scope."

FHWA issued a paper on November 15, 1993 entitled *The Development of Logical Project Termini* (http://www.environment.fhwa.dot.gov/projdev/tdmtermini.asp).

As defined by FHWA, logical termini are rational end points for a transportation improvement and rational end points for a review of the environmental impacts.

Some guidelines for selecting the project's logical termini are:

- Begin/End project at points of major traffic generation, often intersecting highways. An example would be widening a two-lane roadway between two four-lane sections of highway;
- The termini selected should encompass an entire project. Dividing the project up into small individual projects is called "segmentation" and is not allowable under NEPA. The project can be constructed in segments, but the project studies should encompass the entire project, so that the effects of the project can be fully identified; and
- Geographic boundaries are generally not suitable as logical termini. For example, ending a project at a county line is not logical when the substandard roadway continues beyond the county line to an adjacent town or city.

For most projects, the choice of logical termini is likely to be obvious and non-controversial.

For a few major projects where other considerations are important, the termini must ensure the following:

- Environmental issues can be treated on a sufficiently broad scope to ensure that the project will function properly without requiring additional improvements elsewhere; and
- The project will not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

Establishment of logical termini is of major importance for EISs and EAs, but is not as critical for CEs. However, some CEs will have logical termini as a consideration. The decision of whether logical termini are needed for a CE is an FHWA decision that is made on a case-by-case basis. For example, logical termini would need to be established for widening an existing highway with no displacements and little or no right-of-way acquisition. On the other hand, logical termini would probably not have to be established for an intersection improvement or a bridge replacement.

The termini of the project should be determined during the earliest phases of the project; however, it may be necessary to refine the project termini as a result of agency coordination and public involvement.

2.3.2.2 Demonstrating Independent Utility

23 CFR 771.111 (f)(2) also requires that a project must be able to function on its own, a term known as “independent utility.” A project with independent utility or independent significance means that it is usable and is a reasonable expenditure of funding even if no other transportation improvements are made in the area. The project must meet a need without requiring the construction of adjoining projects. In addition, projects that have independent utility should be planned so as not to restrict the consideration of alternatives in adjoining segments.

Independent utility should be determined early in the project development process and should continue to be evaluated as project planning continues.

2.3.3 Defining the Study Area

As the purpose and need statement is being developed, the limits of the study area should also be defined. The study area limits should be based on the logical termini and the purpose of the project. There are two general criteria for defining the study area:

- It should be large enough to encompass a range of alternatives that meet the project purpose and need; and
- The boundary should *only* be large enough to allow for flexibility in the development of alternatives.

The study area typically includes communities/areas/neighborhoods within the project corridor and immediately adjacent to it. "Community" boundaries can often be delineated by physical barriers, land-use patterns, political divisions, selected demographic characteristics, historical background, resident perceptions, subdivisions and historic neighborhoods. In addition, a project can have social and economic consequences for communities beyond the immediate geographic area. An example of this is the construction of a new segment of road that bypasses a small town. This could have negative impacts on the businesses in the small town. Thus the study area should include all or a portion of the town.

2.4 Development and Consideration of Alternatives

Once the purpose and need for a project has been identified and the study area has been defined, alternative ways in which the transportation problem(s) can be solved must be explored.

Under the CEQ regulations 40 CFR 1500.2, federal agencies are directed to:

> *(e) Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that would avoid or minimize adverse effects of these actions upon the quality of the human environment.*

FHWA, in providing guidance for the implementation of SAFETEA-LU, explains that the development of the range of alternatives should be a collaborative process in which the lead agencies must provide opportunities for the involvement of the public and participating agencies, and the lead agencies must consider the input provided by these groups. After considering the input, TDOT, in consultation with, FHWA, is responsible for deciding the range of alternatives to be considered in the NEPA document. The form and timing of the public and participating agency involvement is flexible, but the opportunity must be provided prior to FHWA's final decision regarding the reasonable range of alternatives. SAFETEA-LU's Section 6002 provisions are mandatory for EIS documents and optional for other levels of documentation.

The second TESA concurrence point (see Section 4.5 of this manual) occurs during this stage, when cooperating and participating agencies are asked to review and concur with the range of alternatives to be carried forward in the environmental document.

The identification, consideration and analysis of all reasonable alternatives or the reasonable range of alternatives is essential to the NEPA process and the goal of objective decision-making. A "reasonable" alternative meets the purpose and need of the project or does not have unacceptable consequences. Other criteria for defining reasonableness may apply to individual projects.

The following sections discuss how the initial set of alternatives is developed and how they may be refined during the NEPA process.

2.4.1 Preliminary Alternatives Development and Refinement

During the early phases of project development, a set of preliminary alternatives or options are identified or may be confirmed from earlier studies, including MPO Long Range Transportation Plans and Transportation Planning Reports. The number of preliminary alternatives considered depends upon the type of project and its size and complexity. For example, an intersection improvement is likely to have few alternatives, while a new roadway on new location would be expected to have a fairly large number of possible alignments that will ultimately be screened to a reasonable and representative range.

During the development of the preliminary alternatives, and throughout the project planning process, some of the alternatives may be revised and modified, while others may be dropped from further consideration because they are determined to be impracticable or not feasible, may have severe adverse impacts or do not meet the project's purpose and need. New alternatives may also come to light as the process moves forward. Affected agencies and the public will be given opportunities to provide input into the development of alternatives that are considered.

As stated in 40 CFR 1502.14 (a), the CEQ specifically requires that when an EIS is being prepared, "all reasonable alternatives" must be explored. CEQ also requires that those alternatives that were initially considered but eliminated from more detailed study be discussed in the EIS, with the reasons for removing these alternatives from further consideration also explained. CEQ regulations and the Federal Highway Administration (FHWA) regulations and Technical Advisory provide no guidance regarding the consideration of all reasonable alternatives for projects where the documentation is an Environmental Assessment (EA) or a Categorical Exclusion (CE). Although not specified in the Technical Advisory, TDOT generally discusses in the EA the alternatives that were initially considered but dropped from further study after they were determined to be unreasonable.

Beyond the CEQ requirements to evaluate alternatives to avoid or minimize impacts to the environment, there are other regulations that require consideration of "avoidance" alternatives. Specifically, Section 4(f) of the Department of Transportation Act of 1966, the Executive Orders on Wetlands (E.O. 11990), Floodplains (E.O. 11988), and Environmental Justice (E.O. 12898), and the US Army Corps of Engineers' Section 404 (b)(1) guidelines, require agencies to develop alternatives that would avoid or minimize impacts. These regulations are summarized in Appendix C, and discussed in the appropriate sections of Chapter 5, *Impact Analysis*.

2.5 Early Project Planning Coordination

Early coordination on project alternatives results in an effective project development process. Coordination within the Environmental Division and between other TDOT divisions is necessary to prevent costly project revisions and potential conflicts in design and construction.

TDOT supports early coordination between the Divisions. In an effort to ensure that this coordination is happening effectively and efficiently, an Interdisciplinary Project Planning Team (IPPT) has been established. TDOT also strongly supports interagency coordination with federal, state, and local agencies.

2.5.1 Interdisciplinary Project Planning Team

Within the Environmental Division, staff from the Natural Resources Office, Social and Cultural Resources Office, and the NEPA Planning Office, are active members of the IPPT. The goals of this team are to:

- Ensure that stream and wetland impact avoidance and mitigation are given a priority throughout all phases of project planning and design;
- Identify potential environmental items that need to be addressed in design, ecology, permits, and construction;
- Communicate environmental commitments for the project, such as stream and wetland mitigation; and
- Review other project commitments as they relate to environmental concerns, such as storm water detention requirements or roadway cross-sections that may impact more environmental resources than originally identified.

Input from the IPPT is expected during each step of the project planning and development process:

- **Project Commitments**. Each commitment (environmental or otherwise) should be reviewed by the IPPT to evaluate how it could impact other aspects of the project. For example, agreeing to a boulevard roadway layout with a wider corridor may significantly impact environmental permits and mitigation if stream segments or wetlands are impacted. Project commitments will be documented and adhered to throughout all phases of the project development process, reviewed by all IPPT members, and incorporated into the Environmental Pre-Construction Meeting undertaken prior to construction. Project commitments may be added at different stages of project development; however, the IPPT should review each commitment and evaluate how it may affect permits, environmental resources, and other commitments.
- **Corridor Evaluation**. Each team member should understand the alternatives evaluated for each project and know the rationale for choosing the final option. Each IPPT member should review the NEPA document to fully understand the project goals, limitations, and stakeholders needed.
- **Environmental Boundaries.** Since environmental boundaries determine mitigation, permit requirements, design, and right-of-way needs, the team should review environmental boundaries, once they are developed.

IPPT members will be required to sign off on each of these steps in the Program, Project, and Resource Management (PPRM) tracking database. Failure to sign off on these key steps may delay the project development process. Failure to review each

step and provide input could cause significant project re-designs at a later date or even non-compliance with environmental regulations.

2.5.2 Interagency Coordination

Early identification of environmental resources that may be affected by the project is important in order to facilitate efficient project planning and design. In an effort to make coordination with agencies outside of TDOT more efficient, TDOT has initiated the Tennessee Environmental Streamlining Agreement (TESA), an interagency agreement with the Federal Highway Administration (FHWA), U.S. Fish and Wildlife Service (USFWS), USACE, the Tennessee Department of Environment and Conservation (TDEC), Tennessee Wildlife Resources Agency (TWRA), U.S. Forest Service, and other federal and state agencies involved in reviewing and issuing permits for TDOT transportation projects. In addition, TDOT is developing a SMART Delivery Management System (SDMS) to better facilitate the project development process and gather project and environmental data into one Geographic Information System (GIS) based system. TDOT will work with these other agencies for concurrence on the environmental data as a valid base of data for developing project permits. In particular, TDOT is working with TDEC on the stream and wetland determination protocols and plans to develop a stream layer based on these protocols.

In addition, TDEC and the USACE should be consulted during the development of environmental boundaries to make determinations on streams, wet weather conveyances, and wetlands.

Early planning efforts, such as initial coordination, scoping, and environmental screening, are likely to identify issues that should be factored into the development and refinement of the project location alternative(s). These issues should be located on an “environmental constraints” map by the planner or by a consultant. The planner or consultant should ask for assistance from the Environmental Division’s Natural Resources Office and Social and Cultural Resources Office staff, as needed. At a minimum, the planner or consultant should prepare a memorandum for transmittal to the project concept designer or the project manager calling these issues to their attention.

The project manager, planner and project designer, and as applicable, the Natural Resources Office staff, Social and Cultural Resources Office staff, and/or consultant should discuss how these issues might impact the project alignment, the technical studies that may have already begun, or will soon begin, and the project schedule. Addressing issues early through minor alignment shifts or other means may save time and avoid problems later. If alignment shifts occur as a result of this step, the planner should make sure that all consultants, Environmental Division staff, and other appropriate TDOT staff are informed of the changes and are provided with a set of the revised project concepts.

The impact studies and public involvement activities may identify major issues that must or should be addressed before an alternative is presented in the draft environmental document.

2.5.3 Development of Study Area Inventory and Base Mapping

A valuable tool for developing and screening preliminary alternatives is an inventory of the study area using secondary source materials (referred to as a literature search). The inventory includes lists of and information on known socioeconomic, land use, environmental issues (ecological, noise, air quality, hazardous materials) and cultural (historic and archaeological) resources. This information is obtained from existing databases that are available from such departments and agencies as the Tennessee Department of Environment and Conservation, the Tennessee Wildlife Resources Agency, the U.S. Fish and Wildlife Service, and the U.S. Army Corps of Engineers.[1]

Information obtained through the inventory is then placed on base mapping of the project area by Environmental Division planners, team members of the TPR or CSS processes and/or consultants. The result is a “constraints” or “opportunity” map that can assist with the development and/or refinement of preliminary alternatives. This tool allows planners to conduct an environmental screening of the project area prior to conducting detailed field investigations. This map can be a visual aid to show acceptable and unacceptable paths through the study area.

One of the planning tools that can be used to organize and analyze the environmental impacts on natural and human resources in the early phases of project development is Geographic Information System (GIS) technology. This tool allows environmental and engineering constraints to be depicted graphically and analyzed simultaneously. TDOT is in the process of refining its GIS database and better integrating GIS into the project development process.

Base mapping of the project area may be provided to the Environmental Division planners by the Project Planning or Design Divisions, or by a planning or design consultant. The base mapping consists of one or both of the following components: Digital Line Graphs (DLG) or aerial images. DLG files from the U.S. Geological Survey (USGS) are obtained and converted to MicroStation .dgn files. These files depict the boundaries of public lands, contours, hydrology, transportation facilities and structures. Aerial images, in the form of digital orthophoto quads, may also be obtained. The base mapping is prepared for the purpose of field investigations and for use as exhibits for meetings and presentations. The scale of the mapping is usually determined by the Project Planning or Design Divisions.

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[1] A bibliography of sources for the environmental inventory should be started at this stage, to aid in the preparation of the list of references that will eventually be included in the EA or EIS.

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3.0 NEPA PROCESS OPTIONS

There are three classes of actions that prescribe the level of documentation for the assessment of impacts to the environment in the NEPA process. This chapter defines the three classes of action and explains how the appropriate class of action is determined for a project that has federal funding or is considered a major federal action. Chapter 10 of this manual defines the criteria used by TDOT to determine when an environmental evaluation is performed on a state-funded transportation project.

The chapter also notes the importance of starting the project record (Administrative Record) early in the environmental evaluation process and discusses when each NEPA process options or class of action applies.

3.1 Classes of Action

Transportation projects vary in type, size and complexity, and potential to affect the environment. Transportation project effects can vary from very minor to significant impacts on the human and natural environment. To account for the variability of project impacts, three basic "classes of action" are allowed under NEPA and 23 CFR 771.115. The class of action determines how compliance with NEPA is carried out and documented:

- Class I - Environmental Impact Statement (EIS) is prepared for projects that will cause a significant adverse effect on the environment;
- Class II - Categorical Exclusion (CE) is prepared for projects that cause minimal social, economic or environmental impact; and
- Class III - Environmental Assessment (EA) is prepared for larger scale projects that do not meet the requirements for a CE or those for which the significance of the environmental impact is not clearly established. Should environmental analysis and interagency review during the EA process find a project to have no significant impacts on the quality of the environment, a Finding of No Significant Impact (FONSI) is issued. If it is found that the project will have significant impacts, an EIS must be prepared.

Chapter 6, *Prepare Environmental Documentation*, describes how each of these documents are prepared. FHWA's Technical Advisory, found in Appendix D, provides detailed guidance on preparing and processing environmental and Section 4(f) documents.

3.1.1 Significance

In essence, the level of analysis and the class of documentation are tied to a project's potential to have "significant" adverse environmental effects. The term "significant," as used in NEPA, requires consideration of context and intensity, terms that are defined below.

3.1.1.1 Context

The potential significance of an action must be analyzed in several contexts, such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the physical setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. In addition, both short- and long-term effects are relevant.

3.1.1.2 Intensity

The assessment of significance must also consider the severity or intensity of the impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

- Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that, on balance, the effect will be beneficial.
- The degree to which the proposed action affects public health or safety.
- Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
- The degree to which the effects on the quality of the human environment are likely to be highly controversial.
- The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
- The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
- The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
- The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been

determined to be critical under the Endangered Species Act of 1973.

- Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.

3.2 Project Initiation and Determination of Class of Action

Section 6002.139 of SAFETEA-LU requires TDOT to initiate the environmental review process for an EIS by sending a notification letter to the FHWA Tennessee Division Administrator. The notification letter is signed by the TDOT official authorized to sign EISs. TDOT has elected to follow this initiation process and other requirements of SAFETEA-LU Section 6002 for EAs. The notification letter informs FHWA of the type of work, termini, length and general location of the proposed project, together with a statement of any Federal approvals anticipated to be necessary for the proposed project. The timing of the notification is flexible and typically occurs when the project is sufficiently defined and the project sponsor (TDOT) is ready to proceed with the NEPA phase. The notification will normally occur prior to the publication of the Notice of Intent in the *Federal Register*.

For TDOT projects, the FHWA Tennessee Division will determine the appropriate class of action, which in turn will determine the type of documentation required for a specific project. The determination is based on the FHWA NEPA implementing regulations outlined in 23 CFR 771.115-130 and explained in FHWA's Technical Advisory T6640.8A, *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (contained in full in Appendix D).

TDOT and FHWA meet in September of each year to discuss all anticipated projects that will require NEPA documentation through September of the following year. The purpose of the meeting is to agree upon the level of documentation (if enough information is available), and to negotiate a timeframe for the identified projects. The level of documentation agreed upon is flexible and can be changed if additional information is gathered that warrants a change. Also, during this meeting FHWA determines if a field review is necessary. Two weeks prior to this annual meeting, TDOT will provide to FHWA a list of all new start projects for the following twelve months as well as the following information for each project: 1) preliminary purpose and need, 2) brief description of each project including termini, 3) any readily known impacts, and 4) proposed level of documentation (CE, EA, or EIS).

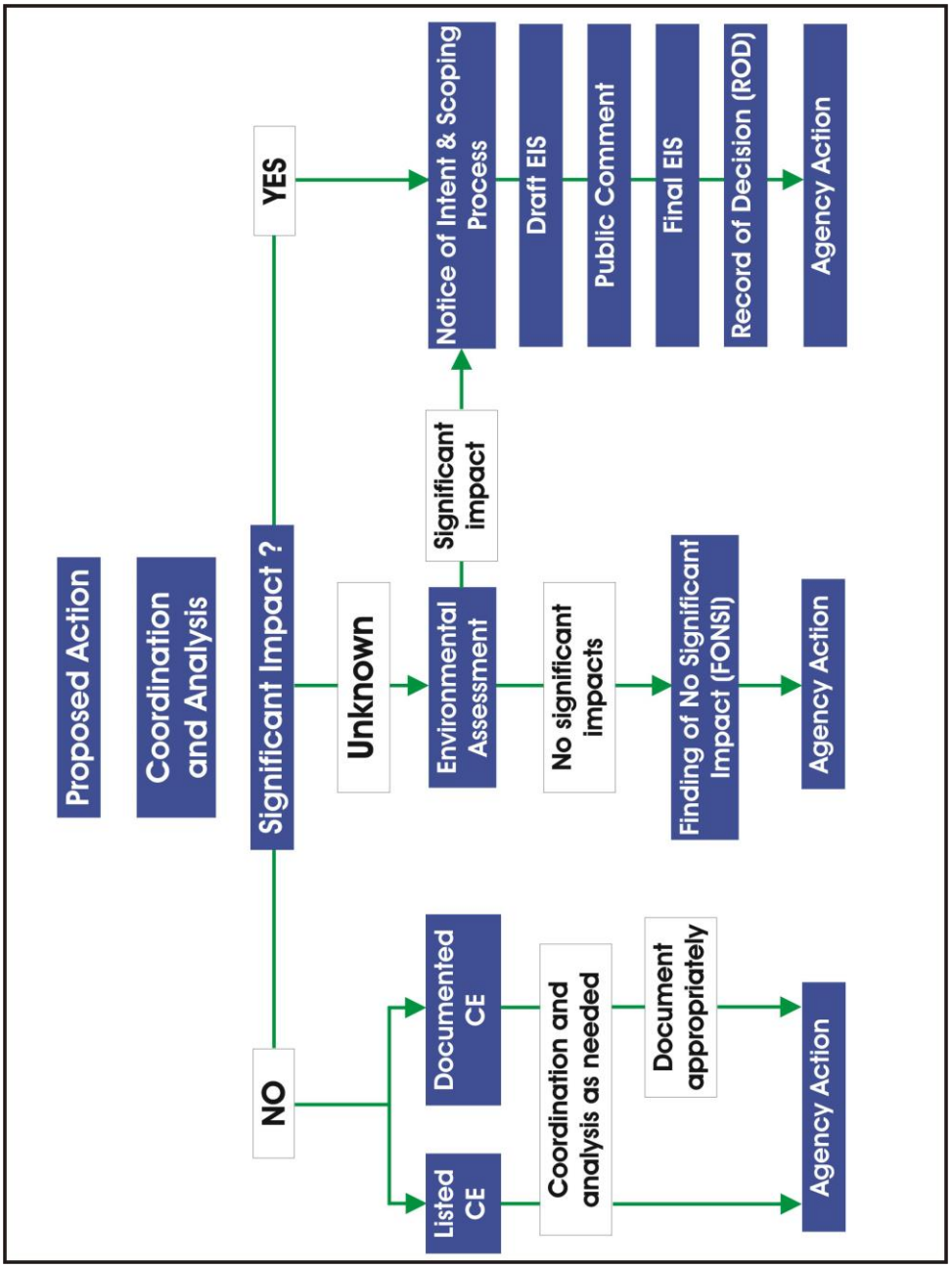
A memo documenting the decision of the level of documentation for a specific project should be prepared and placed in the project file and is documented as part of the project's Administrative Record.

Figure 3-1 illustrates the series of decision points that are made to determine the NEPA Class of Action.

3.3 Administrative Record

There is always potential for legal challenge of a NEPA document and/or federal permits that can seriously delay or even cancel a project that TDOT has spent years planning. Managing the risk of possible litigation should be part of good project planning. In addition to diligent adherence to NEPA procedures, careful, coordinated preparation of the Administrative Record by FHWA, TDOT and its contractors is an important component of risk management.

Figure 3-1. Determination of Class of Action



Beginning in the earliest phases of project development, it is wise to begin to develop a project's Administrative Record (AR). The AR is a written record supporting the agency's decisions on a particular project. While there is no statutory requirement for an administrative record, court cases have essentially established the requirement that the project record should contain the agency's files on a project, including everything the agency considered in reaching its decision.

Ultimately, it is FHWA's Administrative Record, thus FHWA should be consulted on what items are included in the AR. The Environmental Division planner will take the lead on setting up the record and informing other TDOT staff and consultants of their responsibilities regarding the AR.

FHWA has two internal guidance documents that address the AR and that provide some assistance in understanding and developing the record:

- FHWA Memorandum prepared by Edward V. Kussy, *Presenting and Defending Administrative Records* (February 1992). The second memo can be found at: http://nepa.fhwa.dot.gov/ReNepa/ReNepa.nsf/All+Documents/5D24B5E61A4A00DA85256BBD000426E0/$FILE/kussey_admin%20record.doc

Another recent resource is the AASHTO Center for Environmental Excellence Practitioners Handbook 01, *Maintaining a Project File and Preparing an Administrative Record for a NEPA Study*." This handbook, and other NEPA related guides, can be downloaded at: http://environment.transportation.org/center/products_programs/practitioners_handbooks.aspx#0

3.4 Environmental Impact Statement

NEPA requires that federal agencies prepare an Environmental Impact Statement (EIS) for major federal actions that significantly affect the quality of the human environment. The following are examples of actions that normally require an EIS, as listed in 23 CFR 771.115:

1) A new controlled access freeway.
2) A highway project of four or more lanes on a new location.
3) New construction or extension of fixed rail transit facilities (e.g., rapid rail, light rail, commuter rail, automated guideway transit).
4) New construction or extension of a separate roadway for buses or high occupancy vehicles not located within an existing highway facility.

An EIS is a full disclosure document that details the process through which a transportation project was developed, includes consideration of a range of reasonable alternatives, analyzes the potential impacts resulting from the alternatives, and

demonstrates compliance with other applicable environmental laws and executive orders.

CEQ has established the following major milestones in the EIS assessment:

- Notice of Intent (NOI),
- Draft EIS,
- Final EIS, and
- Record of Decision (ROD).

SAFETEA-LU Section 6002's environmental review process went into effect on August 10, 2005, and applies to EIS documents for which an NOI was issued on or after that date. Key requirements imposed by SAFETEA-LU on new EIS projects include:

- The project sponsor shall send a project initiation letter to FHWA prior to the start of NEPA.
- The FHWA serves as the Federal lead agency for a transportation project, and the project sponsor that is a State or local government entity receiving federal-aid funds shall serve as a joint lead agency.
- The lead agencies must invite all Federal, State, tribal, regional and local government agencies that have an interest in the project to be participating agencies.
- Lead agencies must develop a coordination plan for public and agency participation and comment during the environmental review process.
- Participating agencies and the public must be given an opportunity for input in the development of the purpose and need and the range of alternatives. Lead agencies must collaborate with participating agencies on the appropriate methodologies to be used.
- FHWA may issue a 180-day statute of limitations (SOL) on claims against USDOT and other Federal agencies for certain environmental and other approval actions. A SOL notice can be used for a highway project regardless of the category of documentation used under NEPA. It is expected that notices will be published for most EIS projects and many EA projects, but not for projects that are CEs.

As discussed in Section 1.1.4, SAFETEA-LU 2005, FHWA has issued final guidance on the SAFETEA-LU environmental review process. The guidance is found at: http://www.fhwa.dot.gov/hep/section6002/

In addition, the AASHTO Center for Environmental Excellence has published a Practitioner's Handbook on this topic. Handbook 09,*Using the SAFETEA-LU Environmental Review Process (23 U.S.C. 139),* can be downloaded at: http://environment.transportation.org/center/products_programs/practitioners_handbooks.aspx#8

A Supplemental Environmental Impact Statement (SEIS) is necessary when major changes, new information, or further developments occur in the project that would result in significant environmental impacts not identified in the most recently distributed Draft Environmental Impact Statement (DEIS) or Final Environmental Impact Statement (FEIS) (40 CFR 1502.9(c)). The SEIS does not normally require re-initiating the environmental process; instead, the SEIS is for the last approval (DEIS, FEIS or Record of Decision (ROD)). The need for and scope of a SEIS is described in greater detail in Section 6.5.2, *Supplemental EIS*.

3.5 Categorical Exclusions

A Categorical Exclusion (CE) is a category of actions that do not individually or cumulatively have a significant effect on the environment. Under 23 CFR 771.117 and CEQ Section 1508.4, and based on past experience with similar actions, FHWA has developed lists of actions that are to be documented as a CE. They are actions which do not:

- Induce significant impacts to planned growth or land use for the area;
- Require the relocation of significant numbers of people;
- Have a significant impact on any natural, cultural, recreational, historic or other resource;
- Involve significant air, noise, or water quality impacts;
- Have significant impacts on travel patterns; and
- Otherwise, either individually or cumulatively, have any significant environmental impacts.

CEs are divided into two categories, the "C" list and the "D" list, which are discussed in the following section. TDOT has developed templates for each type of CE.

3.5.1 "C" List CEs

23 CFR 771.117(c) lists 20 actions that are non-construction or limited construction activities – the "C" list. These actions generally meet the criteria for a CE determination in the CEQ regulation (Section 1508.4) and normally do not require any further NEPA approvals by FHWA, although documentation should still be completed and retained by TDOT. This list is limited to the following specific actions:

1) *Activities which do not involve or lead directly to construction, such as planning and technical studies; grants for training and*

research programs; research activities as defined in 23 U.S.C. 307 [repealed in 1998]; approval of a unified work program and any findings required in the planning process pursuant to 23 U.S.C. 134; approval of statewide programs under 23 CFR part 630; approval of project concepts under 23 CFR part 476; engineering to define the elements of a proposed action or alternatives so that social, economic, and environmental effects can be assessed; and Federal-Aid Highway System revisions which establish classes of highways on the system;

2) *Approval of utility installations along or across a transportation facility;*

3) *Construction of bicycle and pedestrian lanes, paths, and facilities;*

4) *Activities included in the State's "highway safety plan" under 23 U.S.C. 402;*

5) *Transfer of Federal lands pursuant to 23 U.S.C. 317 when the subsequent action is not an FHWA action;*

6) *The installation of noise barriers or alterations to existing publicly-owned buildings to provide for noise reduction;*

7) *Landscaping;*

8) *Installation of fencing, signs, pavement markings, small passenger shelters, traffic signals, and railroad warning devices where no substantial land acquisition or traffic disruption will occur;*

9) *Emergency repairs under 23 U.S.C. 125;*

10) *Acquisition of scenic easements;*

11) *Determination of payback under 23 CFR part 480 for property previously acquired with Federal-aid participation;*

12) *Improvements to existing rest areas and truck weigh stations;*

13) *Ridesharing activities;*

14) *Bus and rail car rehabilitation;*

15) *Alterations to facilities or vehicles in order to make them accessible for elderly and handicapped persons;*

16) *Program administration, technical assistance activities, and operating assistance to transit authorities to continue existing service or increase service to meet routine changes in demand;*

17) *The purchase of vehicles by the applicant where the use of these vehicles can be accommodated by existing facilities or by new facilities which themselves are within a CE;*

18) *Track and railbed maintenance and improvements when carried out within the existing right-of-way;*

19) *Purchase and installation of operating or maintenance equipment to be located within the transit facility and with no significant impacts off the site; or*

20) *Promulgation of rules, regulations, and directives.*

3.5.2 "D" List CEs

The second category of CEs, as defined in 23 CFR 771.117(d), includes those actions with a higher but still minor potential for environmental impacts. The "D" list includes a list of 12 actions that past experience has shown are appropriate for a CE classification.

This level of CE includes, but is not limited to, the following 12 actions:

1) *Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (e.g., parking, weaving, turning, climbing);*

2) *Highway safety or traffic operations improvement projects including the installation of ramp metering control devices and lighting;*

3) *Bridge rehabilitation, reconstruction or replacement or the construction of grade separation to replace existing at-grade railroad crossings;*

4) *Transportation corridor fringe parking facilities;*

5) *Construction of new truck weigh stations or rest areas.*

6) *Approvals for disposal of excess right-of-way or for joint or limited use of right-of-way, where the proposed use does not have significant adverse impacts;*

7) *Approvals for changes in access control;*

8) *Construction of new bus storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and located on or near a street with adequate capacity to handle anticipated bus and support vehicle traffic;*

9) *Rehabilitation or reconstruction of existing rail and bus buildings and ancillary facilities where only minor amounts of additional land are required and there is not a substantial increase in the number of users;*

10) *Construction of bus transfer facilities (an open area consisting of passenger shelters, boarding areas, kiosks and related street improvements) when located in a commercial area or other high activity center in which there is adequate street capacity for projected bus traffic;*

11) *Construction of rail storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and where there is no significant noise impact on the surrounding community; or*

12) *Acquisition of land for hardship or protective purposes; advance land acquisition loans under section 3(b) of the UMTA [FTA] Act. Hardship acquisition is early acquisition of property by the applicant at the property owner's request to alleviate particular hardship to the owner, in contrast to others, because of an inability to sell his property. This is justified when the property owner can document on the basis of health, safety or financial reasons that remaining in the property poses an undue hardship compared to others. Hardship and protective buying will be permitted only for a particular parcel or a limited number of parcels. These types of land acquisition qualify for a CE only where the acquisition will not limit the evaluation of alternatives, including shifts in alignment for planned construction projects, which may be required in the NEPA process. No project development on such land may proceed until the NEPA process has been completed.*

Other projects, pursuant to 23 CFR 771.117(d), may also qualify as CEs if appropriately analyzed, documented and approved by FHWA at the Division level. TDOT must submit to FHWA documentation that demonstrates that the specific conditions or criteria for these CEs are satisfied and that significant environmental effects will not result. The level of information is dependent upon the action's potential level of impact, controversy, or inconsistency with other agencies' environmental requirements. Where adverse environmental impacts are likely to occur as a result of the project, the level of analysis should be sufficient to define the extent of the impact, identify appropriate mitigation measures and address known and foreseeable agency and public concerns.

At a minimum, the CE documentation would include the following:

- Description of the existing conditions, including the immediate surrounding area;
- Description of the proposed action, and if possible the approximate length of the proposed improvement;
- Discussion of any specific areas of concern, such as wetlands, relocations or Section 4(f);
- A list of other Federal actions required for the proposal; and
- Any concurrence letters from the State Historic Preservation Officer or SHPO (for archaeological and/or historic architectural resources) and U.S. Fish and Wildlife Service (for endangered species).

The documentation should also address unusual circumstances associated with the project, if any. Where there are unusual circumstances, TDOT should undertake sufficient early coordination with agencies, public involvement and environmental studies to determine whether there is the potential for significant impacts. If it is determined that the project is not likely to have significant impacts, the results of the environmental studies, coordination and public involvement should adequately support that conclusion and should be included in the CE documentation that is submitted to FHWA. The CE documentation may be in a letter format or a report format that is transmitted via letter to FHWA. The transmittal includes a cover letter signed by the Environmental Division Director or the Director's designee. TDOT has developed an electronic template for the D-list CE, which will replace the letter or report format.

3.5.3 Programmatic CEs

Some types of projects are processed programmatically. In 1997, FHWA and TDOT entered into a "Programmatic Categorical Exclusion Agreement," in which TDOT and FHWA agreed in advance with the classification of certain projects as identified in 23 CFR Part 771.117(d) as CEs, if the project satisfies the following conditions:

1) The action does not have significant environmental impacts as described in 23 CFR 771.117(a).
2) The action does not involve unusual circumstances as described in 23 CFR 771.117(b).
3) The action does not involve the following:
    a. The acquisition of more than minor amounts of right-of-way or temporary easements.
    b. The displacements of any commercial or residential occupants.
    c. The use of properties protected by Section 4(f), 49 USC 303.
    d. A determination of adverse effect by the SHPO.
    e. A U.S. Coast Guard construction permit or an individual U.S. Army Corps of Engineers Section 404 permit.
    f. Work encroaching on a regulatory floodway or work affecting the base floodplain (100-year flood) elevations of a water course or lake.
    g. Construction in, across or adjacent to a river designated as a component of the National System of Wild and Scenic Rivers.
    h. Work in wetlands.
    i. A change in access control.
    j. A known hazardous material site within the proposed right-of-way.

4) The action conforms to the State Implementation Plan (SIP) in air quality nonattainment areas.

5) The action does not involve federally listed threatened or endangered species or their critical habitat.

These programmatic CEs are completed by documenting in the Environmental Division files that all of the above conditions are met. All determinations made by TDOT under this programmatic classification shall be documented and made available for FHWA review upon request. TDOT has developed an electronic template for use in documenting a Programmatic CE.

3.5.4 Unusual Circumstances

According to 23 CFR 771.117(b), an individual action that would normally be classified as a CE might involve unusual circumstances that would require undertaking certain environmental studies to determine whether a CE classification is appropriate. That decision would be made by FHWA based on input from TDOT. Such unusual circumstances include:

1) *Significant environmental impacts;*

2) *Substantial controversy on environmental grounds;*

3) *Significant impact on properties protected by Section 4(f) of the DOT Act or Section 106 of the National Historic Preservation Act; or*

4) *Inconsistencies with any federal, state, or local law, requirement or administrative determination relating to the environmental aspects of the action.*

3.6 Environmental Assessments

An Environmental Assessment (EA) is prepared when the proposed project does not meet the requirement of a CE, and when the significance of its impacts is uncertain. Actions that are not Class I (EIS) or Class II (CE) fall under the Class III (EA) classification.

If during the preparation of an EA, it is apparent that the project will have significant effects, an EIS should commence immediately. The FHWA may utilize an EA to determine whether the potential impacts are to a level significant enough to warrant completion of an EIS or issuance of a Finding of No Significant Impact (FONSI).

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4.0 EARLY COORDINATION

Early coordination with other federal, state and local agencies and with the public is an essential ingredient in the project development process, the CSS approach and the NEPA process. Early coordination helps in determining the appropriate level of documentation, developing the project's purpose and need discussion, determining alternatives, and identifying issues of concern, the scope of the environmental resources that would be affected by the project, permit requirements, possible mitigation measures, and opportunities for environmental enhancements. Early coordination needs to begin before the NEPA process is initiated, as part of the early project development process. Coordination should occur during the development of long range transportation plans by Metropolitan Planning Organizations (MPOs), and should follow through into the NEPA process.

This task includes coordination with agencies such as the Tennessee Department of Environment and Conservation (TDEC), U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (FWS), other federal and state agencies and local governments. It also may include coordination with quasi-public agencies, private organizations, and individuals that might be affected by or are identified as being interested in the project.

Described in this chapter are the coordination requirements of the new environmental review process mandated by SAFETEA-LU for EIS documents, the NEPA mandated Notice of Intent and scoping process, the Environmental Division's initial coordination process, and the Tennessee Environmental Streamlining Agreement (TESA) process. The chapter also defines the concepts of lead agency, cooperating agency, and participating agency.

4.1 Environmental Review Process

SAFETEA-LU's Section 6002 - Efficient Environmental Reviews for Project Decision-making prescribed a new environmental review process for highway, public transportation capital, and multimodal projects. The new review process is mandatory for projects that are undergoing an EIS level of investigation and optional for those undergoing an EA level of investigation. (TDOT has elected to apply this review process to EAs as well as EISs.) The new process specifies changes from NEPA procedures that were in effect prior to August 11, 2005. All highway and transit EISs for which the Notice of Intent (NOI) was published on or after August 11, 2005, must follow the new process, while highway and transit EISs for which an NOI was published prior to August 11, 2005 may continue as "grandfathered" under prior law.

4.1.1 Project Initiation

The environmental review process is initiated by transmittal of a letter by the project sponsor (TDOT) to FHWA describing the type of work, termini, length and general location of the proposed project prior to the publication of the Notice of Intent (NOI). The letter is sent to the FHWA Division Administrator and is signed by the TDOT

official authorized to sign EIS documents. While the timing of the notification letter is flexible, it would normally be sent to FHWA prior to the publication of the NOI.

4.1.2 Participating Agencies

The new review process specifies a new category of agencies to be invited to participate in the NEPA process starting at the earliest possible time. "Participating" agencies may include federal, regional, state, local, or tribal agencies that reasonably may be expected to have an interest in a project, but would not include nongovernmental agencies or private groups. (See Section 4.3.4.4 below for more discussion on participating agencies.)

4.1.3 Opportunities for Involvement in Purpose and Need and Alternatives Definition

The new review process also requires an "opportunity for involvement" for participating agencies and the public in defining the project purpose and need and the range of alternatives. These opportunities can occur early in the transportation planning process or later, during the early coordination and scoping process. The opportunities must be widely publicized, in the form of public workshops or meetings, solicitations of verbal or written input, conference calls, postings on the Internet, distribution of printed materials or other public involvement techniques. The opportunity must be provided prior to the lead agencies' final decision regarding purpose and need, and prior to the final decision regarding the range of reasonable alternatives to be evaluated, respectively.

Under SAFETEA-LU's new environmental review process, TDOT must also give participating agencies the opportunity to provide input into the methodologies and level of detail to be used in the analysis of alternatives; this can be accomplished on a project by project basis, in a programmatic way, or on a regional basis.

4.1.4 Coordination Plan

SAFETEA-LU also requires the establishment of a plan for coordinating public and agency participation and comment during the environmental review process. Coordination plans are developed early in the environmental review process, and should outline how FHWA and TDOT have divided the responsibilities for compliance of the various aspects of the environmental review process, and how opportunities for input from the public and other agencies are to be provided. The plan should also identify key coordination points, such as:

- Notice of Intent (NOI) publication and Scoping activities;
- Development of purpose and need;
- Identification of the range of alternatives;
- Collaboration on impact assessment methodologies;
- Completion of the DEIS;

- Identification of the preferred alternative and level of design detail;
- Completion of the FEIS;
- Completion of the ROD; and
- Completion of permits, license, or approvals after the ROD.

Prior to the enactment of SAFETEA-LU, FHWA policy required a negotiated schedule for the NEPA process for all EIS and EA projects. This FHWA policy remains in effect and is further strengthened by the law. SAFETEA-LU encourages, but does not require, the inclusion of a project schedule in the coordination plan. For FHWA projects, all EIS coordination plans must include a project schedule. When the lead agencies include a project schedule in the coordination plan, that schedule must be prepared in consultation with each participating agency, the project sponsor, and the State. The schedule should include decision-making deadlines for each agency approval, such as permits, licenses, and other final decisions, consistent with statutory and regulatory requirements, in order to encompass the full environmental review process.

TDOT's current Public Involvement Plan and the public and agency participating requirements of SAFETEA-LU should be used to develop a project-specific public and agency involvement plan, if required. See Chapter 7, *Public Involvement Process*, for more information and a link to the 2007 updated TDOT *Public Involvement Plan*.

SAFETEA-LU's new environmental review process also allows for the incorporation of the coordination plan into a Memorandum of Understanding (MOU) that is applicable to a single project or a category of projects. The TESA process, discussed below in Section 4.5, is intended to be a MOU for all major transportation projects in Tennessee, regardless of funding source.

4.2 Notice of Intent and Scoping

4.2.1 Notice of Intent

As soon as practical after the FHWA determines that an EIS is the appropriate class of NEPA documentation for a project, TDOT, with assistance from the FHWA, will write a Notice of Intent (NOI) to Prepare an Environmental Impact Statement. The NOI is a requirement of the CEQ regulations (40 CFT 1501.7). The NOI initiates the mandated scoping process for all EISs.

The NOI provides a short description of the project, the proposed action and preliminary alternatives. The NOI also describes the scoping process, identifies any upcoming formal public meetings that are associated with the project, and includes the name, address and phone number of a TDOT contact person. The Environmental Division will generally prepare the NOI with assistance from the FHWA. FHWA will send the NOI to the FHWA Washington Office for submittal to the *Federal Register*. The FHWA Technical Advisory T 6640.8A contains guidelines for

preparing and processing NOIs, as well as provides sample NOIs (see Appendix D to this manual). A more recent document entitled, *Federal Register Document Drafting Handbook* (October 1998 revision), provides detailed instructions on preparing Notices for the Federal Register. It can be found at: http://www.archives.gov/federal-register/write/handbook/

4.2.2 Scoping

Section 1501.7 of the CEQ regulations describes the scoping process. Scoping is a process, not just a meeting or an event. It may involve one or more meetings with agencies and/or the public, as a part of the process. Scoping is intended to help determine the scope of the NEPA document (i.e., what will be covered in the document and in what amount of detail). It has specific and fairly limited objectives:

- To identify the affected public and agency concerns;
- To define the issues and alternatives that will be examined in detail in the EIS while simultaneously devoting less attention and time to issues that cause little or no concern; and
- To save time in the overall process by helping to ensure that the environmental document adequately addresses relevant issues, reducing the possibility that new comments will cause a statement to be rewritten or supplemented.

Scoping can be conducted by letter, phone or formal meeting. Formal scoping meetings are not required by CEQ or the FHWA guidelines and regulations.

However, scoping meetings can be helpful in obtaining information about the project area, existing resources, and issues of concern. One or more meetings may be held with public agencies, organizations and interested individuals. If TDOT decides to hold a scoping meeting, notification is made through any combination of the following: the distribution of the initial coordination package, legal notices in local papers, publicity in local print and other media, telephone contacts and the TDOT website. The planner responsible for the NEPA document will work to accomplish this notification with TDOT's Community Relations Division The meeting publicity and format will follow the public meeting guidelines summarized in Chapter 7, *Public Involvement*, and fully outlined in TDOT's latest Public Involvement Plan, which is available on TDOT's website (http://www.tdot.state.tn.us/documents/pip.pdf).

Scoping meetings and initial coordination packages create opportunities for the early input and involvement in the development of purpose and need and identification of alternatives, as mandated by SAFETEA-LU Section 6002 and promoted in the Department's CSS Statement of Commitment.

4.3 Coordination Packages

TDOT initiates coordination with agencies and the public for a project as one of the earliest tasks in the NEPA process for EA and EIS projects. A key element in early

coordination is the preparation of a package of information describing the project. This package, containing a transmittal letter, a project description and a map of the project area, is prepared by the planner for distribution to various agencies, organizations and individuals that are expected to have an interest in the project. The information obtained through the early coordination process is used to help determine the alternatives and the issues that will be examined in the EA or the EIS. While there is an initial effort to include all potentially interested agencies early in the project process, if other agencies are identified as the project progresses, coordination packages should be modified with current information and sent to those additional agencies as soon as possible.

The components of the early coordination packages are:

- Project Data Summary Sheet (discussed below in Section 4.3.1)
- Project Location Map
- Transmittal letter

4.3.1 Project Data Summary Sheet

The Project Data Summary Sheet is prepared to provide agencies and the public with information on the proposed project. At this stage, detailed information on project impacts is generally not known; thus the summary sheet should only state what types of impacts might be anticipated.

The Project Data Summary is brief, typically two to five pages in length. It may be accompanied by a summary table. A sample Project Data Summary can be viewed in Appendix E, Figure E-10.

The following items are typically presented in the Project Data Summary Sheet:

- Project Description – including route name and number, termini, length of proposed improvements, and alternatives to be studied;
- Project Purpose - including discussion of deficiencies such as safety and level of service;
- Traffic – including average daily traffic for base year and design year, and percentage of trucks;
- Description of Study Area – including identification of counties and cities in which the project occurs, topography and types of land use;
- Description of the Build Alternative(s) – including typical cross sections, functional classification of existing and future roadways, and modal connections;
- Environmental, Social and Economic Categories – including a brief discussion of known issues that will be studied in the NEPA document. The discussion may include, but is not limited to, the following categories:

- Land Use
- Air Quality
- Noise
- Hydrological
- Ecological
- Social and Economic
- Utilities and Community Services
- Farmland
- Visual and Aesthetic
- Cultural Resources
- Hazardous Materials

4.3.2 Exhibits

Two exhibits usually accompany the Project Data Summary Sheet: a Vicinity Map and a Project Location Map. However, map insets can be used to show the project in its area context, eliminating the need for a separate vicinity map. An example of an initial coordination project map, with an inset map, is in Appendix E, Figure E-11. The Vicinity Map can be prepared on a TDOT county map base with the study area highlighted. The Vicinity Map should have a title, indicating the project name and the county in which the project is located, a scale and a north arrow.

The Project Location Map is generally developed using a USGS map or other mapping in an urban area, and should show the project's termini, the location of the existing facility and the location of the build alternatives. The Project Location Map should clearly identify existing route names and numbers, the county name, and should include a title, a scale and a north arrow.

4.3.3 General Transmittal Letter

Accompanying the Project Data Summary Sheet and exhibits is a transmittal letter. This letter is addressed to representatives of agencies and organizations and to individuals. The transmittal list is discussed in Section 4.3.5.

The letter should include the following types of information:

- Identification of the project under consideration;
- Reference to the summary sheet and exhibits;
- Statement that this package is intended to initiate the scoping or early coordination process;
- Statement that the project is in the initial stages of planning;
- Request for the agency, organization or individual to provide information on any projects that would be affected by the proposed project, or any areas that would require special consideration; and

- Request for the recipient to provide comments, suggestions and information. The letter will indicate the number of days within which the recipient is asked to respond and where the response should be sent.

These letters are also used to request agencies to serve as cooperating and/or participating agencies and to request review of the project's Coordination Plan.

For assistance in compliance with Title VI of the Civil Rights Act, the transmittal letter to local officials also includes a request to contact any local interest group that may be affected.

The letters are prepared on Environmental Division letterhead and are generally signed by a Manager II in the Environmental Division NEPA Documentation Office.[1] The individual letters should be personalized using an electronic mail merge process.

Samples of the coordination transmittal letters are provided in Appendix E as Figures E-1 and E-2.

4.3.4 Special Initial Coordination Letters

Three other types of required initial coordination letters are described below:

- Farmland Coordination with the Natural Resource Conservation Service (NRCS), U.S. Department of Agriculture;
- Section 106 Initial Coordination; and
- Cooperating and Participating Agencies.

4.3.4.1 Farmland Initial Coordination with the Natural Resource Conservation Service

The farmland impact assessment is undertaken by the planner or consultant and is coordinated with the state office of the Natural Resource Conservation Service (NRCS) at the initial coordination stage. Guidance on coordination with NRCS is available in FHWA's Environmental Guidebook on the FHWA website: http://environment.fhwa.dot.gov/guidebook/chapters/v1ch5.asp

The planner or consultant must complete Parts I and III of the Farmland Conversion Impact Rating form (Form AD-1006) for this submission. This form and the instructions for completing it can be found at: http://www.nrcs.usda.gov/programs/fppa/AD1006.PDF

[1] If the project is being conducted by a local government, the planner or consultant should clarify with the local government official and the TDOT Environmental Division regarding which agency should send the early coordination letters.

Available plans (functional or other) are used to calculate the amount of right-of-way that may be needed for the project from non-developed lands pursuant to the NRCS instructions.

In the mailing to NRCS, TDOT will include a cover letter requesting completion of the AD-1006 form by the NRCS, a copy of the AD-1006 form with Sections I and III completed, and a map(s) indicating locations of project alternatives. The mailing is sent to the NRCS office (their address is on the Environmental Division's initial coordination list). Mapping can be USGS quadrangle maps with the alignment shown or TDOT's functional plans. If functional plans are utilized, a map should also be included that shows the project in the context of the county. The additional steps involved in the farmland coordination process are described in Chapter 5, Section 5.3.10.5. A sample initial coordination letter to NRCS and a copy of the AD-1006 form are in Appendix E, Figures E-8 and E-9, respectively.

4.3.4.2 Section 106 Initial Coordination

The National Historic Preservation Act requires the FHWA or its designee (in this case TDOT) to identify the appropriate parties that need to be involved in the process of identifying effects of a proposed project to historic resources and working through the process with such parties. This "involvement" is referred to as "consultation."

Generally, the first outreach effort to the State Historic Preservation Office (SHPO), Native American tribes that are recognized within the state, local government, and known parties with historic preservation interests occurs in the NEPA early coordination stage.[2] At that time, the Environmental Division cultural resource staff will prepare or will assist the planner or consultant in preparing a special Section 106 initial coordination mail-out. A list of parties with historic preservation interests is sorted by county and is available from the TDOT Historic Preservation Program Manager. The letter to Native American tribes will be sent out by the TDOT Archaeology Program Manager.

The mail-out package includes a cover letter requesting the recipient to provide comments on the project and its potential impacts to architectural/historical and archaeological resources, the Project Data Summary Sheet (discussed in Section 4.3.1) and Project Location Maps.

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[2] It may be desirable to conduct coordination with the SHPO earlier than NEPA early coordination, in either the Transportation Planning Report (TPR) process or Context Sensitive Solutions (CSS) process, for example, for projects that have not progressed into the NEPA process.

The Section 106 outreach and coordination that occur after the early coordination efforts are discussed in Chapter 5, Section 5.3.2.1. Examples of Section 106 Initial Coordination letters are in Appendix E, Figures E-5, E-6, and E-7.

4.3.4.3 Cooperating Agencies Invitation

Typically at the early coordination stage, TDOT knows which agency or agencies should participate in the project planning process as a NEPA cooperating agency. As described in Section 4.4.2 below, "cooperating agencies" are those governmental agencies specifically requested by the lead agency to participate during the environmental evaluation process.

If the project will likely have permitting or other involvement with federal agencies, such as the U.S. Army Corps of Engineers, the Tennessee Valley Authority, the U.S. Coast Guard or the National Forest or Park Service, the agency should be requested during early coordination to participate in project planning as a NEPA cooperating and participating agency. A sample letter is in Appendix E, Figure E-3. The mail-out should include the Project Data Summary Sheet (discussed in Section 4.3.1) and Project Location Maps.

Federal agencies that decline to be a cooperating agency must do so in writing.

4.3.4.4 Participating Agencies Invitation

Also during the initial coordination stage, TDOT works with FHWA to identify those federal, state, tribal, regional and local government agencies that have special interest or expertise related to the project (see Section 4.4.3). A participating agency letter is sent to those agencies, requesting that they respond in writing with an acceptance or denial of the invitation within 45 days. If a federal agency chooses not to be a participating agency for the project, the agency must state the reason for declining the invitation. Tribal, state, regional and local agencies must respond in the affirmative to the invitation to be a participating agency; if the non-federal agency fails to respond by the stated deadline, the agency should not be considered a participating agency. A sample letter is in Appendix E, Figure E-4.

4.3.5 Coordination List

The Environmental Division maintains a coordination list. This list includes the names of federal, state and other agencies (such as regional planning agencies) and local governments that TDOT will coordinate with for this project. The list also includes private organizations and individuals who have requested to be included in initial coordination. Persons and agencies on the list will receive the initial coordination package, and later may receive the approved EA or DEIS for review and comment. As appropriate, persons and agencies on this list will also receive other correspondence related to the project.

Over the years, TDOT has compiled a broad list of federal, state, local and other agencies, private organizations and individuals from which the project-specific coordination list is prepared by the planner or consultant. This broad list is continually updated as new officials are elected, as agency representatives and

addresses change, and as new organizations request to be added to the list. The following federal agencies and offices are generally included. Many of these would likely serve as participating agencies:

- Tennessee Valley Authority
- U.S. Department of the Interior
  - Office of Environmental Policy and Compliance
  - U.S. Fish and Wildlife Service
  - National Park Service
  - U.S. Geological Survey, Water Resources Division
  - Bureau of Mines
  - Southeast Region
- U.S. Department of Commerce
- U.S. Department of Agriculture
  - Natural Resource Conservation Service
  - Forest Service
- U.S. Department of Housing and Urban Development
- U.S. Department of Transportation
  - Federal Aviation Administration
- U.S. Environmental Protection Agency
- U.S. Army Corps of Engineers
- Appalachian Regional Commission (for ARC counties[3])
- Federal Energy Regulatory Commission
- Federal Railroad Administration

The following Tennessee State agencies are generally included:

- State Planning Office
- Department of Economic and Community Development
- Department of Mental Health and Mental Retardation

[3] ARC counties in Tennessee are Anderson, Bledsoe, Blount, Bradley, Campbell, Cannon, Carter, Claiborne, Clay, Cocke, Coffee, Cumberland, De Kalb, Fentress, Franklin, Grainger, Greene, Grundy, Hamblen, Hamilton, Hancock, Hawkins, Jackson, Jefferson, Johnson, Knox, Lawrence, Lewis, Loudon, McMinn, Macon, Marion, Meigs, Monroe, Morgan, Overton, Pickett, Polk, Putnam, Rhea, Roane, Scott, Sequatchie, Sevier, Smith, Sullivan, Unicoi, Union, Van Buren, Warren, Washington, and White.

- Department of Health and Environment
- Department of Environment and Conservation
- Department of Agriculture
- Department of Education
- Tennessee Wildlife Resources Agency

Local and regional agencies would include county mayors, city mayors and/or city managers, town administrators, local planning agencies, Metropolitan Planning Organizations (MPOs), Rural Planning Organizations (RPOs), and Development Districts.

Private organizations that have expressed an interest in being included in the initial coordination list include:

- Tennessee Trails Association
- Tennessee Scenic Rivers Association
- Tennessee Chapter of Sierra Club
- Tennessee Environmental Council
- Tennessee Conservation League
- World Wildlife Fund
- Nature Conservancy

In addition, various private individuals have expressed an interest in knowing about proposed projects.

The Environmental Division maintains and updates the overall coordination list of agencies, organizations and individuals, and that latest list should be consulted as the project specific coordination list is being compiled. At the coordination package stage of project development, the planner or consultant leading the NEPA document preparation develops the project-specific list by selecting those agencies, organizations and persons that are likely to be interested in the project and/or are located in the geographic area of the project. The project-specific list is likely to be amended as the project proceeds, with the addition of other individuals, groups and/or agencies.

The Environmental Division also sends copies of the package to other offices and divisions within TDOT, such as the Civil Rights Office, Aeronautics Division, and the Multimodal Transportation Resources Division.

The planner must prepare a package of information for the early coordination efforts and submit it to the FHWA Division Office. The package will state that the

coordination package has been sent out and the date that it was sent. The package should include a sample letter, the mailing list and a copy of the Project Data Summary Sheet and exhibits.

4.4 Lead, Cooperating, and Participating Agencies

The 1978 CEQ regulations (40 CFR 1501) introduced the concepts of lead agency and cooperating agency. SAFETEA-LU Section 6002 introduced the concept of participating agencies. The purpose of these designations is to assist with early coordination and faster and better processing of the NEPA environmental evaluation and documentation.

4.4.1 Lead Agencies

The lead agency has the responsibility to supervise the preparation of the environmental document when more than one federal agency is called upon to take action on the same project. Federal, state and/or local agencies, including at least one federal agency, may act as joint lead agencies. FHWA is the federal lead agency when federal transportation funding is used for the project. Projects that are developed under the SAFETEA-LU environmental review process (typically only EIS documents) may have joint lead agencies. TDOT as the project sponsor for transportation projects in Tennessee receiving federal-aid funds is a joint lead agency.

4.4.2 Cooperating Agencies

The lead agency should request all other federal agencies that have an action on the project, including permitting, to become cooperating agencies. Cooperating agencies are those governmental agencies specifically requested by the lead agency to participate during the environmental evaluation process. FHWA's NEPA regulations (23 CFR 771.111(d)) require that those federal agencies with jurisdiction by law or special expertise be requested to be cooperating agencies for EAs and EISs. Examples of agencies requested to be cooperating agencies are:

- U.S. Army Corps of Engineers when a Section 404 permit is involved;
- U.S. Coast Guard when a Section 9 bridge permit is involved;
- Tennessee Valley Authority when a Section 26a permit is needed;
- USDA Forest Service when a land transfer in a National Forest is required; and
- National Park Service (NPS), when the project may impact NPS property.

Potential cooperating agencies may also include any other federal agency with special interest or expertise needed for the specific project, Indian tribes when Indian reservation land is involved, or local governments.

As discussed above, the early coordination phase is the time to identify potential cooperating agencies and request their participation as a cooperating agency under NEPA for the subject project. Generally, TDOT decides on FHWA's behalf which agencies should be invited to be cooperating agencies for a specific project. A separate cooperating agency letter is prepared by the Environmental Division planner, as a part of initial coordination. Through the letter, TDOT and FHWA request the agency to serve as a cooperating agency for the project. A Federal agency that declines to be a cooperating agency for a specific project must respond in writing.

The role of a cooperating agency is not necessarily to perform the analysis or provide any substantive narrative for the NEPA documentation, although the agency may in rare circumstances choose to provide their expertise by contributing to specific sections of the document. At the beginning of their involvement, the expectations and responsibilities of a cooperating agency should be clearly understood by the agency, FHWA and TDOT. When a cooperating agency has jurisdiction by law, that agency's role should be acknowledged in the environmental documentation. While a cooperating agency does not have to agree with every word in the environmental documentation, it should be in a position at the end of the process to state that the final document fulfills that agency's responsibilities under NEPA (FHWA, August 21, 1992, *Transportation Decision Making: Project Development and Documentation Overview, Chapter II Environmental Documents, Early Coordination*, page 4 of 11).

4.4.3 Participating Agencies

SAFETEA-LU (Section 6002) created a new category of agencies to participate in the environmental review process for EISs. During the early planning for the EIS, TDOT and FHWA must identify Federal and non-Federal governmental agencies that may have an interest in the project. These participating agencies are formally invited to participate in the environmental review of the project. One or more of these agencies may also be a cooperating agency for the project. Cooperating agencies are, by definition, participating agencies, but not all participating agencies are cooperating agencies. Cooperating agencies have a slightly higher degree of authority, responsibility and involvement in the environmental review process. Cooperating agencies are agencies with jurisdiction by law or with special expertise, while participating agencies are those with an interest in the project. Non-governmental organizations and private entities cannot serve as participating agencies.

Designation as a participating agency does not imply that the agency either supports the proposal or has any special expertise with respect to evaluation of the project. The role of a participating agency is to identify, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts

that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. Specifically, participating agencies are asked to:

- Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in alternatives analysis;
- Participate in coordination meetings and joint field reviews as appropriate; and
- Provide timely review and comment on the pre-draft or pre-final environmental documents to reflect the views and concerns of the agency on the adequacy of the document, alternatives considered, and the anticipated impacts and mitigation.

If an agency chooses not to be a participating agency for this project, it should respond back to TDOT stating the reason for declining the invitation. Pursuant to SAFETEA-LU Section 6002, any Federal Agency that chooses to decline the invitation must specifically state that the agency:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

If a Federal agency does not respond that they do not wish to be a participating agency, then TDOT and FHWA will treat them as a participating agency, until such time that the Federal agency specifically declines.

A non-Federal agency (state, local or Tribal) must respond affirmatively to the invitation in order to be designated as a participating agency. If the non-Federal agency fails to respond or declines the invitation, regardless of the reasons for its declination, the agency should not be considered a participating agency.

The participating agencies will have defined opportunities for meaningful participation in the decision-making process for the project. Specific opportunities are provided via the TESA process for the four key agency concurrence points (defined below in Section 4.5). Participating agencies that are not a part of the formal TESA process will receive Purpose and Need and Study Area, and the Alternatives to be

Considered packages, but will not be expected to concur with any decisions included within the package. Non-TESA participating agencies will instead be requested to provide input and/or comments on any issues or concerns. Non-TESA participating agencies will receive copies of the approved EA or DEIS once the document is approved by FHWA for circulation.

4.5 Tennessee Environmental Streamlining Agreement

In late 2004 and early 2005, TDOT and FHWA conducted a series of workshops to discuss improved interagency coordination and better integration of the resource and regulatory agencies and the Metropolitan Planning Organizations (MPOs) throughout the transportation project development process. The result of the meetings and discussion was the development of the Tennessee Environmental Streamlining Agreement (TESA) for the Environmental and Regulatory Coordination of Major Transportation Projects. The TESA applies to all major transportation construction projects in Tennessee, regardless of project funding source, that are administered by TDOT and require an EIS or an EA. It also applies to major projects requiring a Tennessee Environmental Evaluation Report (TEER) (see Chapter 10).

In addition to TDOT and FHWA, the parties to the TESA are:

- U.S. Army Corps of Engineers, Nashville District (USACE – Nashville District)
- U.S. Army Corps of Engineers, Memphis District (USACE – Memphis District)
- U.S. Fish and Wildlife Service (FWS)
- U.S. Environmental Protection Agency, Region 4 (EPA)
- Tennessee Valley Authority (TVA)
- USDA Forest Service (USDA), Cherokee National Forest
- Tennessee Department of Environment and Conservation (TDEC)
- Tennessee Wildlife Resources Agency (TWRA)

The Tennessee State Historic Preservation Office (Tennessee SHPO) is not a party to TESA at this time but does receive concurrence packages to review.

In addition to the agencies listed above that currently participate in the TESA process, TDOT anticipates involvement by the following parties in the TESA process in the future:

- National Park Service (NPS)
- U.S. Coast Guard (CG)
- Metropolitan Planning Organizations (MPOs)

The streamlined environmental process is intended to achieve timely and efficient identification, evaluation, and resolution of environmental and regulatory issues. This agreement establishes “one decision-making process” to identify and address agency issues at four key points, termed concurrence points, during the planning and NEPA process for major projects. TESA requires concurrence from each of the signatory agencies at the following four stages of project development:

1. The determination of purpose and need for the project and potential project impact area;
2. The development of project alternatives to be evaluated as part of the environmental review document;
3. The draft of the environmental (EA or DEIS) document; and
4. The selection of a preferred project alternative which will include proposed means of mitigating environmental impacts.

The location of these concurrence points in the work flow for an EA, an EIS, and a TEER is shown in Figures 1.3, 1.4 and 1.6, respectively, in Chapter 1.

Under TESA, the following steps will take place:

- **Determine Project Environmental Constraints** – including preparation of a Transportation Planning Report (TPR) to identify environmental constraints and initiating consultation with any affected tribes.
- **Provide Project Notification** – upon completion of the TPR, by sending an early notification package to the signatory agencies
- **Agree to Participate in the Project Environmental Review** – in which agencies have 45 days from receipt of the Early Notification Packet to determine whether to participate in the project.
- **Determine Environmental Document Type** – during which TDOT submits a recommendation for the type of document to be prepared and FHWA reviews the request.
- **Determine Timeline for Completing the Document** – in which TDOT submits a draft recommendation that is reviewed by FHWA.
- **Develop Purpose and Need and Study Area Package** – for submittal to the participating agencies.
- **Concurrence Point 1** – within 45 days of receipt of Purpose and Need and Study Area Package, participating agencies provide a response to the purpose and need, level of NEPA document, as well as input on environmental features, resources of concern, and potential alternatives.
- **Public Scoping** – including preparation of a Notice of Intent.
- **Identify Project Alternatives to Be Evaluated** – based on output from Concurrence Point 1 and any general alternatives analysis conducted by TDOT and development of a Project Alternatives Review Package for submittal to the participating agencies.
- **Concurrence Point 2** – within 45 days of receipt of the Alternatives Review Package, the participating agencies provide a response on the

alternatives to be carried forward and input on scopes and methodologies of detailed technical studies.

- **Conduct Detailed Analysis of Alternatives** – based on output from Concurrence Point 2, TDOT prepares a Preliminary Draft Environmental Document (EA, EIS or TEER) and forwards a copy to the participating agencies.
- **Concurrence Point 3** – within 45 days of receipt of the Preliminary Draft Environmental Document the participating agencies review the document and respond to its adequacy.
- **Draft Environmental Document** – based on output from Concurrence Point 3, TDOT finalizes the EA or DEIS for approval by FHWA (or finalizes the draft TEER) and holds public hearings.
- **Determine Preferred Alternative and Mitigation Measures** – based on output from Concurrence Point 3 and any public hearings, TDOT prepares a Preferred Alternative and Mitigation Package that is forwarded to the participating agencies.
- **Concurrence Point 4** – within 45 days of receipt of the Preferred Alternative and Mitigation Package, the participating agencies review and provide their concurrence on the selection of the preferred alternative and preliminary mitigation.
- **Prepare Final Environmental Document** – based on output from Concurrence Point 4, TDOT prepares the Finding of No Significant Impact, FEIS, or Final TEER for appropriate approvals.
- **Applications for Applicable Permits** – based on the final environmental document, TDOT prepares all necessary applications for all applicable permits.

With prior concurrence by each agency, the need and application for environmental permits should become an extension of earlier joint decisions. This, in turn, will facilitate the processing of these permits. The new approach is intended to achieve the timely and efficient identification, evaluation and resolution of environmental and regulatory issues.

The TESA agreement has been signed by TDOT, TDEC, FHWA, USACE, EPA, TVA, TWRA, USFWS, and USFS. TDOT continues to work with several of the signatory Resource/Regulatory Agencies to reach agreement on an individual agreement outlining specific responsibilities and, as appropriate, funding of supplemental staff and/or other operational costs. A signing ceremony with the agencies was held on September 16, 2008.

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5.0 IMPACT ANALYSIS

For all NEPA (and TEER) documents, some level of data collection/records review, technical studies and impact analysis is required. The chapter begins by defining the types of impacts (direct, indirect and cumulative) that may result from a project. Next the chapter describes the process for a records check that should be completed early in project planning to assist in identifying important environmental issues that warrant consideration in the highway location phase. The bulk of this chapter discusses the individual technical studies and analyses that are required for the environmental documentation of a project, including analyses to meet the requirements of Section 106 of the National Historic Preservation Act, Section 4(f) of the Department of Transportation Act and Section 6(f) of the Land and Water Conservation Fund Act.

The timing for undertaking the analyses and technical studies outlined in this chapter may differ from project to project. It is, however, TDOT's intention to start "environmental screening" at the earliest phases, once the preliminary purpose and need and study area are defined, before the EA, EIS or TEER document is initiated. (see Figures 1-3, 1-4 and 1-6 in Chapter 1). Under the Context Sensitive Solutions (CSS), Needs Assessment, and the Transportation Planning Report (TPR) processes, environmental screening occurs early in project planning to identify issues that must be considered in establishing the project location. Initially the screening may be conducted as a desktop records check supplemented by a windshield survey or field reconnaissance by knowledgeable technical staff. The screening process helps with early identification of important resources that must or should be avoided by the project. By laying out on a constraints map the information gathered in the screening process, roadway designers and the public can see the environmental factors that must be considered in defining alternatives or options to address the transportation needs. The full scope of field work for technical areas occurs once project alternatives or options have been identified.

The timing of the tasks discussed in this chapter may also be influenced by any critical issues that are identified early in project planning. These issues may be known by project planners or may have been brought to the attention of planners by local government or the public. Sometimes these issues will require early, in-depth studies or agency coordination to enable TDOT to proceed with identifying the location for a project. Examples of such issues are former dump sites, a National Historic Landmark, and parklands.

5.1 Types of Impacts

This section begins with a definition of the term, "impact." It then discusses the why (regulatory), who (applicable TDOT staff or consultant) and how (study and coordination process) of impact analyses conducted as part of the NEPA process for a proposed transportation project.

5.1.1 Definition of Impact

NEPA requires federal agencies to consider environmental issues prior to making any major decisions on federally-funded or permitted projects. To understand a project's potential benefit or harm to the environment, NEPA requires an assessment of potential impacts to the environment. Different types of impacts and different impact levels (i.e., significant or not significant) must be examined in this evaluation. As discussed in Chapter 3, the level of impact or potential impact is often the determining factor in the selection of the appropriate NEPA document for a project. Many of the technical areas have federal regulations and/or guidance that define "impact." The term "effect" may be used interchangeably with "impact."

Three types of impacts are addressed under NEPA and many other environmental regulations:

- Direct;
- Indirect (or Secondary)[1]; and
- Cumulative.

Table 5-1 shows the information that is fed into each type of impact analysis.

Table 5-1 Summary of Direct, Indirect and Cumulative Impacts

Type of Effect	Direct	Indirect	Cumulative
Nature of effect	Typical, inevitable, predictable	Reasonably foreseeable, probable	Reasonably foreseeable, probable
Cause of effect	Project	Project's direct and indirect effects	Project's direct and indirect effects as well as the effects of other project-related activities
Timing of effect	Project construction and implementation	At some future time after direct effects	Project construction or in the future
Location of effect	Within project impact area	Within boundaries of systems affected by project	Within boundaries of systems affected by project

Source: *A Guidebook for Evaluating the Indirect Land Use and Growth Impacts of Highway Improvements*, Final Report, APR 327, Oregon Department of Transportation and FHWA, April 2001.

[1] The term "secondary impact" does not appear, nor is it defined in either the CEQ regulations or related CEQ guidance. However, the term is used in the FHWA's Position Paper: *Secondary and Cumulative Impact Assessment in the Highway Project Development Process* (April, 1992) but is defined with the CEQ definition of indirect impact (40 CFR 1508.8). FHWA has used the terms interchangeably. For purposes of this guidance, secondary and indirect impacts are used interchangeably.

The level of analysis should be commensurate with the project's impact potential. Indirect and cumulative impacts could even occur before the transportation project is built (i.e., real estate speculators initiating land use actions in anticipation of project construction).

5.1.1.1 Direct Effects

As defined in the CEQ regulations (40 CFR 1508.8(a)), direct effects are those "which are caused by the action and occur at the same time and place."

Examples of Direct Effects

- Property takes or displacements
- Traffic noise
- Alterations to the visual character
- Changes in traffic circulation patterns or access
- Filling or draining wetlands

5.1.1.2 Indirect and Cumulative Impacts

Besides direct and observable effects, in compliance with NEPA and CEQ regulations (40 CFR 1508), the indirect and the cumulative impacts of a project must be determined along with the direct impacts. The degree to which indirect and cumulative impacts need to be addressed in a NEPA document depends on the potential for the impacts to be significant and will vary by resource, project type, geographic location and other factors. This issue should be addressed, particularly when preparing an EIS or an EA, with other agencies and the NEPA participants during early coordination activities or scoping. The issue of indirect and cumulative impacts can be discussed on a resource-by-resource basis, and/or discussed in a separate section in the Impacts Chapter.

The indirect and cumulative impact evaluation addresses more than multiple federal actions. The evaluation includes impacts of past, present and reasonably foreseeable future actions by everyone.

Reasonably Foreseeable

Courts have defined reasonably foreseeable as an action that is sufficiently likely to occur, that a person of ordinary prudence would take into account in making a decision.

The indirect and cumulative analysis focuses on impacts to the human communities as a result of the proposed project and anticipated land use and development trends. The basis of the analysis is local and regional comprehensive development plans and zoning regulations, which are supplemented by census data, aerial photography and interviews with local government. Typically, the sphere of influence is the area within a one-mile radius of the study area boundaries, i.e., the area of analysis for indirect and cumulative impacts is larger than the study area for direct impacts. The project's design year is used for the reasonably foreseeable future time frame since

design year traffic is based on the area's future land use assumptions. The examination of indirect and cumulative consequences should focus on the functional relationships of resources within larger systems.

Guidance on assessing indirect and cumulative impacts can be found on FHWA's website. Particularly useful are FHWA's April 1992 *Position Paper: Secondary and Cumulative Impact Assessment in the Highway Development Process*, which can be found at http://knowledge.fhwa.dot.gov and their January 2003 *Interim Guidance Questions and Answers Regarding the Consideration of Indirect and Cumulative Impacts in the NEPA Process* at http://environment.fhwa.dot.gov/guidebook/qaimpact.asp.

Indirect and cumulative effects, not as easily recognizable as direct effects, are described below.

Indirect Effects

Indirect impacts are defined by 40 CFR 1508.7 as impacts that may be caused by a project, but would occur in the future or outside the project area and are reasonably foreseeable. Indirect impacts may include growth-inducing effects and other effects related to changes in the pattern of land use, population density or growth rate and related effects on air and water and other natural systems.

Examples of Reasonably Foreseeable Actions or Projects

- A project identified in a local or regional comprehensive land use plan;
- A subdivision plat that has been filed with the local government, county or other plat-approving agency;
- Population/development trends that are identified in local or regional comprehensive land use plans;
- Planned transportation improvements by city or county governments;
- Changes in traffic circulation patterns or access; and
- Local or regional infrastructure projects that could impact resources (schools, hospitals, etc.).

Actions that are not usually considered reasonably foreseeable include those that are possible but not likely to occur, and actions that have little or no influence on the transportation decision.

Often, if a project does not have a direct effect on a resource, it will not have an indirect effect on that resource. Occasionally, however, a project may not have a direct effect but it will have an indirect effect. In general, highway projects most commonly result in indirect impacts to land use, community and economic resources, farmland, water resources, water quality, wetlands and terrestrial ecology.

Access control, or lack of it, is a key factor in assessing the potential for indirect impacts. Projects with uncontrolled access alternatives are more likely to result in

indirect impacts. For those alternatives with access controls, the indirect impact focus is generally in the area of the intersections or interchanges.

Meetings with local and regional planners and other appropriate agencies are helpful in determining potential indirect impacts. Environmental resources that can be sensitive to induced change (i.e., indirect impacts) include the social and economic structure of a community, floodplains and area-wide water quality. Analysis of indirect impacts must include identification of outside development pressures to determine the ability of an area to survive the removal of housing, businesses and community services. The analysis also examines whether a community can absorb relocated residents and businesses in terms of social and economic disruption (available housing, public services affected, areas zoned for business use, etc.).

Cumulative Effects

Cumulative impacts are the combined effects of all past, present and reasonably foreseeable projects (not just the current project and not just highway projects) on a given resource (e.g. wetlands), regardless of who has built the project (includes developers, localities, etc., not just state departments of transportation or federal agencies).

Legal Definition of Cumulative Effects

The impacts on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 CFR 1508.7

For cumulative impacts, development that is occurring or slated to occur independent of the project must be identified. Cumulative actions include existing residential, commercial, industrial, agricultural and infrastructure land uses. Cumulative impacts also include anticipated and planned new growth as defined in the indirect impacts section above, as well as the proposed highway and other highway improvements connecting to the proposed highway. Cumulative effects may be undetectable when viewed in the individual context of direct and even indirect impacts, but nonetheless can add to other disturbances and eventually, lead to a measurable environmental change.

If a project will not cause direct or indirect impacts on a resource, it will not contribute to a cumulative impact on the resource.

5.1.1.3 Level of Impact

Different technical areas define levels of impacts in different terms. For example, in noise, impacts are classified as “minor, moderate, or substantial.” For historic resources, impacts are classified as “no historic properties affected, no adverse effect, or adverse effect.” Projects can also have beneficial, as well as adverse impacts.

The determination of impact level must consider both the context and intensity of the impact. These terms are defined in Section 3.1.1, *Significance*. Regarding context, it is important to identify how sensitive the impacted resource is. For example, is it of national, regional, state or local significance? Is it a watershed versus a stream channel? Are a few houses affected or is a whole neighborhood affected?

Regarding intensity, how bad (or good) is the impact? For example, is public health or public safety involved? Is there a high degree of public controversy? Will the project affect a unique or unusual area? Will federally listed species be adversely impacted? Or, will the project have beneficial impacts?

It is important for a planner to use the correct terms when summarizing a technical study or preparing an impact analysis. It is also important to avoid loosely using the terms “significant” or “significantly” to describe impacts in both technical studies and the NEPA document. If an impact is determined to be significant, the determination must be supported by factual information.

5.2 Records Check in Early Project Planning Phase

A desktop records check should be conducted early in project planning, regardless of which development process is followed for a project. An early records check provides a sound basis for developing or refining alternatives for study in the NEPA document. The records check also provides the background information needed to undertake field surveys and assess project impacts.

A preliminary records check should be undertaken during environmental screening, which occurs early in project planning, before alternatives are developed. The Environmental Division NEPA Documentation planner, the Natural Resources Office, the Social and Cultural Resources Office, and/or consultants may participate in the early records check. The records check can identify issues of concern early in the process. For example, a records check could reveal that a National Historic Landmark property or federally-designated Wilderness Area would be bisected by the project corridor.

A thorough records check should be conducted once the purpose and need of the project has been identified in the NEPA process and should be verified throughout the process.

Different types of records can be accessed in different ways. Some records must be manually checked in person at agency offices. Other records are accessible online, and still other records are available via Geographic Information Systems (GIS), allowing data to be electronically linked to geographic points, i.e., maps.

GIS is a useful tool, used by thousands of organizations and hundreds of thousands of individuals to access and manage multiple sets of geographically related information. Available GIS software tools allows the planner to perform complex analysis of the information and map the results in a user-friendly and understandable format. These tasks may consist of the management of data that include social and

economic, land use, floodplain, traffic and accident, utilities, geological, and a host of others. GIS also allows for different types of data to be joined by a common feature for data analysis and mapping purposes.

Data for Tennessee are available through the Tennessee Geographic Information Council website (http://www.tngic.org/geninfo.html). The Tennessee Spatial Data Server provides a number of coverages for the state including county boundaries, county seat locations, city limits, watersheds, detailed streams, 7.5 Minute Series USGS Quadrangle grids, soils, geology, public lands, scenic rivers, and land cover. These data are useful when analysis and mapping is needed on a statewide basis.

Soils, wetlands, digital raster graphics, and 2000 U.S. Census data are all available for each county in Tennessee. Each of these data sets can be useful for data collection, analysis and mapping. Downloadable digital wetlands data are available through the National Wetlands Inventory website (http://www.fws.gov/nwi/). Land use and zoning data may be found in a GIS format in most, but not all, urbanized areas.

The above tools can be used to give a visual sense, or "snapshot", of the study area conditions through detailed mapping. The mapping of data either manually or through the use of GIS is especially beneficial for analysis of census and socioeconomic data. In GIS, maps can be produced that spatially locate and compare data for different geographical sets (census blocks, cities, counties, etc.) such as population, density, employment, and housing data, all of which can be useful for environmental studies.

The section below describes some of the record types that are useful to check early in project planning and the process for accessing the records.

5.2.1 Cultural Resources

Architectural/Historical Resources

This records check can be done during environmental screening or as part of the technical studies done for the NEPA document. It involves a preliminary records check of the files at the Tennessee State Historic Preservation Office (SHPO), reviewing the quad maps for properties listed in the National Register of Historic Places (NRHP) and possibly talking with the SHPO NRHP staff. This preliminary check can be done by a historic preservation planner, a consultant or by the Environmental Division's Historic Preservation Section.

Tennessee State Historic Preservation Office

Clover Bottom Mansion
2941 Lebanon Road
Nashville, Tennessee
615-532-1550

A thorough records search includes checking the NRHP listings, the master quad survey maps, applicable survey forms, and a general perusal of the survey cards for properties within the project area since many of these are not cited on the quad maps. The NRHP staff is also consulted to determine if they are aware of any

National Register nominations being prepared for the study area or of any eligibility decisions that have been made for the area.

A literature review is also conducted at this stage. This involves reviewing published preservation plans and architectural surveys that cover the study area. Knox and Hamilton Counties have preservation plans, and Shelby, Sevier, and Davidson Counties have architectural survey books. The SHPO has survey reports for several counties. Conclusions from these studies regarding National Register eligibility and non-eligibility should be included in the assessment; however, the TDOT Historic Preservation Section staff or consultant eligibility determination may differ from the NRHP recommendation made in the survey report as a result of the additional research and field work that has been or will be conducted.

Archaeological Resources

It is recommended that this review be completed by an archaeologist. A records search for archaeological sites involves checking the files of the Tennessee Division of Archaeology (TDOA). The TDOA contains the state's most comprehensive set of archaeological records. The files contain USGS quadrangle maps showing locations and site numbers of previously recorded sites, site records for all known sites and reports produced for cultural resource management activities. An appointment to review the records must be made with the Site Files Coordinator.

Tennessee Division of Archaeology

Cole Building #3,
1216 Foster Avenue
Nashville, Tennessee
615-741-1588

Unlike the historic resources files, a review of the site file maps will not provide information on whether the sites previously surveyed meet the NRHP eligibility criteria or whether enough work has been completed to make such a determination. The map review must be accompanied by a review of the accompanying site files, which is best understood by a qualified archaeologist. Even then, more work may be required to determine NRHP eligibility.

5.2.2 Natural Resources

A natural resources check can be completed during environmental screening or it can be conducted as part of the technical studies done for the NEPA document, which is discussed later in this chapter. TDOT or consultant biologists initially review the TDOT GIS data sets maintained on the TDOT Intranet to note any potential encroachments on major streams or on identified wetlands, springs, caves, sinkholes or depressions. Records provided by TDEC and TWRA are consulted for federally listed, state listed, or proposed listed plant and animal species. TDOT staff access a copy of TDEC's natural heritage database in a GIS format for these records. If appropriate, TDOT may send the consultant a map and accompanying information derived from data supplied to TDOT by the TDEC Resource Management Division, Natural Heritage Inventory Program. Alternatively, TDOT may require that the consultant request the information directly from the Natural Heritage Inventory

Program. In the latter case, TDEC will charge the consultant a fee per project for this information.

U.S. Department of Agriculture (USDA) Soil Surveys for the project area are checked. Soils having high potential for wetland formation are identified by reading the soil survey narrative and comparing the soil units to the USDA's list of hydric soils. Soil survey maps are also used to help identify springs and streams not shown on topographic maps. Information of the soil survey program can be obtained at http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm.

Additional wetland information is obtained by consulting the National Wetland Inventory (NWI) maps at http://www.nwi.fws.gov. The NWI maps must be used with caution as they do not show all wetlands, as many sites no longer exist and newly developed sites are not shown on the maps. In addition, much of the information depicted on the maps has not been verified in the field.

Known cave locations are identified by perusing books on caves available from the TDEC Division of Geology. These books include: *Caves of Tennessee* (1961) by Thomas Barr and *Descriptions of Tennessee Caves* (1971) by Larry Matthews. Local cavers are sometimes consulted for information on lesser-known caves. Often, local governments maintain a database or set of maps indicating the locations of known sinkholes. In addition, those sinkholes with limited storage capacity and/or historic flooding issues are often known by local governments. Coordination with local governments should include the location and limitations of sinkholes.

The TDEC website (http://tn.gov/environment/water.shtml) is accessed to obtain information on water bodies designated as Exceptional Tennessee Waters (previously known as Tier 2), Outstanding National Resource Waters (previously known as Tier 3), impaired waters (303(d) list), and streams impaired by siltation and/or habitat. All impaired streams appear on the U.S. Environmental Protection Agency (EPA) 303(d) list, but they may be listed for other pollutants. Some watersheds also have approved Total Maximum Daily Loads (TMDLs). TMDLs must be approved by the EPA before they are finalized. Proposed TMDLs are those that have been developed by TDEC and in the draft stage. All proposed TMDLs are placed on public notice for comments. Until the proposed TMDLs are approved by EPA, they are not regulatory documents.

Ecology section staff, a consultant, or the ED planner also should check:

1. Tennessee Scenic Rivers designated under the Tennessee Scenic Rivers Act of 1968. The TDEC website for Tennessee scenic rivers is http://www.state.tn.us/environment/na/scenicrivers/.

2. Tennessee Wildlife Resources Agency website for Wildlife Management Areas at http://www.state.tn.us/twra/gis/gisindex.html.

3. National Wild and Scenic Rivers website at http://www.nps.gov/nero/rivers/wildandscenic.htm.

5.2.3 Hazardous Materials

A records check will be conducted by the TDOT Hazardous Materials Coordinator, the planner, or TDOT's consultant, during environmental screening to identify major known areas of hazardous materials or contamination concerns within the predefined study corridor that may influence the development of corridors and alternatives. Both Federal (EPA) and State (TDEC) records should be reviewed.

Hazardous materials sites are managed in one of two main regulatory programs, RCRA (Resource Conservation and Recovery Act), and CERCLA, aka Superfund (Comprehensive Environmental Response, Compensation, and Liability Act of 1980). In addition, petroleum-related sites with underground storage tanks, such as gas stations, are managed under the TDEC Underground Storage Tanks Program.

EPA provides a GIS-based web site to identify hazardous materials sites called EnviroMapper at http://www.epa.gov/emefdata/em4ef.home. It is important to note that not all state-managed hazardous substance sites will appear in EnviroMapper. Much of TDEC environmental information is not yet readily available on the Internet, and information must be obtained directly from TDEC offices.

A more detailed analysis of properties for hazardous materials concerns is undertaken in the Phase I Environmental Site Assessment during the development of the draft NEPA document.

5.2.4 Environmental Justice

During environmental screening, it is advisable to conduct research to preliminarily determine whether environmental justice issues may exist in a proposed project area. This can be done through any of the following methods: use of GIS to determine if minority populations exist in the project area, mapping of census data by other methods, conversations with local government and lastly, through field observation. The EPA's new on-line assessment tool, EJView, was designed to allow the public to run analyses and identify potential areas that may suffer from greater exposure to environmental harms. The tool is found at http://epamap14.epa.gov/ejmap/entry.html. In addition, the planner will coordinate with TDOT's Civil Rights Office.

5.2.5 Map Review

A review of available mapping, including USGS quadrangle maps, city and county maps and TDOT road maps can provide valuable planning information early in the planning process. For example, these maps show National Parks, National Forests and federally designated Wilderness Areas; blueline streams, ponds, rivers and lakes; cemeteries; roads, road classifications and bridges; schools, churches and community facilities; historic sites and museums; city, county and regional parks; wildlife management areas; city and town limits; state-designated natural areas; airports; subdivision development; military installations; and powerlines. All of this information is critical to project planning.

County and state maps can be obtained through the TDOT Map Sales Office in the Long Range Planning Division (Ordering instructions and some maps are available or on-line at http://www.tdot.state.tn.us/longrange/mapsales.htm). Most property maps can be obtained through the Tennessee Comptroller of the Treasury, Division of Property Assessments Mapping Section. Some property maps, however, can only be obtained through the county or city tax appraiser's office. TDEC has USGS maps for sale and they can also be obtained online at www.tngis.org. City maps, federal agency maps (such as National Park Service and National Forest Service) can be obtained directly from the local government or agency or viewed on-line.

5.3 Technical Studies and Other Impact Analyses

5.3.1 Overview

Technical studies are completed both to assist in developing the location and design of a project build alternative or alternatives and to provide a comparison of environmental impacts between the no-build and build alternative(s) and between build alternatives if more than one is under consideration.

The timing for the study phases may differ depending on the project development process being utilized by TDOT for the individual project. Field or baseline studies may be completed first as part of the environmental screening process for the Context Sensitive Solutions (CSS) or Transportation Planning Report (TPR) processes. The comprehensive impact analysis would come later, with full consideration given to the identified environmental factors. If conceptual plans are generated during the pre-NEPA transportation planning process, baseline studies, fieldwork and the impact analysis may be done at the same time.

Sources for guidance on the preparation of the required NEPA analyses are discussed in the applicable sections in this chapter. Guidance is also available in FHWA's 1987 Technical Advisory 6640.8A (Technical Advisory, hereafter), which is available in Appendix D of this report and at http://www.environment.fhwa.dot.gov/projdev/index.asp.

The section below describes the technical studies that are needed for the NEPA analysis. For each technical study, the discussion includes the applicable regulations, who should prepare the study, overview of the study process, agency or public involvement required, and mandated review times that could affect the project schedule.

The technical studies are prepared by technical specialists within TDOT or by consultants. Environmental Division technical staff or planners will generally oversee and review consultant studies or may request studies to be completed by other TDOT offices. Once the studies are completed, Environmental Division technical staff, planners or consultants will summarize the study findings for the NEPA document.

Listed below are the technical studies described in this chapter:

- Cultural Resources (architectural/historical and archaeological);
- Natural Resources (threatened and endangered species, wetlands, water quality, terrestrial and aquatic resources);
- Noise;
- Air Quality;
- Hazardous Materials;
- Conceptual Stage Relocation Plan; and
- Soils and Geology.

5.3.2 Cultural Resources (Section 106 and Section 4(f))

5.3.2.1 Applicable Regulations

The two primary federal laws that apply to transportation projects and their impacts to cultural resources are:

- Section 4(f) of the Department of Transportation Act; and
- Section 106 of the National Historic Preservation Act.

Cultural resource investigations are conducted for compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended (codified as 36 CFR 800), with Section 4(f) of the Department of Transportation Act of 1966 (now codified as 23 USC 774), as well as NEPA. This section focuses on the NHPA; Section 4(f) is described in Section 5.3.9.

The Federal Interstate Highway System was initially designed and constructed in the 1950s, meaning this massive infrastructure system is now over 50 years old, the typical threshold for properties to be considered potentially "historic." In 2005, however, the Advisory Council on Historic Preservation (ACHP) adopted the "Section 106 Exemption Regarding Effects to the Interstate Highway System," which exempted the bulk of the 46,700-mile federal Interstate system from consideration as a historic property under Section 106. Also in 2005, SAFETEA-LU regulations included a provision (Section 6007) that exempts the bulk of the Interstate System from consideration as a historic property under Section 4(f). Therefore, planners are no longer required to consider the federal Interstate system as a potentially historic resource.

However, under Section 106, certain elements of the Interstate system, such as bridges, tunnels and rest areas can be excluded from this exemption if these resources are designated by FHWA as "nationally and exceptionally significant features" (ESF) and potentially eligible for the National Register. In December 2006, the FHWA published the final list of ESFs in the Federal Register. The list can be found at http://www.environment.fhwa.dot.gov/histpres/highways_list.asp. The only designated ESFs in Tennessee are the I-40 Hernando DeSoto Bridge (1973) and the

I-55 Memphis & Arkansas Bridge (1949), both connecting Memphis, Tennessee, with West Memphis, Arkansas, over the Mississippi River.

Cultural resources include prehistoric and historic archaeological sites and historic bridges, buildings, structures, sites, objects, and districts. The purpose of cultural resource investigations is to consider the impact of federally funded undertakings on properties, sites, buildings, structures and objects that are listed in, or may be eligible for listing in, the NRHP. The criteria of adverse effect, the standard by which effects to historic properties are measured, are included in 36 CFR 800.

A historic property, as defined in regulation 36 CFR Section 800.16(l)(1), is any cultural resource included in, or eligible for listing in, the NRHP. A cultural resource is eligible for listing in the NRHP if it meets one or more of the four NRHP Criteria and retains sufficient integrity to convey historic significance.

National Register of Historic Places (NRHP) Eligibility Criteria

The NRHP Criteria states that the quality of significance is present in cultural resources when resources:

A. Are associated with events that have made a significant contribution to the broad patterns of our history; or

B. Are associated with the lives of persons significant in our past; or

C. Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. Have yielded, or may be likely to yield information important in prehistory or history.

In addition to significance, a property must also have integrity of location, design, setting, materials, workmanship and feeling to be eligible for listing in the NRHP. This means that not only must a resource be of sufficient age; it must also retain many of its original features and be significant under one or more of the four criteria listed above.

Typically, the following types of cultural resources are not eligible for listing in the NRHP: religious properties, moved properties, birthplaces or graves, cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the last 50 years. Such resources, however, may be eligible for listing in the NRHP, under special circumstances. For example, a property less than 50 years old could be eligible if it is an integral part of an eligible historic district, or it could be eligible for other reasons, which are outlined in the NRHP regulations (36 CFR 60).

Two types of cultural resources need to be identified to satisfy the requirements of Section 106 of the National Historic Preservation Act of 1966: architectural/historical resources (e.g., above ground buildings and structures) and archaeological

resources (e.g., underground sites). For federally-funded transportation projects, TDOT conducts the Section 106required studies on behalf of FHWA.

The oversight of the archaeological and architectural/historical studies needed to satisfy Section106 falls to the TDOT Archaeology Program Manager and the Historic Preservation Program Manager. Their staff may perform the needed studies or may contract the work to a consultant. If contracted, TDOT requires that an archaeologist be utilized to perform the archaeological survey and an architectural historian perform the architectural survey. If contracted out by TDOT, the architectural/historical and archaeological studies do not necessarily need to be done by the same firm and can be contracted separately. If contracted to a consultant, the work must be done according to TDOT cultural resource scopes of work, which can obtained from the Archaeology Program Manager and the Historic Preservation Program Manager.

The purpose of the studies is to identify architectural/historical resources or archaeological sites that are listed in or eligible for listing in the NRHP and to assess a project's effects to such resources. The first step in this process is to define the project's Area of Potential Effect (APE).

Area of Potential Effect (APE)

The geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

36 CFR 800.16 (d)

The APE will differ between architectural/historical resources and archaeological resources. For example, the architectural/historical resource APE for a highway improvement project may encompass areas that:

1. Could be affected by noise;
2. Could be affected by traffic increases;
3. May have changes in access;
4. Are within the viewshed of the proposed improvements; and
5. Would be physically affected by the project.

Only #5 above, areas of direct physical impact, would be considered as the APE for an archaeological survey. It is important to note, however, that the archaeological APE could also include areas of construction staging, borrow areas and areas of cut and fill. In addition, construction staging areas and borrow areas could be considered to be within the APE for historic resources.

Within the framework of the Section 106 process, the impact analysis is referred to as the "determination of effect." Functional or conceptual plans, or other more detailed plans, are needed to undertake the effects assessment.

Effects determinations are made by applying the Criteria of Adverse Effects as defined in 36 CFR 800.5 to each identified NRHP listed or eligible cultural resource. This involves the consideration of several factors, including whether the project will alter the characteristics that qualify the historic property for listing in the NRHP.

In accordance with Section 106, a project can result in one of the following findings:

- **No Historic Properties Affected**, indicating that a project will not affect the characteristics or qualities of an NRHP listed or eligible resource;
- **No Adverse Effect**, indicating that a project has an effect on a historic resource, but that this effect does not have a negative affect to the historic characteristics or qualities of the resource; or
- **Adverse Effect**, indicating that a project has a negative effect on a historic resource.

If historic resources are potentially adversely affected, TDOT must seek ways to avoid, minimize or mitigate impacts through the consultation process, which is described below.

5.3.2.2 Agency Coordination and Public Involvement

A cornerstone of the Section 106 process is the identification of the appropriate parties that need to be involved in the process of assessing effects of a proposed project to historic properties and working through the process with such parties. This "involvement" is referred to as "consultation." Additional description of the early steps in the Section 106 "consultation process," i.e., those that occur during early coordination, can be found in Section 4.3.4.2, *Section 106 Initial Coordination*.

Consultation is required with the Tennessee SHPO. In addition, the Advisory Council on Historic Preservation (ACHP) must be afforded a reasonable opportunity to comment on the undertaking. The Section 106 regulations also require the federal agency or its designee to consult with certain other entities and involve the public in the process of assessing a project's effects to historic resources.

The Section 106 regulations specify that federally recognized Native American tribes that may attach cultural or religious significance to properties within a project study area be given the opportunity to participate in the project as Section 106 "Consulting Parties." The *Section 106 Consultation with American Indian Tribes in Tennessee* manual, developed by the FHWA Tennessee Division, should be used for determining the appropriate tribes to contact for proposed projects.

TDOT must also contact local governments and, if such government elects to participate as a consulting party in the 106 process, they do so as consulting parties. As a result of TDOT's NEPA initial coordination mail-out to historical groups known to have an interest in the area or through other correspondence or meetings, additional

parties may be identified and invited by the agency to serve as consulting parties. For TDOT projects, the decision regarding the designation of additional consulting parties ultimately lies with FHWA.

For some projects, Section 106 coordination may begin prior to the NEPA process and/or the mailing of initial coordination packages. For example, such coordination may occur during the TPR process.

For EA or EIS documents, the first outreach effort to the SHPO, Native American tribes, local government and parties with historic preservation interests generally occurs in the NEPA initial coordination stage. At that time, the Environmental Division cultural resource staff will prepare a special Section 106 mail-out. The Historic Preservation and Archaeology Sections maintain a list of parties with historic preservation interests, which is sorted by county, and a list of Native American tribes that are potential consulting parties in Tennessee.

The second phase of outreach occurs after technical studies have been completed. (In both the historic and archaeological areas, studies are or can be phased. If that is the case, outreach should occur after each phase.) As applicable, the completed technical study will be sent by the respective TDOT Cultural Resource Program Manager to the SHPO office for review and comment. A copy of the cultural resource study, the management summary, or a pertinent study excerpt will be sent to all Section 106 consulting parties, and to the ACHP if adverse effects are identified under 36 CFR 800.

If adverse effects are found, TDOT must work with the SHPO, the ACHP if they choose to participate, and Section 106 consulting parties to identify ways to avoid, minimize or mitigate project effects. The measures agreed upon are included in a Memorandum of Agreement (MOA), which is a legally binding document and is signed, at a minimum, by the SHPO and FHWA and concurred with by TDOT. FHWA may also invite other parties to sign the MOA as concurring parties. The implementation of the measures included in an MOA is discussed in Section 9.3.1, *Cultural Resources*, of Chapter 9, *Environmental Commitments*.

5.3.2.3 Study Process for Architectural/Historical Resources

The architectural/historic study can begin as early as the environmental screening phase. The goal of the study is to identify historic resources that are listed in or eligible for listing in the NRHP and identify effects to such historic resources, pursuant to 36 CFR 800. It is undertaken either by the Historic Preservation Section or by consultants.

A records search is required to identify previously surveyed cultural resources in the proposed project corridor, to identify NRHP listed or previously determined eligible historic properties and to identify whether any properties in the project corridor are currently under consideration for nomination to the NRHP. This research can help in establishing the alignment and serves as the basis for field work to be conducted in the project corridor.

The first step in the survey process entails examination of historical records and literature with the intent to identify previously recorded resources that may be important to understanding the area's resources and can provide a historic background, or context, of the project area. The historic context provides a basis against which cultural resources may be evaluated using the NRHP Criteria of Evaluation.

Century Farms

Century Farms are designated by the Tennessee Department of Agriculture program. For properties that might have agricultural significance, the Environmental Division Historic Preservation Section or its consultant must check with the Tennessee Century Farms Program, Center for Historic Preservation at Middle Tennessee State University in Murfreesboro for contextual information on the significance of the property.

Center for Historic Preservation
MTSU, Box 80
Murfreesboro, TN 37132
615-898-2300
http://www.mtsuhistpres.org/

Once the records check is complete, a field survey is undertaken. The purpose of the architectural survey is to make an assessment concerning the presence of properties in the project vicinity that are either listed in, or eligible for listing in, the NRHP. The architectural historian will survey an area large enough to encompass all potential historic properties within the project's APE.

While it is not necessary to inventory every building or structure that is at least 50 years old in the APE, the architectural historian should inventory any potentially historic properties in the APE. If there are properties either listed in or potentially eligible for listing in the NRHP (even if they are not being affected) in the immediate vicinity of the project impact area, these should be inventoried. Two primary reasons for this are to illustrate to the public and agencies that TDOT has an awareness of the existence of the property in proximity to the project and to assist in developing project modifications and alignment shifts needed to avoid other sensitive areas (e.g., archaeology, ecology, hazardous materials).

Following the survey, the findings regarding NRHP eligibility will be compiled in a report that is submitted to the SHPO for review and concurrence. Sometimes the survey data are presented in a stand-alone report, which is submitted to the SHPO for concurrence with the NRHP eligibility findings and boundaries. At other times, the survey report is combined with the assessment of effects report.

The survey report will provide an architectural description of each inventoried property, general historical information about it, and a brief discussion of each support building (historic and modern). For each property, the report author must provide an opinion regarding its NRHP eligibility. For all listed or eligible resources, the existing or potential NRHP boundaries must be illustrated on a map. The historical/architectural survey must be coordinated with the SHPO.

The SHPO must comment on the findings of effect and the comment letter must be included in an appendix of the NEPA document. The Section 106 regulations allow 30 days for the report review to occur, however, the SHPO can respond within that 30-day period and request additional information or disagree with the report findings. This can substantially increase the review time.

If adverse effects are found, the Historic Preservation Program Manager will coordinate the effort to examine ways to avoid, minimize, or mitigate project effects with the SHPO, the ACHP if they are participating and any Section 106 consulting parties. This generally occurs after the NEPA public hearing and the selection of a preferred alternative. All measures agreed upon are included in a Memorandum of Agreement (MOA), a legally binding agreement prepared pursuant to Section 106 if properties will be adversely affected by a project. A copy of the fully executed MOA must be included in an appendix of the final NEPA document.

A copy of TDOT's guidelines for historic and architectural surveys and effect determinations is contained in the Appendix.

Study Process for Archaeological Resources

The archaeology study can begin in the environmental screening phase for a corridor study or whenever functional or more detailed conceptual plans are available. The goal of the study is to identify resources that are listed in, or eligible for listing in, the NRHP and identify effects to such resources, pursuant to 36 CFR 800. If NRHP resources are adversely affected, FHWA, TDOT, SHPO and project-specific consulting parties must examine ways to avoid those effects. If avoidance is not feasible, then TDOT or the consultant must develop a plan for minimization and mitigation of adverse effects. Typically archaeological mitigation involves excavation for the recovery of significant information. All of the measures to be taken to minimize and mitigate a project's adverse effects are stipulated in an MOA. Once approved by the FHWA and the SHPO, TDOT implements the agreed-upon measures.

The first step in the survey process entails examination of historical and archaeological records and literature with the intent to identify previously recorded resources and develop cultural/historical contexts that may be important to understanding the area's resources. The records check includes examination of the site file maps and accompanying site survey forms at the TDEC Division of Archaeology.

The second step involves field work, which is almost always undertaken by a consultant. Prior to commencing work, the consultant is required to make a good faith effort to contact landowners and must secure a permit from the TDEC Division of Archaeology. This survey will involve a visual inspection, a systematic pedestrian examination of exposed ground surfaces, and shovel testing of land having poor surface visibility. Limited deep soil sampling to ascertain whether buried archaeological deposits are present is also required. The completion of site survey forms is required for all identified archaeological sites. The data collected will be analyzed and then the findings of the literature search and field work and analysis

are presented in a written report. The report must present sufficient information to allow evaluation of whether additional investigation is warranted to determine NRHP eligibility. This report will be reviewed by Environmental Division archaeologists and then, through the FHWA, sent to the project-specific consulting parties for a 30-day review period as provided in the regulations. After questions and comments about the report are addressed, a final report is prepared and distributed to the consulting parties.

The Phase I Archaeological Survey (consisting of the two steps described above) not only identifies cultural resources listed or eligible for inclusion in the NRHP, but it also identifies cultural resources requiring additional testing to evaluate their NRHP eligibility.

Between the draft and final environmental documents, if it is determined that a site or sites on the selected alignment require additional testing, it is currently TDOT's policy to attempt first to avoid the sites. The Environmental Division archaeology staff coordinates with the project planner and designer to determine whether the subject site or sites can be avoided. If it is not feasible to avoid the sites, Phase II testing of the sites identified in Phase I will occur within the proposed right-of-way limits. The Phase II work, which must be completed prior to the approval of the final environmental document, is almost always undertaken by a consultant. It focuses on excavation of 15 to 20 percent of a site's area within the right-of-way, often employing the use of heavy equipment to determine whether undisturbed archaeological deposits are present that would meet the NRHP eligibility criteria. Right-of-way will not yet have been purchased. If an amicable arrangement cannot be made with the landowner to conduct the archaeological work on the site, the process will be carried forward by TDOT's legal office.

The fieldwork includes clearing, plowing and disking the direct impact zone to enhance surface visibility and then conducting controlled surface collection and subsurface excavation. The artifacts are then analyzed in the laboratory. The Phase II findings are presented in a report, which evaluates the NRHP eligibility of the site and provides recommendations for future work. Justification must be presented for suggested mitigation measures. If a site is considered NRHP eligible and recovery of significant data is recommended, a preliminary research design and data recovery plan must be included in the report. The Phase II testing report is distributed by FHWA to the project-specific consulting parties for a 30-day review in accordance with the Section 106 regulations.

Any mitigation agreed upon will be described in an MOA, which must be included in an appendix to the NEPA document. The MOA must be fully executed and may also include agreed-upon cultural resource mitigation. Archaeological mitigation measures may involve archaeological data recovery, which is referred to as Phase III, or Recovery of Significant Data (RSI). Phase III is most often undertaken after right-of-way has been acquired. All mitigation work must be completed before FHWA will authorize construction. The SHPO must also be notified when the field work has been completed and offered the opportunity to conduct an inspection.

It is important to note that precise archaeological location data (written descriptions and maps) are not made available to the public in order to eliminate the distribution of this information to potential "treasure hunters" and to diminish the potential of looting of archaeological sites.

5.3.3 Natural Resources

5.3.3.1 Applicable Regulations

In addition to NEPA, a number of federal and state laws pertain to the consideration and evaluation of natural resources. The list includes:

- The Clean Water Act (CWA) 33 U.S.C. 1251 et seq. (1977)
- The Endangered Species Act (ESA); 7 U.S.C. 136; 16 U.S.C. 1531 et.seq. (1973)
- Fish and Wildlife Coordination Act 16 U.S.C. 661-667
- Executive Order 11988, Floodplain Management
- Executive Order 11990, Protection of Wetlands
- Tennessee Non-game and Endangered or Threatened Wildlife Species Conservation Act of 1974
- Tennessee Rare Plant Protection and Conservation Act of 1985
- Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101)

5.3.3.2 Study Process for Natural Resources

Ecological evaluations are conducted by consultants or by the Environmental Division's Natural Resources Office - Ecology Section. Both terrestrial and aquatic surveys must be conducted by qualified biologists. Biologists must be familiar with the regulations listed above and with the Environmental Division's current Scope of Work for Ecological Studies.

The initial step in the assessment of natural resources is a records check (the records check process is described in Section 5.2.2). The next step is a field review by a qualified biologist of all alternative alignments being considered. The field survey includes an area 250 feet on either side of the centerline of the proposed alignments. For a bridge project, the field study must include an area 150 feet on either side of the centerline of the proposed alignments, to include any area needed for temporary detours. Biologists identify the presence or absence of:

- Streams that may be affected by construction (including those that may be crossed, those that are parallel to the alignment and may be relocated, and those that are potentially affected only by sediment in runoff);
- Wetlands;
- Types of plant and animal species that occur in the area;

- Federal- and State-listed threatened and endangered species (including critical habitats);
- Waterfowl refuges;
- Wildlife management areas;
- Caves;
- Springs or seeps;
- Sink holes; and
- Potential mitigation sites.

Streams. Biologists examine all defined channels within the direct project impact area. They will use the TDEC approved stream determination protocols, once developed, for making any watercourse determinations. For both channels that show as "blue-lines" on USGS topographic maps and other discernible channels encountered during field surveys, the biologist determines and documents whether the channel is a stream or a wet-weather conveyance, and clearly identifies the channel as such in the Ecological Boundaries and Mitigation Memorandum.

The substrate at each stream crossing and the canopy shading percentage and tree species composition are described. Aquatic fauna and flora are noted.

Wetlands. Biologists describe the location, type, size, and characteristics of wetlands within the project impact area, including:

- Soils;
- Hydrology;
- Vegetation; and
- Functions and Value.

The total area of wetlands present and the area likely to be filled are estimated and the impacts that will result from project construction are discussed. Possible wetland mitigation sites are included in the report, as well as the type of water quality permits that may be required (Section 404, Individual or General Aquatic Resource Alteration Permits or ARAPs, see Chapter 9, Permits). Wetland determinations are made using the Level 2 routine determination method described in the 1987 USACE *Wetlands Delineation Manual*.

Federal- and State-Listed Species. The first step in the process of investigating threatened and endangered (T&E) species is to send a coordination letter requesting a species list to the U.S. Fish and Wildlife Service (FWS). Next, a TDOT biologist will conduct a database review of the occurrence records maintained by the TDEC Division of Natural Areas (DNA), as well as other applicable sources (such as the Tennessee Valley Authority (TVA)) to determine if there are known occurrences of state or federally listed species near a proposed project. When a species review indicates known occurrences for state listed animals near a project, the TDOT

biologist shall coordinate with TWRA to address these species. TDOT biologists will provide TWRA with the list of species that were noted during the database review as well as a brief project description. TWRA personnel review this information and provide comments regarding the potential project impacts to the listed species. The TWRA may also provide direction and notes that will protect the species of concern.

When the species review indicates state listed plants are near a project, the TDOT biologist shall determine if coordination with the DNA is required and only coordinate with DNA if it is believed a listed plant may be impacted by the proposed project or if additional information is needed regarding a state listed plant. If coordination is warranted, TDOT biologists will provide DNA with the list of plant species that were noted during the database review as well as a brief project description. DNA personnel review this information and provide comments regarding the potential project impacts to the listed species. The DNA may also provide direction and notes that will protect the species of concern.

Information regarding the species review and coordination is then incorporated into the Ecological Boundaries and Mitigation Memorandum. A one-page topographical map showing the recorded locations of state or federally listed species should be included in the memorandum.

To determine the presence or absence of listed species, both terrestrial and aquatic, field reviews of the project area shall be conducted. Sufficient time should be taken at each site to reasonably determine the presence or absence of listed species and any suitable habitats.

Descriptions of any state or federally listed species or federally designated critical habitats observed during the field survey are included in the memorandum. The memorandum also documents the presence or absence of suitable habitats for state or federally listed species appearing in FWS correspondence or identified during the DNA database review. It addresses all listed species (terrestrial and aquatic) recorded within a four mile radius of the project, stating whether suitable habitat for each identified species occurs within the project impact zone and the likely project impacts on each, differentiating whether the project is likely to physically harm the identified species, whether the identified species are likely to be affected by sedimentation only, or whether the identified species are unlikely to be affected by the project. It is intended that the species review sufficiently address downstream aquatic impacts so as to meet the requirements of the Tennessee Construction General Permit for Storm Water Discharges.

If FWS provides a list of protected species in response to the request for information, or if federally protected species are located within the project impact area, a separate Biological Assessment (BA) is prepared following the guidelines issued pursuant to Section 7(c) of the Endangered Species Act. If suitable habitat for a federally listed species is present, either simple or complex field studies will be required to determine impacts. Complex studies include scuba surveys or mist-netting are usually conducted by consultants with specialized expertise and the appropriate

FWS license. Occasionally, complex studies are conducted by other agencies and the results provided for inclusion in the BA.

The completed BA shall be transmitted by Environmental Division to FWS via the FHWA. The BA contains a reference to the date of the species list provided by FWS, as well as the complete project route, termini, county, and log mile description. A conclusion is made in the BA as to whether a project will have no effect on each federally listed species, or whether it may affect each species. If it is determined that the project may affect the species, a further determination is made whether the effect is likely to be adverse or not. If it is determined that the project may affect the species, TDOT immediately requests the initiation of formal consultation with FWS via the Federal action agency.

Reports. The Ecology Report, required by NEPA, is a summary of the conditions in the field. It is prepared initially as part of the planning process and is an overview of the potential alignment ecological impacts. The Ecology Report is a preliminary report that may cover several alignments and provides insight into the potential impacts a specific alignment may have on ecological resources.

The Environmental Boundaries Study and Mitigation Memorandum is developed once a single alignment is determined and is prepared prior to preparation of any necessary permit assessment or application. This memorandum ensures that species impacts and mitigation needs for the field survey are addressed and is sent to all appropriate parties within TDOT for roadway development and permit assessment and/or permit application. The memorandum describes the project setting, terrain, land use, vegetation, and terrestrial and aquatic habitats and discusses the impacts the proposed construction may have on plants, animals, streams, and wetlands. It describes the substrate at each stream crossing and the canopy along the stream banks, as well as impacts the proposed construction may have on water quality.

The memorandum highlights sensitive areas (wetlands, glades, critical habitat, natural areas, wildlife refuges, and management areas), and includes a color topographic map showing the study boundaries and labeled color photographs. Tabular formats for project data are encouraged. Sensitive areas, as well as streams and wet-weather conveyances are labeled on the topographic map in a manner consistent with the labeling protocols defined in TDOT's Mitigation Practices manual (May 2007) found at http://www.tdot.state.tn.us/sswmp/pdfs/Mitigation.pdf. Photos include upstream and downstream views, as well as views of the surrounding land use. For bridge projects and approach projects and widening and drain projects, photos should include views of the existing highway and its surroundings. Copies of correspondence with other agencies are included in the memorandum. If a USDA Soil Survey is available for the area, a soil map with the hydric soils and soils with hydric inclusions (highlighted) is placed in the report.

The Environmental Division staff member or consultant should identify potential onsite mitigation areas for stream and/or wetland mitigation during the field survey, and mitigation areas should be documented in the Ecological Boundaries and

Mitigation Memorandum. A primary focus of the field survey should be to identify impacts and mitigation opportunities on a project well before design is completed and right-of-way obtained.

The results of the technical investigations must be summarized in the Ecological Boundaries and Mitigation Memorandum, the format of which is prescribed in Scope A of the current *Scope of Work for Ecological Studies*. The memorandum should be made available to the IPPT. The results of the memorandum should be incorporated into the project commitments.

Once the final alternative is selected and design plans are received, studies are usually repeated in more detail to ensure that nothing has been missed and to prepare detailed minimization and mitigation strategies and documents.

Impact, Avoidance and Minimization. If the Ecology Report is prepared as part of a Transportation Planning Report (TPR) study, the biologist provides advice and assistance to enable the TPR consultant to avoid and minimize ecological impacts, specifically those to streams, wetlands, springs, and protected species. In all other project phases, the TDOT ecology staff coordinates impact avoidance and minimization with the staff of the Environmental Division and the Design and Structures Divisions. Ecology section staff coordinates stream mitigation design with the Environmental Division's Environmental Design Group (once established) to ensure that natural channel design is considered to avoid in-lieu fees, where possible and practicable. Projects requiring complex mitigation or minimization activities require close coordination with construction staff during planning and design as well as during construction.

Deliverables. The consultant should submit two copies of the Draft Ecological Report and Ecological Boundaries and Mitigation Memorandum with color copies of the maps and photographs. After the Environmental Division Ecology Section staff reviews the draft report and memorandum, the consultant shall make any needed changes to these documents. The consultant, on written approval of the draft reports, will prepare and submit the original photographs, two hard copies, one electronic copy of the final documents with color copies of the maps and photographs. If a BA is required, the consultant should submit four hard copies and one electronic copy with color copies of maps, photographs, and the USFWS letter containing the species list. The Final Ecological Report is to be used by the planner for insertion into the NEPA document ecology section(s). The final Ecological Boundaries and Mitigation Memorandum is used to transmit more detailed ecology information internally within TDOT.

5.3.4 Noise

Pursuant to requirements set forth by the Federal Highway Administration (FHWA), the Tennessee Department of Transportation's (TDOT's) Noise Policy, *Policy on Highway Traffic Noise Abatement,* provides the requirements for the evaluation of highway traffic noise and the consideration of noise abatement when noise impacts are predicted.

The purpose of these noise procedures is to provide detailed technical guidance for conducting highway traffic noise studies for federal, federal-aid and state-funded highway projects in accordance with federal regulations and TDOT's Noise Policy.

5.3.4.1 Legislation, Regulations and Policies

5.3.4.1.1 NEPA

The National Environmental Policy Act of 1969 (NEPA) established a national policy on the environment and created the Council on Environmental Quality (CEQ). The purpose of NEPA is to minimize or eliminate damage to the environment caused by actions funded or taken by the federal government. NEPA provides broad authority and responsibility for evaluating and mitigating adverse environmental effects including those resulting from highway traffic noise.

5.3.4.1.2 1970 Federal-Aid Highway Act

The Federal Aid Highway Act of 1970 (FAHA 1970) mandated that FHWA develop noise standards for identifying noise impacts and evaluating noise mitigation for federal projects. FAHA 1970 also stipulated that FHWA should not approve plans and specifications for federal projects unless the project includes adequate noise abatement measures to comply with the standards.

5.3.4.1.3 FHWA Noise Standards (23 CFR 772)

FHWA developed noise standards in response to the requirements set forth in FAHA 1970. These standards have been modified over time as summarized below:

- 1973 - *Policy and Procedures Manual (PPM) 90-2.*
- 1976 - *Federal Highway Procedures Manual 7-7-3 (FHPM 773).*
- 1982 - *Procedures for Abatement of Highway Traffic Noise and Construction Noise, 23 CFR 772.*
- 1997 – *Procedures for Abatement of Highway Traffic Noise and Construction Noise, 23 CFR 772:* Revised eligibility for Type II projects.
- 2005 - *Procedures for Abatement of Highway Traffic Noise and Construction Noise, 23 CFR 772:* Revised to require FHWA's Traffic Noise Model (TNM) for highway traffic noise analyses.
- July 13, 2010 - *Procedures for Abatement of Highway Traffic Noise and Construction Noise, 23 CFR 772:* Revised to add definitions and to clarify the applicability of the regulation, certain analysis requirements, and the use of Federal funds for noise abatement measures.

The purposes of the FHWA Noise Standards are to:

- Provide procedures for noise studies and noise abatement measures to help protect public health and welfare and livability;
- Supply noise abatement criteria (NAC); and,
- Establish requirements for information to be given to local officials for use in the planning and design of highways.

5.3.4.1.4 FHWA Guidance

On June 12, 1995 FHWA issued a memorandum requiring states to adopt written statewide noise policies. These written state policies must be approved by FHWA and demonstrate "substantial compliance" with FHWA's noise standards contained in 23 CFR 772.

FHWA concurrently published the document, *Highway Traffic Noise Analysis and Abatement: Policy and Guidance* (FHWA's Guidance), to aid states in developing their policies. This guidance document was updated in 2010 to ensure consistency with the July 13, 2010 revision of 23 CFR 772.

State agencies have some flexibility in establishing their highway traffic noise policies and procedures in accordance with 23 CFR 772. However, all policies must be reviewed and approved by FHWA before they can become effective.

5.3.4.1.5 TDOT's Noise Policy

TDOT's Noise Policy, *Policy on Highway Traffic Noise Abatement,* was developed in accordance with 23 CFR 772 (July 13, 2010) and FHWA's Guidance (December 2010). TDOT's Noise Policy was approved by FHWA on April 19, 2011 and became effective on [insert date]. TDOT's Noise Policy outlines the process that TDOT uses to make decisions on highway traffic noise abatement and to justify the expenditure of public funds in the most cost-effective manner when addressing the total needs of the state's highway system. TDOT's Noise Policy is located at (http://www.tdot.state.tn.us/environment/airnoise/pdf/TDOTNoisePolicy520-01.pdf).

5.3.4.2 Qualifications Necessary to Conduct Noise Studies

Only individuals (TDOT or consultant staff) qualified in the field of highway traffic noise analysis shall conduct highway traffic noise studies for TDOT projects or local projects that will utilize federal or state funding.

In order to be qualified, the person performing the analysis must have 1) demonstrated experience in conducing highway traffic noise analyses for transportation projects in accordance with *23 CFR 772,* 2) familiarity with TDOT's Noise Policy, and 3) demonstrated experience conducting noise measurements in accordance with FHWA-PD-96-046, *"Measurement of Highway-Related Noise."*

Qualified individuals must have successfully completed the following formal training before conducting work on TDOT noise studies:

- Highway Traffic Noise Analysis Training; and,
- FHWA Traffic Noise Model (TNM) Training.

TDOT may request that analysts provide documentation of the above training before or during the conduct of a noise study. TDOT may also request documentation of other noise studies that the analyst has completed.

5.3.4.3 Definitions

The following definitions are used in these Procedures.

Abatement - measures used to reduce traffic noise levels. The use of quieter pavements and the planting of vegetation are not acceptable Federal-aid noise abatement measures for Federal projects.

Ambient Noise - all-encompassing sound that is associated with a given environment.

Approach - as used in 23 CFR 772.5(g), one-hour equivalent sound levels [L_{eq}(1h)] that are one decibel or less below the levels shown in Table 5-2.

Attenuation - reduction of the level of sound or noise.

Average Daily Traffic (ADT) - the average number of vehicles passing a specific point in a 24-hour period (vehicles per day).

A-Weighted Sound Level (dBA) - the sound level in decibels measured with a frequency weighing network corresponding to the A-scale. The A-scale tends to suppress lower frequencies (e.g. below 1,000 Hz) and best approximates the sound as heard by the human ear.

Benefited Receptor - the recipient of an abatement measure that receives a noise reduction at or above the minimum threshold of 5 dBA regardless of whether or not the receptor is "impacted."

Common Noise Environment - a group of receptors within the same Activity Category in Table 5-3 that are exposed to similar noise sources and levels; traffic volumes, traffic mix and speed; and topographic features. Generally, common noise environments occur between two secondary noise sources such as interchanges, intersections or cross-roads.

Date of Public Knowledge - the date of approval of the Categorical Exclusion (CE), the Finding of No Significant Impact (FONSI), or the Record of Decision (ROD), as defined in 23 CFR 771.

Decibel (dB) – a measure used to express the relative level of a sound in comparison with a standard reference level. For traffic noise purposes, the A-weighted scale, which closely approximates the frequency response of the human ear to typical environmental sound levels, is used. The A-weighted sound level in decibels has the unit dBA.

Design Year - the future year used to estimate the probable traffic volume for which a highway is designed, typically 20 years into the future.

Design Hour Volume (DHV) - the DHV is typically the thirtieth highest hourly traffic volume for the design year, commonly twenty years from the time of construction. The DHV is given in units of vehicles per hour.

Existing Noise Level - the existing worst one-hour equivalent sound level in dBA resulting from the natural and mechanical sources and human activity present in a particular area.

Feasibility - one of two criteria (also see "reasonableness") used to evaluate a noise abatement measure. Feasibility deals with engineering considerations and the ability to achieve a 5 dB noise reduction.

First-Row - receptors directly adjacent to the highway with no intervening developed lands.

Frequent Human Use - any activity that results in prolonged human exposure to traffic noise on a regular basis over the course of a year in a given location.

Future Noise Level - the predicted worst one-hour equivalent sound level in dBA in the design year.

Impacted Receptor - a receptor that has a traffic noise impact.

Insertion Loss - the reduction in $L_{eq}(1h)$ at a location after a noise barrier is constructed.

K- Factor - a percentage applied to the Average Daily Traffic (ADT) to determine the Design Hour Volume (DHV).

L_{Aeq} - the A-weighted equivalent steady-state sound level that in a stated period of time contains the same acoustic energy as the time-varying sound level during the same time period.

$L_{Aeq}(h)$ - the hourly value of L_{Aeq}.

Multifamily Dwelling - a residential structure containing more than one residence. Each residence in a multifamily dwelling shall be counted as one receptor when determining impacted and benefited receptors.

Noise - unwanted sound.

Noise Abatement Criteria (NAC) - the Noise Abatement Criteria shown in Table 5-3 of these Procedures.

Noise Barrier - a physical obstruction that is constructed between the highway noise source and the noise sensitive receptor(s) that lowers the noise level, including stand alone noise walls, noise berms (earth or other material) and combination berm/wall systems.

Noise Reduction Design Goal – the predicted minimum noise level reduction provided by the noise abatement measure. TDOT's noise reduction design goal is 7 dB and must be achieved at 60% or more of the first-row benefited receptors. If a reduction of 7 dB at 60% or more of first-row benefited receptors cannot be met, the abatement measure would not be considered reasonable.

NEPA - the National Environmental Policy Act.

Permitted - a definite commitment to develop land with an approved specific design of land use activities as evidenced by the issuance of a building permit.

Property Owner - an individual or group of individuals that holds a title, deed or other legal documentation of ownership of a property or residence.

Reasonableness - one of two criteria (also see "feasibility") used to evaluate a noise abatement measure. Reasonableness weighs the amount of required noise barrier area against the benefits that would be provided by the barrier.

Receptor - a discrete or representative location of a noise sensitive area(s), for any of the land uses listed in Table 5-3.

Residence - either a single family residence or each dwelling unit in a multifamily dwelling.

Shielding - any man-made or natural structure or barrier that provides an auditory barrier between a receptor and a roadway. For example, the top of a cut or an intervening hill.

Sound Level Meter - a device used to measure sound levels. A sound level meter is also called a sound level analyzer or dosimeter.

Statement of Likelihood - a statement provided in the environmental clearance document based on the feasibility and reasonableness analysis completed at the time the environmental document is being approved.

Substantial Construction - the granting of a building permit, prior to right-of-way acquisition or construction approval for the highway. This definition applies to Type II projects only.

Substantial Noise Increase – an increase in existing noise levels as defined in Table 5-2 of these Procedures.

Substantial Noise Reduction - a minimum reduction in traffic noise levels of at least 7 dB at the majority of impacted first-row receptors.

Traffic Noise Impacts - impacts that occur when the predicted design year traffic noise levels for the Build Alternative(s) approach or exceed the NAC or when the

predicted design year traffic noise levels for the Build Alternative(s) substantially exceed the existing noise levels.

Type I Project - a project shall be considered Type I if it meets one of the following conditions:

(1) The construction of a highway on new location; or,
(2) The physical alteration of an existing highway where there is either:
    (i) Substantial Horizontal Alteration. A project that halves the distance between the traffic noise source and the closest receptor between the existing condition to the future build condition; or,
    (ii) Substantial Vertical Alteration. A project that removes shielding, therefore, exposing the line-of-sight between the receptor and the traffic noise source. This is done by either altering the vertical alignment of the highway or by altering the topography between the highway traffic noise source and the receptor; or,
(3) The addition of a through-traffic lane(s). This includes the addition of a through-traffic lane that functions as a High-Occupancy Vehicle (HOV) lane, High-Occupancy Toll (HOT) lane, bus lane or truck climbing lane; or,
(4) The addition of an auxiliary lane, except for when the auxiliary lane is a turn lane; or,
(5) The addition or relocation of interchange lanes or ramps added to a quadrant to complete an existing partial interchange; or,
(6) Restriping existing pavement for the purpose of adding a through-traffic lane or an auxiliary lane; or,
(7) The addition of a new or substantial alteration of a weigh station, rest stop, ride-share lot or toll plaza.
(8) If a project is determined to be a Type I project under this definition, then the entire project area as defined in the environmental document is a Type I project.

Type II Project - a Federal or Federal-aid highway project for noise abatement on an existing highway.

Type III Project - a Federal or Federal-aid highway project that does not meet the classifications of a Type I or Type II project. Type III projects do not require a noise analysis.

Worst Noise Hour - a one-hour period during the day that represents the peak noise hour.

5.3.4.4 Traffic Noise Terminology

Traffic noise levels are expressed in terms of the hourly, A-weighted equivalent sound level in decibels (dBA). A sound level represents the level of the rapid air pressure fluctuations caused by sources such as traffic that are heard as noise. A decibel is a unit that relates the sound pressure of a noise to the faintest sound the young human ear can hear. The A-weighting refers to the amplification or

attenuation of the different frequencies of the sound (subjectively, the pitch) to correspond to the way the human ear "hears" these frequencies. Generally, when the sound level exceeds the mid-60 dBA range, outdoor conversation in normal tones at a distance of three feet becomes difficult. A 9-10 dB increase in sound level is typically judged by the listener to be twice as loud as the original sound while a 9-10 dB reduction is judged to be half as loud. Doubling the number of sources (i.e., vehicles) will increase the hourly equivalent sound level by approximately 3 dB, which is usually the smallest change in hourly equivalent A-weighted sound levels that people can detect without specifically listening for the change.

Because most environmental noise fluctuates from moment to moment, it is standard practice to condense data into a single level called the equivalent sound level (L_{eq}). The L_{eq} is a steady sound level that would contain the same amount of sound energy as the actual time-varying sound evaluated over the same time-period. The L_{eq} averages the louder and quieter moments, but gives much more weight to the louder moments in the averaging. For traffic noise assessment purposes, L_{eq} is typically evaluated over the worst one-hour period and is defined as L_{eq} (1h).

The term insertion loss (IL) is generally used to describe the reduction in L_{eq} (1h) at a location after a noise barrier is constructed. For example, if the L_{eq} (1h) at a residence before a barrier is constructed is 75 dBA and the L_{eq} (1h) after a barrier constructed is 65 dBA then the insertion loss would be 10 dB.

5.3.4.5 Noise Study Requirements

Per 23 CFR 772 and TDOT's Noise Policy, noise studies must be conducted for highway projects that are determined to be Type I.

5.3.4.5.1 Type I Projects

Per the definition in Section 5.3.4.3, Type I projects are proposed Federal or Federal-aid highway projects for the construction of a highway on new location or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment or increases capacity.

A detailed noise analysis is required if the project meets the definition of a Type I project. Noise analyses are not required for projects that are Type III regardless of the level of NEPA document.

Per the definition, a project that halves the distance between the traffic noise source and the closest receptor is a Type I project. When assessing whether a project will halve the distance between the noise source and a receptor, the measured distance should be the smallest distance between the receptor and the center of the nearest travel lane.

5.3.4.5.2 Noise Impact Screening for Type I Projects

There will be cases when it is unclear whether a Type I project will result in noise impacts based on the NAC.

These cases might include widening projects on low to medium volume roads, and projects where potentially impacted land uses are located at distances where impacts would not normally be expected. In these cases, a screening analysis should be completed to determine whether a noise study is warranted.

Any Type I project that might result in impacts due to a substantial increase in sound levels requires a noise study.

The screening level steps are summarized below.

- Determine if noise-sensitive land uses exist that might be impacted by the project. If the project will not affect noise-sensitive land uses, then a noise study is not needed.
- If noise-sensitive land uses exist that may or may not be impacted by the project, TNM should be used with simplifying assumptions to predict whether noise impacts would be expected. If the predicted sound levels are within 5 dB of the NAC for the identified noise-sensitive land use(s), then a noise study is needed. If predicted sound levels are more than 5 dB lower than the NAC, then a noise-study is not needed.

The screening analysis should involve a review of project plans as well as aerial photography from web-based mapping sites such as Google Maps (http://maps.google.com) or Bing Maps (http://www.bing.com/maps), web-based city or county GIS sites, or data from the County Property Assessor (http://www.assessment.state.tn.us/). A site visit may be required to establish if any recent development has occurred. The municipal planning or codes department should also be contacted to determine if any building permits have been issued in the project area.

The results of the screening procedure and the conclusion that a noise study is not needed should be summarized in the environmental document along with discussions of information for local officials and construction noise per Sections 5.3.6.4.12 and 5.3.6.6.13 of these Procedures.

5.3.4.5.3 Type II Projects

TDOT is required by federal law to evaluate noise abatement for new highway construction and widening projects. However, there is no federal requirement for State DOTs to construct noise barriers along existing highways adjacent to impacted communities that were in place before the highways were built. Such stand-alone “retrofit” noise barrier projects are referred to as Type II projects. Following the completion of detailed *Type II Noise Barrier Needs and Cost Assessment and Noise Barrier Prioritization Studies*, TDOT initiated a Type II Noise Barrier Program in 2005.

To be eligible for a Type II noise barrier, an area must meet the following criteria:

- The neighborhood must be located along a limited-access roadway;
- The neighborhood must be primarily residential;

- The majority (more than 50%) of residences in the neighborhood near the highway pre-dated the initial highway construction;
- A noise barrier for the neighborhood must not have been previously determined to be not reasonable or not feasible as part of a new highway construction or through-lane widening study (Type I project);
- Existing noise levels measured in the neighborhood must be above the Noise Abatement Criteria (NAC) of 66 dBA;
- A barrier must be feasible to construct and will provide substantial noise reduction;
- A barrier must be reasonable in accordance with TDOT's Noise Policy. A residence is considered "benefited" if the noise barrier will reduce the traffic noise by at least 5 dB; and,
- A majority of the impacted residents (>50%) must support the construction of the noise barrier.

TDOT's Type II studies resulted in a list of eligible Type II projects. This list is available at URL http://www.tdot.state.tn.us/environment/airnoise/default.htm. This list includes all of the areas that have been identified for inclusion in TDOT's Type II Program and represents TDOT's prioritized list of Type II projects.

The order in which these projects are programmed will depend on many factors including funding limitations; requirements for lane closures (particularly on urban interstates); other nearby interstate construction projects; a strong likelihood that an area will get a barrier as part of a Type I project; geographic considerations; right-of-way and utility requirements; and the need to retrofit existing bridges with noise barriers.

TDOT will review the Type II project list on an annual basis and will select projects from the list for programming based upon a comprehensive consideration of the above factors.

5.3.4.6 Noise Study Methodology and Procedures

The primary goal of conducting noise studies is to ensure that the information derived and related conclusions are accurate and pertinent to the decision-making process.

In order to facilitate this goal, noise studies should 1) accurately identify all noise-sensitive land uses that are predicted to be impacted under each Build Alternative in the design year, and 2) properly assess the noise abatement measures listed in Section 5.3.4.6.6 for impacted land uses.

This section provides the detailed framework for conducting a highway traffic noise study in Tennessee. Noise studies should include the following tasks:

- Identification of noise-sensitive land uses: Identification of existing land uses in the project area that are sensitive to highway traffic noise;

- Determination of existing sound levels: Measurement and/or prediction of existing worst-hour sound levels at noise-sensitive land uses to characterize the existing noise environment in the project area;
- Determination of future sound levels: Prediction of design year worst-hour sound levels for the No-Build and Build Alternatives;
- Determination of traffic noise impacts: Determination of traffic noise impacts based on the increase in existing sound levels and predicted design year sound levels;
- Noise abatement evaluation: Evaluation of noise abatement measures for noise-sensitive land uses predicted to be impacted by the project;
- Discussion of construction noise; and,
- Provision of information for local officials.

Each of these steps and all analysis results should be thoroughly documented in a Noise Technical Report for the project. Each of these analysis steps is discussed in detail below following a discussion of TDOT's criteria for determining noise impacts.

5.3.4.6.1 Criteria for Determining Impacts

Traffic noise impacts may occur when either the predicted noise level at a receptor approaches or exceeds the NAC or when there is a substantial increase in noise as a result of the project. Both criteria are defined below.

Substantial Increase

Highway traffic noise impacts will occur if there is a substantial increase in design year noise levels above existing noise levels as shown in Table 5-2.

Noise Abatement Criteria (NAC)

Highway traffic noise impacts will also occur when the design year noise levels approach, equal, or exceed the FHWA's noise abatement criteria (NAC) shown in Table 5-3.

Table 5-2 Substantial Noise Level Increase

Existing Noise Level (dBA) [(1)]	*Predicted Design Year Noise Level Increase (dB)* [(2)]
42 or less	15 or more
43	14 or more
44	13 or more
45	12 or more
46	11 or more
47 or more	10 or more

(1) Worst hour noise level from the combination of natural and mechanical sources and human activity.
(2) Predicted design year noise level minus existing noise level.

Table 5-3 Noise Abatement Criteria
[Hourly A-weighted Sound Level, decibels (dB(A))]

Activity Category	*$L_{Aeq}(h)$*	*Evaluation Location*	*Activity Description*
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B(1)	67	Exterior	Residential.
C(1)	67	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structure, radio stations, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structure, radio studios, recording studios, schools, and television studios.
E(1)	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D, or F.
F	---	---	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), and warehousing.
G	---	---	Undeveloped lands that are not permitted.

(1) Includes undeveloped lands permitted for this activity category.
Source: 23 CFR 772, July 2010.

TDOT's Noise Policy defines "approach" as one decibel below the NAC.

The NAC are not arbitrary. The NAC are based upon noise levels associated with interference of speech communication and are a compromise between noise levels that are desirable and those that are achievable. The NAC should not be viewed as desirable noise levels and they should not be used as design goals for noise barrier construction.

5.3.4.6.2 Identification of Noise-Sensitive Land Uses

Traffic noise analysis should be performed for 1) developed lands containing noise-sensitive land uses, and for 2) undeveloped lands where noise-sensitive development is permitted.

Land uses that are sensitive to highway noise will generally be identified based on review of project plans, aerial photography from web-based mapping sites including Google Maps (http://maps.google.com) and Bing Maps (http://www.bing.com/maps), web-based city or county GIS sites, and data from the County Property Assessor (http://www.assessment.state.tn.us/).

The municipal planning or codes department should also be contacted to determine if any building permits have been issued in the project area.

For most projects, the availability of these mapping resources should eliminate the need for separate field reviews to identify noise-sensitive land uses. Unresolved questions regarding noise-sensitive land uses and other site related concerns can generally be addressed during the conduct of noise measurements.

The Noise Technical Report should include a summary of the existing land uses in the project area.

Developed Lands

Developed lands that should be identified and included in the noise study include Category A, B, C and E land uses with exterior areas of frequent human use, as well as qualifying Category D uses.

If, in TDOT's opinion, a land use within the project limits is worthy of consideration as a Category A land use, TDOT will prepare and submit a "Proposal for Justification for Designating Land Use as Category A" to the FHWA Division Office.

Category C and E land uses should be assessed to identify any areas of frequent human use. Specific locations of human use that are exposed to traffic noise on a regular basis over the course of a year would qualify as frequent human use areas that should be assessed for noise impacts.

Category C and E frequent human use areas could include exterior sitting or eating areas, playgrounds, pools or other similar locations where people may gather for extended periods. Parking lots and sidewalks are not considered to be frequent human use areas.

For campgrounds, frequent human use areas might include dedicated camp sites or picnic areas. For cemeteries, frequent human use areas might include exterior areas where services are held on a regular basis but would generally not include individual grave sites.

If a Category C land use has both exterior and interior areas of frequent human use, the exterior area should be analyzed for impact as Category C. If there are no exterior areas of frequent human use, or the exterior area is far from or physically shielded from the roadway in a manner that prevents an impact on the exterior areas, then the interior area should be analyzed for impact as Category D.

TDOT should be consulted during the conduct of the noise study if there is uncertainty regarding whether an area qualifies as a frequent human use area.

Permitted Development

Per TDOT's Noise Policy, development is deemed to be "permitted" if there is a definite commitment to develop land with an approved specific design as evidenced by the issuance of a building permit.

The noise study should include lands for which development is "permitted" at the date of public knowledge for the project. The date of public knowledge is the date that a project's final environmental document (i.e. CE, FONSI, or ROD) is approved by FHWA.

Undeveloped Lands

Category G land uses are undeveloped lands that should be addressed as part of the "Information for Local Officials" described in Section 5.3.4.6.13 of these procedures. Lands used for agriculture that are included in Category F should also be addressed the in "Information for Local Officials" section.

5.3.4.6.3 Determination of Existing Noise Levels

The determination of existing noise levels will generally be made utilizing field measurement of actual sound levels and/or the prediction of existing sound levels.

Existing noise levels should be determined using one of the following methods

- Method 1: Measurement of Existing Noise Levels
- Method 2: Prediction of Existing Noise Levels
- Method 3: Measurement and Prediction of Existing Noise Levels (including validation)

The method selected for each project should consider several factors including the type of project (i.e. widening or new alignment); facility type; the extent, level of detail, and accuracy of the data available to complete noise modeling for existing conditions; the number of expected impacts; the potential need for evaluation of noise abatement measures; and the effect on the decision-making process. TDOT's Environmental Division should be consulted to determine the proper method to be used for each project

Method 1: Measurement of Existing Noise Levels

This method should be used for Type I projects involving the construction of a roadway on a new alignment. This method should also be used on Type I projects when the extent, level of detail, and/or accuracy of data for existing conditions is not sufficient to support the development of an accurate noise model for existing conditions.

All measurements should be conducted in accordance with the detailed procedures outlined later in this section. Use of these procedures will ensure that the existing worst-hour noise levels at noise-sensitive uses in the project area are accurately determined and reported.

Method 2: Prediction of Existing Noise Levels

This method could be used for projects located in areas where the existing noise environment is dominated by traffic noise from an existing highway, arterial or local road; where the number of impacts is expected to be low or the impacts will be isolated; and where conditions clearly indicate that noise abatement will not be feasible and/or reasonable. This method should not be used for projects involving interstate facilities or similar major highways. TDOT will consider whether this method should be used on a case-by-case basis.

IF TDOT determines that TNM modeling of existing conditions is necessary, then the procedures outlined in Section 5.3.4.6.4 should be used.

Method 3: Measurement and Prediction of Existing Noise Levels (including validation)

There may be some projects for which both noise measurements and modeling of existing conditions may be needed to facilitate validation of the TNM model. These projects might include large or controversial widening projects; projects where there is uncertainty as to whether impacts will occur; and projects that are likely to include reasonable and feasible noise abatement measures. TDOT will consider whether this method should be used on a case-by-case basis.

Noise Measurements

Noise measurements should be conducted in accordance with FHWA-PD-96-046, *"Measurement of Highway-Related Noise"* and using the procedures described below.

<u>Noise Measurement Locations</u>

Measurement sites should generally include exterior areas of Category B, C and E land uses.

Noise measurement sites should be selected according to the purpose of the measurement and should be representative of the area of interest, meaning that the sound level at a measurement location is representative of that location and any nearby locations.

Generally, sites should be selected that will be exposed to the highest sound levels generated by the project for each project alternative. All sites should be representative of areas of frequent human use.

Measurement sites should be clear of obstructions and the microphone should be located at least 10 feet (3 meters) from any reflective surfaces. Sites should be free of contamination by sources such as barking dogs, HVAC noise, etc.

Interior measurements are generally not needed and would only be made in situations where there are no exterior areas of frequent human use. TDOT should be consulted before interior noise measurements are conducted for any project.

Noise Measurement Data Sheets

TDOT's standard noise measurement data sheets should be used. The data sheets are available at http://www.tdot.state.tn.us/environment/airnoise/default.htm.

A noise measurement data sheet should be completed for each measurement location, and copies of the noise measurement data sheets should be provided in an appendix of the Noise Technical Report.

Each noise measurement data sheet should provide a detailed site sketch including appropriate distance measurements. The following information should be noted as applicable:

- Microphone height
- The roadway elevation relative to the elevation of the measurement location (i.e. in cut, on fill, at-grade)
- An indication whether the road is on a grade or at-grade
- Type of intervening ground
- Any surfaces or areas that could affect sound levels such as ponds, lakes, and parking areas
- Existing structures including residences, garages, barns, commercial and industrial buildings, noise barriers and fences
- Significant existing terrain features such as the berms, crests of hills, and drainage ditches
- Locations and density of areas of trees and/or vegetation
- A description of any non-traffic noise sources including aircraft and/or train operations, commercial and industrial activities, etc.
- Calibration results
- Wind speed and direction
- Temperature

Field staff conducting noise measurements must wear Type III safety vests and should carry proper identification. Consultants conducting measurements should obtain a measurement explanation letter from TDOT before conducting any field work. This letter will explain the purpose of the measurements and should be

provided to residents, business owners, law enforcement, etc. who inquire about the purpose of the measurements.

Equipment

Measurements should be conducted using an ANSI Type I or II sound level meter using slow time weighting.

A windscreen shall be used and should be of a type specified by the microphone manufacturer as suitable for the particular microphone.

Sound level meters should be calibrated at the beginning and end of each measurement and the results should be noted on the noise measurement data sheet.

Noise Measurement Times

Sound levels will vary by location and time of day depending on the proximity of noise-sensitive land uses to roads and other background noise sources. Additionally, sound levels can vary with changes in meteorological conditions including shifts in wind speed and direction, and changes in the vertical temperature profile.

Although long-term measurements would more fully characterize the existing noise environment, collection of long-term data at many sites requires significant time, effort and cost. In most cases, the additional data would not significantly change the conclusions regarding the number and locations of noise impacts and the associated need to consider noise abatement.

As a result, a combination of long-term and short-term noise measurements should be conducted to aid in characterizing the existing noise environment in the project area.

Long-Term Measurements

Existing sound levels should be representative of the worst noise hour. The highest traffic volume at the highest average speed usually creates the noisiest conditions. The peak traffic hour may be the worst noise hour if traffic is free-flowing. However, the worst noise hour may occur at other times of the day due to traffic congestion and changing speeds, as well as fluctuations in the number of heavy trucks throughout the day. In most cases, the worst noise hour will occur between 6:00 am and 7:00 pm.

One or more long-term measurements (8 to 12 hours) should be conducted to identify changes in sound levels throughout the day and to aid in identifying the worst noise hour. Long-term measurements should generally include the morning and/or afternoon peak periods.

The noise environment at long–term measurement sites should generally be dominated by traffic noise from the study roadway. Long-term sites should be isolated from local traffic noise sources and other sources of potential contamination.

The long–term monitor does not have to be attended during the entire course of the measurement. However, it is recommended that field staff return to the monitor site several times during the measurement period(s) to ensure that the sound level meter continues to function properly.

The number of long-term measurements will depend on the number of alternatives and the variation in sound levels throughout the day. Long-term measurements are generally not needed to establish background noise levels in areas where no significant traffic noise sources exist, such as near new roadway alignments in rural areas. Short-term measurements can generally be used to establish background sound levels in these areas.

The long-term measurement data should be recorded in one minute intervals to allow for removal of non-representative, intrusive events. After the measurement is conducted, the data should be thoroughly reviewed to ensure that the reported data is representative of traffic noise levels. One-minute periods where it is clear that recorded sound levels were influenced by random non-traffic noise sources (i.e. intermittent lawn equipment, sirens, etc.) should be eliminated.

The long-term measurement data should be used to calculate sound levels for each hour of the long-term measurement period, and to identify the worst noise hour. The long-term data should also be used to develop adjustments to apply to the short-term measurements to arrive at existing worst-hour sound levels at the short-term measurement sites.

Short-Term Measurements
Short-term measurements should be conducted during the long-term measurements at times when traffic is relatively free-flowing. The short-term measurements should be adjusted to represent worst-hour noise levels during the measurement period as described above. Short-term measurement data should be recorded in one minute intervals to allow for removal of non-representative, intrusive events.

The duration of the short-term measurement will depend on the density of traffic on the study roadway. Noise measurements near high volume roads can be of shorter duration than measurements near low volume roads. General guidance for determining the minimum duration of short-term measurements is provided in Table 5-4.

Table 5-4 Short-Term Measurement Durations

Traffic Volume (vehicle/hour/lane)	*Minimum Duration (minutes)*
High (>1000)	15
Medium (500-1000)	20
Low (<500)	30

Meteorological Conditions
Meteorological conditions can affect sound levels and sound propagation, particularly at long distances.

Measurements should not be conducted when the wind speed(s) at the microphone exceeds 11 mph (5 m/s), regardless of wind direction. Wind speed should be monitored and reported on the noise measurement data sheet.

There is no set limit on temperature during noise measurements. However, the ambient temperature must be noted on the noise measurement data sheet.

Pavement Conditions
Noise measurements should only be conducted when road surfaces are dry. Road surfaces should also be free of extraneous material such as gravel.

Data Analysis
The measured sound level data should be imported into spreadsheet tables and any measurement intervals that are contaminated due to unrepresentative noise sources, high wind, or other factors should be eliminated.

5.3.4.6.4 Determination of Design Year Sound Levels

No-Build Alternative

For most projects, sound levels for the No-Build Alternative in the design year should be predicted by evaluating existing and design year traffic volumes on the roadway network. Background sound levels in areas that are not affected by highway traffic noise should generally not be increased.

The increase in sound level from the existing year to the design year can be estimated using the following equation.

$$\text{Increase in sound level} = 10 \log (1+N/10)$$

where: N = Percent increase in traffic between existing and design year

For example, doubling the traffic on a roadway would result in a 3 dB increase in the sound level at a given receptor assuming all other conditions remain the same. Similarly, an increase in existing traffic volumes of 60% would results in an approximate 2 dB increase in sound levels. In this case, design year sound levels would be approximately 2 dB higher than existing sound levels.

If the percentage of trucks is projected to increase significantly between the existing year and the design year for the No-Build Alternative, then a more detailed analysis would be needed to determine the projected sound level increase.

Additionally, the projected No-Build traffic volumes for the design year should be reviewed to determine if the design hour volumes could be accommodated at free-low traffic conditions. If the projected traffic volumes would result in decreases in

travel speeds, the traffic volumes should be analyzed to identify the percent increase in traffic volume that could be accommodated during the worst noise hour at free-flow traffic conditions.

Build Alternative(s)

Noise modeling of the Build Alternative(s) should be completed using the most recent version of the FHWA Traffic Noise Model (TNM) computer program. The program should be used to calculate design year noise levels at the noise-sensitive land uses in the project area, including the measurement sites.

In TDOT's experience, requiring detailed and accurate modeling of the Build Alternative(s) in the design year is the best way to ensure 1) the best estimates of design year sound levels for all receptors and 2) the most accurate accounting of the impacts resulting from the project.

TNM is a complex model requiring numerous inputs and modeling assumptions. As a result, TDOT developed *"TDOT Guidelines for Traffic Noise Modeling Using TNM"* to ensure consistency in modeling practices and enable comparison of results. The TNM Guidelines are available at:
http://www.tdot.state.tn.us/environment/airnoise/default.htm.

The guidelines have been developed based on TDOT's TNM noise modeling experiences for numerous projects across the state, and are intended to provide supplementary information to analysts who are skilled in both traffic noise modeling and in the use of TNM.

The TNM model should include the following for all Build Alternatives:

- The proposed roadway alignment including all existing and proposed ramps and intersections;
- Local roads that contribute to the noise environment;
- Receivers;
- Existing noise barriers or large buildings that act as noise barriers;
- Terrain features including intervening hills, tops of cuts, and bases of fills;
- Rows of buildings that provide shielding; and,
- Intervening ground zones that will affect sound propagation including parking lots and bodies of water.

All TNM runs developed for the project shall be transmitted to TDOT electronically or on a disk at the time any draft or final report is submitted.

Mapping

The following mapping should be used in the development if the TNM models as available:

- Functional plans
- Cross-sections
- MicroStation design files, including proposed horizontal alignment and vertical profiles
- Tennessee GIS data (http://www.tngis.org/)
- County GIS data
- USGS maps (http://terraserver-usa.com/)

TNM Roadways

The proposed roadway alignment including all existing and proposed ramps and intersections should be modeled. Local roads that contribute to the noise environment should also be modeled.

The direction of travel should be properly modeled for each TNM roadway. No more than two lanes of travel should be combined into a single TNM roadway.

The actual width of the roadway pavement should be modeled including travel lanes and shoulders. Additionally, the outside edge of pavement should be modeled as close as possible to the actual location.

All appropriate flow devices including on-ramps, stop signs, traffic signals, and toll booths should be modeled.

Traffic

Design year sound levels should be predicted for the worst-noise hour which would normally occur when the highest traffic volume can travel at the highest possible speed.

Traffic projections developed for the project typically include traffic volumes for the "design hour," which is often representative of Level of Service (LOS) C operating conditions. These design hour volumes (DHVs) should be used for the noise analysis since they represent the highest number of vehicles expected to travel on the roadway network in a given hour.

The DHVs should be modeled at the planned posted speed for the Build Alternative(s) since modeling DHVs at posted speeds provides a conservative estimate of worst-hour noise levels.

If the projected traffic volume is less than the LOS C volume. Those lesser volumes should be used. The source of the traffic data used for the TNM modeling should be documented in the Noise Technical Report.

Traffic projections for the project should also include truck projections. If the percentage of trucks for the design hour is not provided, then the percentage of trucks during the design hour should be assumed to be two-thirds of the projected percentage of trucks on a daily basis. The split between medium trucks and heavy trucks should be based on traffic classification counts if they are available. If classification counts are not available, a split should be requested from TDOT's Planning Division.

The Noise Technical Report should include a table summarizing the projected traffic volumes for each modeled TNM roadway. The traffic projections should be included in an appendix of the Noise Technical Report.

TNM Receivers

Traffic noise analysis should be preformed for Category B, C and E land uses with areas of frequent human use as well as for FHWA-approved Category A land uses. The analysis should also include qualifying Category D uses and Category G undeveloped land where development is permitted.

Receivers should be modeled at all noise measurement sites.

Category B Land Uses

For residences, receivers should typically be located in areas near the residences where frequent human use would be expected such as patios, decks, balconies, common grounds or areas such as swimming pools, playgrounds, or other appropriate locations.

Receivers should be located in areas of the property that are oriented toward the project roadway. Therefore, receivers may need to be located to represent front porch or yard locations. Generally, receivers should be located approximately 10 feet from the residence.

Often, residences will have decks that are elevated above the ground. These locations can be modeled for the purpose of identifying impacts and counting benefits. However, noise abatement will generally not be designed for these locations.

Upper story locations such as those at apartments and condominiums should be modeled for the purpose of identifying impacts and counting benefits. Noise abatement might be designed for these locations as discussed in Section 5.3.4.6.6.

A single receiver can represent more than one residential unit as long as the units would be expected to have comparable existing and design year sound levels.

Category C Land Uses

Receivers should be located at frequent human use areas of Category C land uses. Areas of frequent human use must be exposed to traffic noise on a regular basis

over the course of a year. These locations might include exterior sitting or eating areas.

For campgrounds, these areas might include dedicated camp sites. For cemeteries, these areas might include exterior areas where services are held on a regular basis but would generally not include individual grave sites.

If a Category C land use has both exterior and interior areas of frequent human use, the exterior area should be analyzed for impact as Category C.

Category D Land Uses
If there are no exterior areas of frequent human use or the exterior area is far from or physically shielded from the roadway in a manner that prevents an impact on the exterior areas, then the interior area should be analyzed for impact as Category D.

Receivers should be modeled at exterior areas of these properties facing the highway. After the TNM predictions are made, interior noise levels should be estimated in accordance with FHWA's Guidance. FHWA's procedure requires that the type of building construction be identified and documented. A determination whether the building would normally operate under "closed windows" conditions should then be made. The appropriate sound level reduction from Table 5-5 for building attenuation should be applied to the predicted exterior noise level to arrive at the predicted interior noise level. This level should be compared to the NAC for Activity Category D land uses to determine if interior impacts are predicted.

Table 5-5 Building Noise Reduction Factors

Building Type	***Window Condition***	***Reduction***
All	Open	10 dB
Light Frame	Ordinary Sash (closed)	20 dB
	Storm Windows	25 dB
Masonry	Single Glazed	25 dB
	Double Glazed	35 dB
** The windows shall be considered open unless there is firm knowledge that the windows are in fact kept closed almost every day of the year.*		

Source: FHWA's "*Highway Traffic Noise Analysis and Abatement: Policy and Guidance.*"

There may be situations where it is desirable to develop noise reduction factors through the conduct of additional field measurements or more detailed acoustical analysis. TDOT will determine the need for interior measurements on a case-by-case basis.

Category E Land Uses
Receivers should be modeled at exterior frequent human use areas of Category E land uses such as exterior restaurant seating areas, pools or playgrounds.

Exterior areas of commercial properties including sidewalks and parking areas are not considered to be areas of frequent human use.

Number of Receivers
The number of modeled TNM receivers for a project should be adequate to facilitate an accurate count of the number of impacts that will result from each Build Alternative.

For a project with a large number of residences, it is not necessary to model at every residence. One receiver can represent multiple residences if the location is considered to be acoustically representative of several residences.

If noise barriers are being evaluated, enough receivers should be modeled to ensure an accurate count of the number of benefits.

A table that indicates the number of residences being modeled by each receiver should be included in the Noise Technical Report.

The analyst should exercise judgment in determining the distance at which receivers should be modeled. Consideration should be given to the distance within which impacts are expected, as well as where benefits might occur if noise abatement is evaluated.

For projects involving widening existing roads or interchange modifications, a distance of 500 to 600 feet from the road should generally be sufficient. However, the distance within which impacts might occur will often be much greater for projects involving construction of a road on a new alignment.

The analyst should be aware that unique site conditions such as a high percentage of trucks or the existence of intervening “hard“ ground, such as paved areas or bodies of water, might also result in impacts at greater distances that would normally be expected.

Receiver Elevations
Receiver elevations should closely approximate actual ground elevations. The elevation datum should be Mean Sea Level (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929). If a different datum is used, then a discussion of the datum should be included in the Noise Technical Report.

First-floor receivers should generally be modeled 5 feet (1.5 m) above the ground and second-floor receivers should generally be modeled 15 feet (4.5 m) above the ground.

Receiver Names

Generally, receivers should be named by designating the address of the property where the receiver is located. Address information can be obtained at http://www.assessment.state.tn.us/, http://tnmap.state.tn.us/assessment/map.aspx or various county GIS websites.

An alternative method of receiver naming is to designate the receiver as first (1), second (2), third (3) or subsequent row relative to the roadway. The relative location is then followed by a hyphen, the first two letters of the local street on which the receiver is located, and the station of the adjacent roadway being modeled. For example, a second-row receiver on Green Street near STA 335+00 would be designated as 2-GR335.

TNM Barriers

Existing noise barriers or noise barriers that are being evaluated as abatement measures should be modeled, as well as any structures that act like noise barriers such as median barriers, parapet walls and large buildings.

Median Barriers

If the future typical cross section shows that a median barrier will be constructed, the median barrier shall be modeled in TNM at the proposed location(s) and height(s).

Parapet Walls

Parapet walls should be modeled at the existing or proposed location(s) and height(s) so that the shielding from the parapet wall is included in the no-abatement sound levels.

Buildings

Buildings that cannot be accurately modeled as part of a building row should be modeled as fixed height noise barriers.

Existing Noise Barriers

Solid noise barriers that were constructed to abate noise should be modeled as fixed height noise barriers.

Privacy Fences

Privacy fences that are constructed with materials and in a manner that would be expected to reduce sound levels should be modeled in TNM. These types of fences could include solid cinder block or brick walls.

Wooden privacy fences are not typically constructed to mitigate noise and should not be modeled as noise barriers. However, these fences can provide small reductions in sound levels. If the fence is expected to remain in good condition over the lifetime of the project (i.e. 20 years in the future), then it may be appropriate to model the fence as a TNM building row as described below. However, TDOT should be consulted before a privacy fence is modeled.

Field measurements can also assist in evaluating the noise level reduction that might be provided by existing fences.

TNM Building Rows

Multiple small buildings, such as rows of houses, that act as multiple small barriers with gaps should be modeled as building rows with a uniform low transmission loss.

TNM Terrain Lines

TNM terrain lines should be used to define the terrain between TNM roadways and receivers. TNM terrain lines should be modeled where they break the line-of-sight or where they would reduce excess ground attenuation. TNM terrain lines could include:

- The top of cut for a depressed roadway
- The bottom of deep drainage ditches
- The edge of fill for roadways on fill
- Ridges of intervening hills
- Lines of constant elevation of an intervening hill

TNM Ground Zones

Lawn should generally be specified as the default ground type for TDOT projects. Any large areas of ground type that would be expected to affect sound propagation should be modeled as TNM ground zones. Ground zones might include parking lots and lakes.

TNM Tree Zones

Tree zones should not be modeled on TDOT projects unless they meet FHWA's definition which states that tree zones should consist of long, wide regions of heavy, non-deciduous woods and undergrowth, not just individual trees or several rows of trees. The vegetation also must be sufficiently dense to completely block the view along the sound propagation path. This requires dense undergrowth as well as dense tree-top foliage. Tree zones" should not be modeled unless they have this vegetative density and without TDOT's concurrence.

TNM Contours

This TNM feature should only be utilized for land-use planning activities.

Review of Design Year Sound Levels

The predicted design year sound levels for the Build Alternative(s) should be thoroughly reviewed to assess whether the predicted sound levels at each receiver are reasonable given the analyst's knowledge and understanding of the source of the traffic noise, the path between the source and the receiver, and the characteristics of the intervening terrain.

The predicted design year sound levels at the measurement locations should be compared to the existing and design year No-Build worst-hour sound levels at each

measurement location to assess whether the predicted change in sound level due to the project is reasonable.

If the predicted change in noise levels due to project is significantly higher or lower than the change that the analyst would expect, then the analyst should thoroughly review the modeling for the Build Alternative to ensure that the TNM model accurately represents the design year conditions. For example, a predicted 6 dB increase in the sound level would not be expected if the traffic did not double and the roadway did not move closer to the receiver.

5.3.4.6.5 Determination of Traffic Noise Impacts

Traffic noise impacts for each Build Alternative should be identified in accordance with TDOT's Noise Policy. An impact analysis is generally not needed for the No-Build Alternative.

Each modeled receiver should be identified as not impacted, impacted based on the NAC, impacted based on substantial increase in sound levels, or impacted based on both the NAC and a substantial increase in sound levels. The information should be presented in a table in the Noise Technical Report.

The total number of impacts by Land Use Category resulting from each Build Alternative should be determined and summarized in a table in the Noise Technical Report.

If traffic noise impacts are not predicted for the Build Alternative(s) in the design year, the analysis is considered complete and noise abatement measures should not be evaluated. This determination should be stated in the Noise Technical Report.

5.3.4.6.6 Evaluation of Noise Abatement Measures

Noise abatement should be evaluated when noise impacts are predicted in the design year for the Build Alternative(s). At a minimum, TDOT will consider noise abatement in the form of a noise barrier, since barriers are generally the best available abatement measure to reduce sound levels for impacted land uses.

Earth berms are similar to noise barriers and are sometimes considered to be more aesthetically pleasing that noise barriers. However, berms require significant right-of-way that is typically not available. For example, the width of a 15-foot high berm constructed at a 2:1 slope with a top flat width of 5 feet is 65 feet plus additional width for drainage. Additionally, berms are generally not feasible where the road is in cut or on-fill. Earth berms may also be difficult to maintain. Therefore, earth berms are not feasible for most projects. As a result, berms will be evaluated in lieu of or in combination with noise barriers on a case-by-case basis.

TDOT may also consider the following noise abatement measures for Type I projects: (1) traffic management measures (e.g., traffic control devices and signing for prohibition of certain vehicles types, time-use restrictions for certain vehicle types, and exclusive lane designations); (2) alteration of horizontal and vertical alignments;

(3) acquisition of property rights (either in fee or lesser interest) for construction of noise barriers; and (4) noise insulation of Category D land uses.

These measures are discussed in greater detail below. The feasibility and reasonableness of these alternative abatement measures will be assessed on a case-by-case basis.

Traffic Management Measures: Truck prohibitions and reducing speed limits can sometimes reduce sound levels. However, a 20 mile-per-hour reduction in speed is necessary for a readily noticeable (5 dB) decrease in sound levels. This sound level reduction would not be substantial. Therefore, speed reductions are not acoustically feasible for most projects.

FHWA generally does not allow restrictions of truck trailer combinations on facilities in the National Network for large trucks, except under very special circumstances and where comparable parallel facilities are available. The National Network includes most of the Interstate Highway System in Tennessee. Therefore, truck restrictions are not possible for projects involving Interstates or other routes where comparable alternative routes do not exist. Truck restrictions could be evaluated if the restriction would not conflict with the designated use of the roadway and where such restrictions would not cause increased delay or travel times to the motoring public.

Alteration of Horizontal and Vertical Alignment: For projects that involve widening of an existing facility, the modification of the horizontal and vertical alignment is generally not a feasible mitigation strategy. However, the modification of the horizontal and vertical alignment may be a feasible strategy for projects that involve the construction of a roadway on a new alignment.

Noise Insulation of Category D Land Uses: Sound insulation might be possible to mitigate predicted interior impacts of public use or nonprofit institutional structures.

Noise insulation measures might include installation of new windows; sealing windows, cracks, and other openings; and the installation of air-conditioning. However, post-installation maintenance and operational costs for noise insulation are not eligible for Federal-air funding.

Noise Reduction Design Goal
The noise abatement measure shall provide at least 7 dB noise reduction at 60% or more of the first-row benefited receptors. For impacted Category D land uses, the noise abatement measure should provide a minimum 7 dB reduction in interior noise levels for the impacted areas.

Multistory Buildings
For multiple-story, single-family houses and multi-family dwellings, noise abatement will be designed to protect the exterior ground-floor receptors when the exterior areas are at-grade or elevated above the roadway. In cases where the exterior first-floor areas (i.e., decks or porches) are elevated above the ground but are still below

the grade of the roadway (i.e., first-floor decks or porches), noise abatement will generally be designed to protect those elevated first-floor areas.

If any of the upper floor exterior balconies in multi-family dwellings are benefited as a result of a noise abatement design, then these upper floor units will be included in the reasonableness analysis.

Date of Public Knowledge
Federal participation in noise abatement measures will not be considered for lands that are not permitted by the date of public knowledge of the project, and TDOT will not analyze or provide noise abatement for these lands. After the date of public knowledge, provision of noise abatement becomes the responsibility of local communities or private developers.

Trees/Vegetation
The planting of trees/vegetation is not considered as a noise abatement measure because vegetation and trees could not be constructed within the right-of-way at the depth and density required to provide a substantial noise reduction. Additionally the planting of vegetation is not acceptable Federal-aid noise abatement measures for Federal projects.

Alternative Pavements
The use of alternative pavement types is also not considered as a noise abatement measure. FHWA's policy related to tire/pavement noise is as follows:

> *"Pavement is sometimes mentioned as a factor in traffic noise. While it is true that noise levels do vary with changes in pavements and tires, it is not clear that these variations are substantial when compared to the noise from exhausts and engines, especially when there are a large number of trucks on the highway. Additional research is needed to determine to what extent different types of pavements and tires contribute to traffic noise.*
>
> *It is very difficult to forecast pavement surface condition into the future. Unless definite knowledge is available on the pavement type and condition and its noise generating characteristics, no adjustments should be made for pavement type in the prediction of highway traffic noise levels. Studies have shown open-graded asphalt pavement can initially produce a benefit of 2-4 dBA reduction in noise levels. However, within a short time period (approximately 6-12 months), any noise reduction benefit is lost when the voids fill up and the aggregate becomes polished. The use of specific pavement types or surface textures must not be considered as a noise abatement measure."*

5.3.4.6.7 Noise Barrier Design

Noise barriers should be evaluated using TNM to reduce sound levels at impacted land uses.

Noise Reduction Design Goal: Noise barriers should provide at least 7 dB noise reduction at 60% or more of the benefited first-row receptors. For impacted Category D land uses, the noise abatement measure should provide a minimum 7 dB reduction in interior noise levels for the impacted areas.

When the noise reduction design goal can be achieved, additional efforts may be made to obtain up to a 10 dB noise reduction at impacted first-row receivers.

Barrier Location: Acoustically, the most effective noise barriers are generally located close to the source (i.e. at the highway shoulder) or close to the receptor (i.e. at/near the right-of-way). The analyst should exercise judgment in determining the most effective location for a barrier. Additionally, in areas where a road transitions from cut to fill and vice versa, the barrier will likely need to transition from a location near the road to a location near the right-of-way.

Some situations may require an analysis of more than one barrier location and may require coordination with TDOT's Design Division.

Barrier Heights: Barrier heights will vary considerably depending on traffic volumes and mixes, the characteristics of the intervening ground, and the location of the road relative to the impacted receptors (i.e. cut or fill).

TNM should generally be run with an input height of 16 feet, a perturbation increment of 2 feet, and with 4 perturbations up and down.

5.3.4.6.8 Noise Barrier Feasibility and Reasonableness

Noise abatement measures must be feasible and reasonable, as defined below. Feasibility deals with engineering considerations and the ability to achieve a 5 dB noise reduction. Reasonableness weighs the amount of required noise barrier area against the benefits that would be provided by the barrier. The viewpoints of the benefited property owners and residents will be considered by TDOT in its final decision regarding reasonableness.

Feasibility

Feasibility deals with engineering considerations and the ability to achieve a 5 dB noise reduction. In order for the noise abatement measure to be feasible, the measure should provide a minimum of 5 dB reduction in design year highway traffic noise levels for the majority of the benefited first-row receptors.

Feasibility may also be affected by: (1) topography; (2) access and utility requirements; (3) drainage; (4) safety and maintenance considerations; (5) the presence of local cross streets; and (6) noise from other sources in the area such as local roads, trains, aircraft, factories, (7) excessive height of barrier needed to reach reduction goal, etc.

A preliminary qualitative assessment should be completed to identify any major design, construction, maintenance or safety factors associated with construction of noise barriers. The factors that should be evaluated include:

- Access to adjacent properties for non access-controlled facilities
- Sight distance
- Clear zone
- Drainage
- Utilities
- Constructability of the barrier including issues associated with constructing noise barriers on bridges

The extent to which these issues can be assessed will depend on the project development process. The Noise Technical Report and NEPA document should indicate the type of plans upon which the noise study was based.

Noise barriers will generally not be determined to be not feasible for non-acoustic reasons during the NEPA process. Instead, non-acoustic issues that could affect the feasibility determination during the final design process should be discussed in the Noise Technical Report and NEPA document.

TDOT will assess all potential feasibility issues during the final design process for those barriers that are determined to be acoustically feasible and reasonable. Issues associated with drainage, sight distance, clear zone and utilities can generally be addressed during the final design process without affecting the feasibility and reasonableness of the noise barrier.

Barriers that are predicted to provide a minimum 5 dB IL at the majority of impacted first-row receptors should be identified as acoustically feasible.

The feasibility of providing noise abatement may be influenced by other significant noise sources in the areas including rail, aircraft, and industrial/manufacturing operations. The extent to which other significant noise sources affect acoustic feasibility will depend on the temporal nature of the noise source as well as the sound levels themselves.

In these cases, a more detailed assessment of acoustical feasibility may be needed and TDOT should be consulted. The procedures contained in the Federal Transit Administration Report Number FTA-VA-90-1003-06, *"Transit Noise and Vibration Impact Assessment"* should be followed in cases where acoustic feasibility may be affected by transit or rail operations.

Feasibility alone does not dictate whether a noise barrier will be built. Each noise barrier must also be "reasonable" in accordance with TDOT's Noise Policy.

Reasonableness

Noise abatement will only be assessed where noise impacts are predicted and where frequent human use occurs. Primary consideration will be given to exterior areas.

In order for a noise abatement measure to be reasonable, the required barrier area (in square feet) per benefited residence must be less than or equal to the allowable barrier area per benefited residence for that noise abatement location.

The calculated area per benefited residence is the estimated area of the barrier divided by the number of benefited residences. The number of benefited residences in each noise analysis area is determined by counting all of the residences that would receive 5 dB or more insertion loss due to construction of the barrier regardless of whether or not the residence is predicted to be impacted.

Noise abatement will generally not be considered reasonable for isolated residences due to the quantity of abatement versus the benefits provided.

The allowable barrier area per benefited residence for each noise abatement location is calculated using the following equation:

Allowable Area per Benefited Residence

= Base Allowance	_____
+ Previous Type I Widening Allowance	_____
+ Design Year Noise Levels Allowance	_____
+ Noise Level Increase Allowance	_____
+ Noise Compatible Planning Allowance	_____
= Total Allowable Area per Benefited Residence	_____

The value for each allowance type should be selected based on the criteria outlined in the following table:

Allowance Type	Criteria	Allowance in square feet
Base Allowance	Residences pre-date the highway(1) or the project is on a new alignment.	1,500
	Residences post-date the highway(2) but were constructed before September 16, 2005. (3)	750
	Residences were constructed after September 16, 2005.(3)	250
Previous Type I Widening Allowance(4)	Residences pre-date a Type I widening project on the adjacent highway.	200
Design Year Noise Levels Allowance(5)	69 or less dBA	0
	70 – 74 dBA	100
	75 or more dBA	200
Noise Level Increase Allowance(6)(7)	0 – 4 dBA	0
	5 – 9 dBA	200
	10 or more dBA	400
Noise Compatible Planning Allowance	The local government of the jurisdiction in which the project will be constructed has no policies to require that noise be considered in the land development process.	0
	The local government of the jurisdiction in which the project will be constructed has adopted official and enforceable policies to require that noise be considered as an integral component of the land development process.	100

(1) The majority (more than 50%) of residences existed before the original highway construction.

(2) The majority (more than 50%) of residences were constructed after the original highway construction.

(3) TDOT's previous noise policy became effective on September 16, 2005. FHWA's approval of this policy was contingent upon TDOT's completion of a public outreach program to 1) notify local jurisdictions of the changes in TDOT's new noise policy and 2) encourage them to consider noise compatible land use planning when noise-sensitive land uses are proposed adjacent to TDOT's highways. As a result, development that occurs after this date receives less consideration in the reasonableness analysis.

(4) The majority (more than 50%) of residences existed before the most recent Type I project that added through traffic lanes.

(5) Based on an average of the impacted first–row receivers' levels (design year noise levels for Type I projects and existing noise levels for Type II projects).

(6) An average of the increases from existing noise levels to design year noise levels for the Build Alternative at the impacted first-row receivers.

(7) Not applicable for Type II projects.

A table summarizing the results of the noise barrier reasonableness analysis should be provided in the Noise Technical Report and environmental document. The table should include a description of the area protected by the barrier(s), barrier length(s), average height(s), estimated barrier area, number of benefited residences, calculated area per benefited residence, allowable area per benefited residence, and whether the barrier is reasonable.

Section 772.17(b) of 23 CFR 772 (July 13, 2010) states that if a highway agency chooses to participate in a Type II noise program or to use the date of development as one of the factors in determining the reasonableness of a Type I noise abatement measure, the highway agency shall have a statewide outreach program to inform local officials and the public of (1) Noise compatible planning concepts, (2) The best estimation of the future design year noise levels for undeveloped lands or properties within the project limits, and (3) Non-eligibility for Federal-aid participation for Type II projects.

TDOT's policy dated September 16, 2005 was the result of a lengthy policy update process that was developed with close coordination with the FHWA Tennessee Division Office. As part of that policy update, TDOT committed to undertaking a public education campaign to 1) notify local jurisdictions of the changes in TDOT's new noise policy and 2) encourage them to consider noise compatible land use planning when noise-sensitive land uses are proposed adjacent to TDOT's highways. The campaign included sending more than 400 letters City and County officials of jurisdictions adjacent to TDOT's highways; presentations at Metropolitan Planning Organizations (MPOs) meetings and conferences; hosting a booth at a Tennessee Chapter of the American Planning Association (TAPA) state conference; and publishing an article regarding TDOT's Noise Policy and noise compatible land use planning. A detailed summary of the public outreach program can be obtained from the Environmental Planning Division.

Since TDOT has demonstrated compliance with Section 772.17(b) of 23 CFR 772 (July 13, 2010), the date of development is a factor in determining the Base Allowance for the reasonableness analysis as described below.

Base Allowance

If the project is located on a new alignment, then each impacted area along the new alignment should be assigned New Alignment Allowance of 1,500 square feet.

If the project involves an existing road, then a development date analysis must be completed to determine the build dates of the impacted residences or other noise-sensitive land uses. The development date analysis involves first, determining the date of original highway construction; second, determining the construction dates of the impacted receptors; and third, determining whether the majority of impacted residences 1) predated the highway, 2) postdated the highway but were constructed before September 16, 2005, or 3) were constructed after September 16, 2005. The applicable base allowance is determined based on the results of the development date analysis.

The construction dates for most of Tennessee highways can be obtained from TDOT's TRIMs database. If the road construction date is not available, a determination as to whether a land use(s) predated the highway might be possible by reviewing historical USGS mapping, GIS data, and data from the property assessor. TDOT should be consulted if a determination cannot be made using these available sources of information.

The construction dates for impacted receptors can generally be obtained from the County Property Assessor (http://www.assessment.state.tn.us/).

A table summarizing the results of the development date analysis should be included in the Noise Technical Report and detailed results should be provided in an appendix.

Previous Type I Widening Allowance
Areas where the majority (more than 50%) of residences existed before the most recent Type I project that added through traffic lanes should be assigned a Previous Type I Widening Allowance of 200 square feet.

Design Year Noise Levels Allowance
The Design Year Noise Levels Allowance is based on an average of the impacted first–row receptors' levels. Areas with average predicted future sound levels of 75 dBA or higher should be assigned a Noise Levels Allowance of 200 square feet. Areas with average predicted future sound levels between 70 and 74 dBA should be assigned a Noise Levels Allowance of 100 square feet. Areas with average predicted future sound levels of 69 dBA or lower should not be assigned a Noise Levels Allowance.

Noise Level Increase Allowance
The Noise Level Increase Allowance is based on an average of the change between existing sound levels and future sound levels for the Build Alternative(s) at the impacted first–row receptors.

Areas where the predicted change is 10 dB or more should be assigned a Build Versus Noise Levels Allowance of 400 square feet. Areas where the predicted change is between 5 and 9 dB should be assigned a Build Versus Noise Levels Allowance of 200 square feet. Areas where the predicted change is 4 dB or less should not be assigned a Build Versus Noise Levels Allowance.

Noise Compatible Planning Allowance
TDOT's Noise Policy states the following:

> *"TDOT and the FHWA believe that highway traffic noise should be reduced through a program of shared responsibility. Local governments should use their power to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway or that the developments are planned, designed and constructed in such a way that noise impacts are minimized."*

Local governments that have adopted official and enforceable policies to require that noise be considered as an integral component of the land development process will be assigned Noise Compatible Planning Allowance of 100 square feet.

Category C, D and E Land Uses

The reasonableness determination for Category C, D and E land uses requires the calculation of an equivalent number of residences based on the size, type and duration of the activity.

The allowable barrier area per equivalent benefited residence for each noise abatement location is determined using the reasonableness calculation provided in the previous section.

The abatement measure will be reasonable if the required barrier area (in square feet) per equivalent benefited residence is less than or equal to the allowable barrier area per equivalent benefited residence for that noise abatement location.

The number of equivalent residences is determined using the following formula:

$$\textbf{Equivalent Residences} = \frac{\textbf{Number of Users}}{\textbf{(Number of People Per Residence)}} \times \textbf{Usage}$$

where:

Number of Users = Average Number of Users During Usage Times
Number of People Per Residence = 2.5 (Tennessee Average from Census)
Usage = (Hours Used Per Day/24 Hours) x (Days Used Per Year/365 Days)

The Number of Users, Hours Used Per Day, and Days Used Per Year should be determined by evaluating the characteristics of the individual use.

Variables that might be included in assessing the Number of Users could include the maximum capacity of the use or the number of parking spaces provided. If maximum capacities are used, these capacities should be multiplied by a Typical User Factor to arrive at the average number of users during usage times. Guidance for calculating the Number of Users for swimming pools and playgrounds is provided in the following table.

Land Use	Number of Users	Maximum Users	Typical User Factor
Swimming Pool	Maximum Users x Typical User Factor	Swimming Pool Area (sq. ft.)/ 10 sf. ft(1)	10% to 50%(2)
Playground	Maximum Users x Typical User Factor	Playground Area (sq. ft.)/ 50 sf. ft(3)	10% to 75%(4)

(1) Maximum occupancy based on Davidson County and Hamilton County swimming pool regulations that require 10 sq. ft. of swimming pool area (deck areas excluded) per person.
(2) The typical number of users would be significantly less than the maximum number of users..
(3) Based on Tennessee licensure regulations for playgrounds requiring 50 sq. ft. of area per child.
(4) School playgrounds that are used throughout the day (i.e. schools) would have higher Typical User Factors than playgrounds at other facilities (i.e. churches, libraries, etc.).

Active sports areas are not considered to be noise-sensitive since a quiet noise environment is not important for normal activities. Therefore, these areas are equivalent to one residence.

Parks will typically be comprised of several individual use areas including active sports areas, swimming pools, playgrounds, picnic areas, etc. The equivalent residences for each of these individual uses should be calculated and added to get the total number of equivalent residences for the park.

5.3.4.6.9 Views of Benefited Property Owners and Residents

Per TDOT's Noise Policy, the views of benefited property owners and residents will be considered in making final noise abatement decisions. This input will generally be received at planning, NEPA, or design public hearings or public meetings.

If a noise barrier has been determined to be both feasible and reasonable, TDOT will include a note in the public hearing or meeting advertisement indicating that noise barriers are proposed and that public comments will be solicited and received at the meeting or hearing. TDOT will also include a discussion of the noise barrier(s) in the presentation and provide a dedicated space on the comment card for noise barrier comments.

Experience on past projects has indicated that the vast majority of residents have supported TDOT's proposed noise barriers. However, there may be instances where benefited residents or property owners oppose the construction of noise barriers for various reasons including blockage of views, the loss of sunlight due to the shadow created by a noise barrier, and isolation effects.

If significant opposition exists and there is not clear support for the construction of the proposed noise barrier(s), TDOT will conduct a certified mail survey to solicit the views of the benefited residents and/or property owners that would be protected by the barrier(s). If a majority of benefited residents/property owners oppose the construction of a noise barrier, then the barrier will not be included as a "likely" noise abatement measure. Benefited residents and/or property owners that do not respond will be contacted a second time. A final determination will be made based upon the total responses received after the second survey.

Responses from residents or owners of properties that are predicted to be impacted as well as benefited will be counted as two responses. Responses from residents or owners of properties that are predicted to be benefited but not impacted will be counted as one response.

TDOT will conclude that a community desires the construction of a noise barrier unless a majority (at least 51%) of the impacted property owners and residents indicate that they do not want the proposed noise barrier.

5.3.4.6.10 Statement of Likelihood

A statement of likelihood should be included in the CE, FONSI, ROD or TEER for all abatement measures that are determined to be feasible and reasonable in the preliminary analysis.

The statement of likelihood should include the preliminary location and physical description of all likely noise abatement measures, and should indicate that final decisions regarding the construction of abatement measures will be made during the final design process for the project.

5.3.4.6.11 Third-Party Funding

Third-party funding is not allowed on a Federal or Federal-aid Type I or Type II project if the noise abatement measure would require the additional funding from the third-party to be considered feasible and/or reasonable. Third-party funding is acceptable on a Federal or Federal-aid highway Type I or Type II project to make functional enhancements, such as absorptive treatment, access doors, aesthetic enhancements, to a noise abatement measure already determined feasible and reasonable.

5.3.4.6.12 Assessment of Construction Noise

Construction noise related to transportation projects should be addressed in the Noise Technical Report and in the environmental document for the project. Most projects will not require modeling or any form of construction-related noise analysis. In most cases, construction noise may be adequately addressed through a narrative discussion. The following statement should be included in the Noise Technical Report and environmental document for most projects:

> *"Transportation projects will result in intermittent and temporary noise above existing ambient noise levels due to construction activities. The sound levels resulting from construction activities will be a function of the types of equipment utilized, the duration of the activities, and the distances between construction activities and nearby land uses.*
>
> *However, the noise increases will be temporary and will not constitute a noise impact as defined by the FHWA Noise Standards and TDOT's Noise Policy.*
>
> *If TDOT's construction specifications apply to this project, construction procedures should be governed by the Standard Specifications for Road and Bridge Construction as issued by TDOT and as amended by the most recent applicable supplements. The contractor will be bound by Section 107.01 of the Standard Specifications to observe any noise ordinance in effect within the project limits. All construction equipment should be maintained, repaired and adjusted to keep it in full satisfactory condition and detoured traffic should be routed during construction so as to cause the least practicable noise impact upon noise-sensitive areas."*

Large projects in urban or populated areas or controversial projects may require a more detailed assessment of construction noise. TDOT will consider the need for more detailed construction noise analyses on a case-by-case basis.

If TDOT determines that a more detailed construction noise analysis is required, the analysis scope will be developed in coordination with TDOT and will be completed in accordance with the most recent version of the ***FHWA Roadway Construction Noise Model (RCNM).***

5.3.4.6.13 Information for Local Officials

To minimize future traffic noise impacts on currently undeveloped lands adjacent to Type I projects, TDOT will provide local officials of the jurisdiction where the highway project is located with the following:

1. Information on noise compatible planning concepts;
2. The best estimation of the design year noise levels on the undeveloped lands along the project at various distances from the edge of the nearest travel lane of the highway improvement; and,
3. Information on TDOT's Type II Noise Barrier Program.

This information should be included in the "Information for Local Officials" section of the Noise Technical Report and environmental document.

Information on Noise Compatible Planning Concepts

TDOT encourages local governments with jurisdiction over undeveloped lands, as well as potential developers of these lands, to practice noise compatibility planning in order to avoid future noise impacts. The following language is included in TDOT's Noise Policy:

> *"TDOT and the FHWA believe that highway traffic noise should be reduced through a program of shared responsibility. Local governments should use their power to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway or that the developments are planned, designed and constructed in such a way that noise impacts are minimized."*

TDOT's Noise Policy states that:

> *"Federal participation in noise abatement measures will not be considered for lands that are not permitted by the date of public knowledge of the project and TDOT will not analyze or provide noise abatement for these lands. After the date of public knowledge, provision of noise abatement becomes the responsibility of local communities or private developers."*

The Noise Technical Report templates include this language as well as references to the following FHWA guidance documents on noise compatible land use planning:

- *The Audible Landscape: A Manual for Highway Noise and Land Use*, FHWA, November, 1974. http://www.fhwa.dot.gov/environment/audible/index.htm
- *Entering the Quiet Zone: Noise Compatibility Land Use Planning*, FHWA, May, 2002. http://www.fhwa.dot.gov/environment/noise/quietzon

Estimates of Design Year Noise Levels

The Noise Technical Report and environmental document should include a brief discussion of the location and type of undeveloped lands the project area.

TNM should be used to predict design year sound levels at various distances from the proposed centerline of the near lane for these undeveloped areas. The analysis should be done for an at-grade condition.

The predicted sound levels should be summarized in a table and the Noise Technical Report should clearly state the following:

> *"The noise predictions do not represent predicted levels at every location at a particular distance back from the roadway. Sound levels will vary with changes in terrain and will be affected by the shielding of objects such as buildings. This information is being included to make local officials and planners aware of anticipated highway noise levels so that future development will be compatible with these levels."*

TDOT's Type II Noise Barrier Program

The following discussion should be included in the Noise Technical Report and environmental document.

> *"TDOT currently has a Type II Noise Barrier Program to facilitate the construction of "retrofit" noise barriers along existing highways. To be eligible for a Type II noise barrier, an area must meet the following criteria:*
>
> - *The neighborhood must be located along a limited-access roadway;*
> - *The neighborhood must be primarily residential;*
> - *The majority (more than 50%) of residences in the neighborhood near the highway pre-dated the initial highway construction;*
> - *A noise barrier for the neighborhood must not have been previously determined to be not reasonable or not feasible as part of a new highway construction or through-lane widening study (Type I project);*
> - *Existing noise levels measured in the neighborhood must be above the Noise Abatement Criteria (NAC) of 66 dBA;*
> - *A barrier must be feasible to construct and will provide substantial noise reduction; and,*
> - *A barrier must be reasonable (barrier cost per benefited residence) in accordance with TDOT's Noise Policy. A residence*

is considered "benefited" if the noise barrier will reduce the traffic noise by at least 5 dB."

5.3.4.7 Noise Technical Report

The results of the noise analysis should be documented in a Noise Technical Report that should have a logical sequence and language that adequately describes the procedures used to complete the noise analysis. Tables and figures should be used to convey the study results and make the report easily understandable by both a technical reviewer and a lay person.

The Noise Technical Report should generally contain the following sections:

1.0 Executive Summary
2.0 Project Description
3.0 Criteria for Determining Impacts
  3.1 Traffic Noise Terminology
  3.2 Noise Abatement Criteria (NAC)
4.0 Identification of Noise-Sensitive Land Uses
5.0 Determination of Existing Sound Levels
6.0 Determination of Future Sound Levels
  6.1 No-Build Alternative
  6.2 Build Alternative(s)
7.0 Impact Determination Analysis, Build Alternative(s)
8.0 Noise Abatement Evaluation
  8.1 Noise Barrier Feasibility
  8.2 Noise Barrier Reasonableness
  8.3 Views of Benefited Property Owners and Residents
  8.4 Summary
9.0 Construction Noise
10.0 Information for Local Officials
11.0 Indirect and Cumulative Effects
12.0 References

Appendices (as applicable):
- Typical Cross-Sections
- Noise Measurement Data Sheets and Photographs
- Traffic Projections
- TNM Plan Views
- Design Year Sound Levels and Impacts, Build Alternative(s)
- Development Date Analysis
- Noise Barrier Analysis Results

The PIN and state project numbers should be included on the report cover.

All TNM runs developed for the project shall be transmitted to TDOT electronically or on a disk at the time any draft or final report is submitted.

TDOT has developed templates for the preparation of Noise Technical Reports to ensure consistency between project studies. These templates should be used on all TDOT projects and will be provided upon request.

5.3.4.8 Noise Section of Environmental Document

TDOT has developed templates for CEs, EAs, EISs and TEERs to ensure consistency between project studies. The analyst conducting the noise study should use the appropriate template to develop the noise section of the NEPA environmental document.

The environmental document for the project should also include brief discussions of the public involvement process (if applicable). Projects for which an EA or EIS is being prepared should include a discussion of indirect and cumulative impacts.

5.3.4.9 Final Noise Abatement Decisions

Conditions can change during the project design process. These changes may affect the preliminary noise abatement determinations in the environmental document. Such changes could include modifications to the proposed cross-sections, shifting the alignment, and changing roadway or ramp grades.

Final decisions regarding the construction of noise barriers will be made during the final design process.

5.3.4.10 Final Noise Barrier Design

Preliminary final noise barrier designs will be developed once right-of-way plans have been completed. The preliminary final barrier designs will be incorporated into the preliminary roadway design plans. The final noise barrier design will be re-evaluated when the preliminary roadway construction plans are completed.

The factors discussed below should be considered in making final decisions regarding noise abatement.

<u>Noise Reduction Design Goal</u>
The noise abatement measure shall provide at least 7 dB noise reduction at 60% or more of first-row benefited receptors. For impacted Category D land uses, the noise abatement measure should provide a minimum 7 dB reduction in interior noise levels for the impacted areas.

When noise abatement measures are considered and the noise reduction design goal can be achieved, additional efforts may be made to obtain up to a 10 dB noise reduction at impacted first-row receivers.

<u>Barrier Heights</u>
Barrier heights will vary considerably depending on traffic volumes and mixes, the characteristics of the intervening ground, and the location of the road relative to the

impacted receptors (i.e. cut or fill). Barrier heights between 10 and 20 feet are typical. Barrier heights above 20 feet will generally only be constructed in areas where the barrier location is transitioning from a location at/near the shoulder to a location at/near the right-of-way or vice versa.

Right-of-Way (ROW)
ROW needs, including access rights (air, light, view, ingress/egress), easement for construction and/or maintenance, and additional land must be considered as part of the feasibility of noise barrier construction.

Isolated pockets of land between noise barriers and access control fences and private fencing should be avoided if possible. Such areas collect litter and are difficult to access and maintain. In many cases, the noise barriers will serve to control access so that a control of access fence may not be required, particularly in locations where the noise barrier is constructed at/near the ROW.

Safety
Safety factors including maintaining adequate clear zone and sight distance are critical factors in determining whether a particular abatement scheme is viable.

Accessibility
Noise abatement measures should not affect ingress or egress from adjacent properties. Accessibility is considered in determining if the abatement measure is feasible and should be reviewed during final design.

Drainage
Drainage is an important consideration in locating and designing a noise barrier. Directing water along, under, or away from a noise barrier can be expensive and cause construction and maintenance problems.

Utilities
The location of overhead and underground utilities can affect the location and design of noise barriers. In some cases, utilities may have to be relocated so that a noise barrier can be constructed.

Ultimate Location
Noise abatement measures should be constructed to accommodate any planned widening of the facility. A noise abatement measure will not normally be constructed where the implementation of future projects would limit its useful life to less than 20 years. If noise abatement measures will be constructed at a shoulder location along a project where future widening is anticipated, then the project design should provide for salvage in the future.

Noise Reflections
Noise reflections between parallel reflective noise barriers can degrade the predicted effectiveness of the noise barriers. The amount of degradation is highly dependent on geometrics and degradations can vary significantly from location to location behind the same noise barrier.

A detailed noise reflections analysis should be completed during final noise barrier design using the "Parallel Barriers" module of TNM for all projects that involve the construction of parallel barriers on both sides of the highway.

The analysis should predict degradations at enough receivers to make a determination whether the barrier(s) should be specified as absorptive. Modeled receivers should include impacted first and second-row receivers as well as any other receivers where noise reflections could reduce the predicted barrier insertion loss.

If noise reflections are predicted to substantially degrade the predicted design year noise reductions, TDOT will specify that the barrier sections that are causing the degradations be absorptive.

Noise reflections off of a noise barrier on one side of a highway can also increase sound levels on the opposite side of the highway. In most cases, these increases are less than 3 dB which is usually the smallest change in hourly sound levels that people can detect without specifically listening for the change. However, TDOT may consider specifying single noise barriers as absorptive if there are noise-sensitive land uses of the opposite side of the road from the noise barrier.

Aesthetics

TDOT will generally solicit the views of the residents and/or owners of the impacted properties in making a determination regarding the aesthetic texture and color of the community side of the noise barrier. TDOT will select the aesthetic texture and color of the highway side of the noise barrier.

Maintainability

Noise barriers must be maintained after construction including removing or covering any graffiti that appears on both the road side and community side of noise barriers. Maintenance could be hampered if the noise barrier is constructed at a location that is difficult for maintenance crews to access. Maintenance crews must be able to access locations

5.3.4.11 Construction Noise

As discussed previously, Transportation projects will result in intermittent and temporary noise above existing ambient noise levels due to construction activities. The sound levels resulting from construction activities will be a function of the types of equipment utilized, the duration of the activities, and the distances between construction activities and nearby land uses.

One key to effectively addressing construction noise effects is proactive communication with the community. Residents and other affected property owners should be notified in advance of construction activities that will generate high noise levels including blasting and pile driving. Measures contained in TDOT's Section

107.01 of the Standard Specifications should apply to most projects. In addition to those measures, the following measures may be incorporated:

- Inform the public in advance on construction activities that might generate particularly high noise levels.
- Noise barriers that are included in the design plans should be constructed as early in project construction as practical.

5.3.5 Air Quality

Transportation projects have the potential to affect air quality by changing the volume, mix, and location of motor vehicle traffic. The potential effects that a project may have on air quality must be assessed during the NEPA process.

5.3.5.1 Applicable Legislation and Regulations

5.3.5.1.1 The Clean Air Act (CAA)

The *Clean Air Act* (CAA) was enacted in 1970 to protect and enhance air quality and to assist state and local governments with air pollution prevention programs. The CAA established six criteria pollutants and required the Environmental Protection Agency (EPA) to set National Ambient Air Quality Standards (NAAQS) for these criteria pollutants.

The CAA was amended in 1977 to set new goals for achieving attainment of NAAQS. This amendment also required a qualitative discussion of the air quality impacts of transportation projects and any transportation control measures (TCMs) which may be used to mitigate the air quality impacts attributable to the project.

The CAA amendments (CAAA) of 1990 were intended to meet unaddressed or insufficiently addressed problems such as acid rain, ground level ozone, air toxics, and stratospheric ozone depletion. Specific criteria were established for areas that did not meet the NAAQS for each criteria pollutant. The amendments also mandated the development and implementation of State Implementation Plans (SIPs) and specific timetables for implementing mobile source emission control strategies. If the criteria are not met, EPA can impose sanctions on all or part of the state.

Criteria Pollutants

Under the Clean Air Act, EPA establishes air quality standards for six common air pollutants called “criteria” pollutants including carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), and sulfur dioxide (SO_2).

National Ambient Air Quality Standards

Under the CAA, EPA establishes primary National Ambient Air Quality Standards (NAAQS) to protect public health, including the health of sensitive populations such as people with asthma, children, and older adults. EPA also sets secondary standards to protect public welfare. This includes protecting ecosystems, including plants and animals, from harm, as well as protecting against decreased visibility and damage to crops, vegetation, and buildings.

The NAAQS for the six criteria pollutants as summarized in Table 5-3.
In January 2010, EPA proposed stricter ozone standards. To ensure EPA's decision is grounded in the best science, EPA will review scientific data provided by the Clean Air Scientific Advisory Committee (CASAC). EPA intends to set a final standard in the range recommended by CASA by the end of July 2011. The new standard is expected to be lower than the 2008 standard of 0.075 ppm.

NAAQS Designations

The CAA established three designations for areas based on ambient measured concentrations for each criteria pollutant:

- Attainment Area: A geographic area that meets the NAAQS for the pollutant.
- Nonattainment Area: an area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the NAAQS for the pollutant.
- Maintenance Area: an area with a history of nonattainment, but that is now consistently meeting the NAAQS. Maintenance areas have been re-designated by EPA from "nonattainment" to "attainment with a maintenance plan." Maintenance areas are required to have a plan to remain in attainment for at least 20 years.

Nonattainment areas may also be given classifications based on the magnitude of the area's air quality problem. Nonattainment classifications are used to specify certain regulatory requirements, establish deadlines for states to submit air quality plans, and determine when an area must be in compliance (attainment) with the NAAQS.

For ozone, the nonattainment classifications are marginal, moderate, serious, severe, and extreme. For CO and PM, the classifications are moderate and serious. Table 5-4 shows the Tennessee's non-attainment and maintenance areas.

State Implementation Plans (SIPs)

The CAA requires that each state that has areas designated as nonattainment or maintenance develop a plan for how it will attain and maintain the NAAQS. This plan is called a state implementation plan (SIP). The state must involve the public in approving the plan before it is submitted to EPA. If the EPA finds a plan unacceptable, it can promulgate and enforce a Federal Implementation Plan (FIP). The SIP elements for Tennessee are located at EPA's Region 4 SIP Page (http://www.epa.gov/Region4/air/sips/).

General Conformity Rule

The General Conformity Rule established under section 176(c) of the CAA prohibits Federal entities from taking actions in nonattainment or maintenance areas that do not conform to the SIP.

The purpose of the General Conformity Rule is to:

- Ensure that federal activities do not interfere with the budgets in the state implementation plans (SIPs);
- Ensure that actions do not cause or contribute to new violations; and
- Ensure the attainment and maintenance of the national ambient air quality standards (NAAQS).

5.3.5.1.2 Conformity Regulations

In November 1993, EPA promulgated two sets of regulations to ensure compliance with Section 176(c): the *Transportation Conformity Regulations* and the *General Conformity Regulations.*

Transportation Conformity

The Transportation Conformity Regulations apply to highways and mass transit. These regulations establish the criteria and procedures for determining whether transportation plans, programs, and projects funded under title 23 U.S.C. or the Federal Transit Act conform to the SIP.

The *Transportation Conformity Regulations* contained in 40 CFR 96 establish the criteria and procedures for determining that transportation plans, programs, and projects that are funded under Title 23 U.S.C. or the Federal Transit Act conform with the SIP.

Transportation Conformity applies to nonattainment and maintenance areas for ozone (O_3), carbon monoxide (CO), particulate matter (PM_{10} and $PM_{2.5}$), and nitrogen dioxide (NO_2). Transportation Conformity does not apply to nonattainment and maintenance areas for sulfur dioxide (SO_2) and lead (Pb).

EPA's Final Conformity Rule, revised on July 1, 1999, requires state Departments of Transportation and Metropolitan Planning Organizations (MPOs) to develop Long Range Transportation Plans (LRTPs) and Transportation Improvement Programs (TIPs) that conform to the emissions budget and implemented schedule of Transportation Control Measures (TCMs) established in the SIP for air quality. The responsibility for implementing the conformity regulations falls upon the United States Department of Transportation (USDOT), through the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

These agencies ensure that transportation plans and programs in nonattainment and maintenance areas conform to the SIP. The policy board of each MPO makes a formal conformity determination on its transportation plans and program prior to submitting them to the USDOT for approval.

Table 5-6 National Ambient Air Quality Standards (NAAQS)

Pollutant	Primary Standards		Secondary Standards	
	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	9 ppm (10 mg/m^3)	8-hour [(1)]	*None*	
	35 ppm (40 mg/m^3)	1-hour [(1)]		
Lead	0.15 µg/m^3 [(2)]	Rolling 3-Month Average	*Same as Primary*	
	1.5 µg/m^3	Quarterly Average	*Same as Primary*	
Nitrogen Dioxide	53 ppb[(3)]	Annual (Arithmetic Average)	*Same as Primary*	
	100 ppb	1-hour [(4)]	*None*	
Particulate Matter (PM_{10}) [(4)]	150 µg/m^3	24-hour [(5)]	*Same as Primary*	
Particulate Matter ($PM_{2.5}$)	15 µg/m^3	Annual [(6)] (Arithmetic Average)	*Same as Primary*	
	35 µg/m^3	24-hour [(7)]	*Same as Primary*	
Ozone	0.075 ppm (2008 std)	8-hour [(8)]	*Same as Primary*	
	0.08 ppm (1997 std)	8-hour [(9)]	*Same as Primary*	
	0.12 ppm	1-hour [(10)]	*Same as Primary*	
Sulfur Dioxide	0.03 ppm	Annual (Arithmetic Average)	0.5 ppm	*3-hour* [(1)]
	0.14 ppm	24-hour [(1)]		
	75 ppb[(11)]	1-hour	*None*	

(1) Not to be exceeded more than once per year.
(2) Final rule signed October 15, 2008.
(3) The official level of the annual NO_2 standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard
(4) To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb (effective January 22, 2010).
(5) Not to be exceeded more than once per year on average over 3 years.
(6) To attain this standard, the 3-year average of the weighted annual mean PM2.5 concentrations from single or multiple community-oriented monitors must not exceed 15.0 µg/m3.
(7) To attain this standard, the 3-year average of the 98th percentile of 24-hour concentrations at each population-oriented monitor within an area must not exceed 35 µg/m3 (effective December 17, 2006).
(8) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.075 ppm. (effective May 27, 2008)
(9) (a) To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.08 ppm.
(b) The 1997 standard—and the implementation rules for that standard—will remain in place for implementation purposes as EPA undertakes rulemaking to address the transition from the 1997 ozone standard to the 2008 ozone standard.
(c) EPA is in the process of reconsidering these standards (set in March 2008).
(10) (a) EPA revoked the 1-hour ozone standard in all areas, although some areas have continuing obligations under that standard ("anti-backsliding").
(b) The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is ≤ 1.
(11) Final rule signed June 2, 2010. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.

Table 5-7 Tennessee Counties NAAQS Designations(1)(2)

Area	Transportation-Related Criteria Pollutants			Non Transportation-Related Criteria Pollutants (3)	
	Ozone (8 Hour)	$PM_{2.5}$	Carbon Monoxide	Sulfur Dioxide	Lead
Chattanooga AL-TN-GA					
Hamilton Co		N			
Knoxville TN					
Anderson Co	M	N			
Blount Co	M	N			
Cocke Co	M (P-GSMP)				
Jefferson Co	M				
Knox Co	M	N			
Loudon Co	M	N			
Sevier Co	M				
Roane Co		N (P)			
Memphis TN-AR					
Shelby Co	M		M		M (P)
Nashville TN					
Williamson Co					M (P)
Clarksville-Hopkinsville TN-KY					
Montgomery Co	M				
Benton Co				M (P)	
Fayette Co					M (P)
Humphreys Co				M (P)	
Polk Co				M	

(1) Source: US Environmental Protection Agency website: http://www.epa.gov/airquality/greenbk/. As of January 1, 2011.
(2) N = Nonattainment; M = Maintenance; (P) = Part of the county; (P – GSMNP) = the only part of Cocke County in nonattainment for ozone is the Great Smokey Mountains National Park.
(3) Transportation conformity does not apply to nonattainment and maintenance areas for sulfur dioxide (SO_2) and lead (Pb).

Project-level conformity determinations must also be made for Federal highway and transit projects to demonstrate that the project is either exempt or included in a conforming transportation plan and TIP.

Additionally, projects located in CO and $PM_{2.5}$ nonattainment and maintenance areas, are subject to localized "hot-spot" analysis.

General Conformity
The *General Conformity Regulations* apply to all other projects to ensure that other Federal actions also conform to the SIP.

5.3.5.1.3 Transportation Legislation

The *Intermodal Surface Transportation Efficiency Act* (ISTEA) of 1991 and subsequent legislation, including the *Transportation Efficiency Act for the 21st Century (TEA 21)*, offer tools to help transportation decision makers carry out the

CAA mandates. ISTEA strengthened the role of the MPO in transportation planning and programming while emphasizing intermodalism and the environment. Furthermore, ISTEA linked transportation and environmental goals by providing funding flexibility and the Congestion Mitigation and Air Quality Improvement Program (CMAQ). *The Safe, Accountable, Flexible, Efficient Transportation Equity Act – Legacy for Users* (SAFETEA-LU) includes an expanded list of eligible CMAQ projects and revisions to some conformity and planning requirements.

5.3.5.1.4 Mobile Source Air Toxics (MSATs)

In addition to the criteria air pollutants for which there are NAAQS, EPA also regulates air toxics. Most air toxics originate from human-made sources, including on-road mobile sources, non-road mobile sources (e.g., airplanes), area sources (e.g., dry cleaners) and stationary sources (e.g., factories or refineries).

Mobile Source Air Toxics (MSATs) are a subset of the 188 air toxics defined by the CAA. The MSATs are compounds emitted from highway vehicles and non-road equipment. The EPA identified a subset of this list that FHWA labels as the six priority MSATs:

- Benzene
- Formaldehyde
- Acetaldehyde
- Diesel particulate matter/diesel exhaust organic gases
- Acrolein
- 1, 3-butadiene

While these MSATs are considered the priority transportation toxics, the EPA stresses that this list is subject to change and may be adjusted in future rules.

5.3.5.2 Air Quality Study Methodology and Procedures

The air quality analysis process will vary in content and scope based on the project size, geographic location, background conditions and anticipated impacts.

However, the air quality analysis for most projects will generally address the following:

- Project-Level Conformity; and,
- Mobile Source Air Toxics (MSATs).

Additionally, a discussion of climate change should be included for projects for which an EA or an EIS is prepared.

Standard air quality sections for project-level conformity, MSATs, and climate change are provided in the appendices of this manual.

TDOT staff can provide assistance in determining the level of air quality analysis that is needed on a project-by-project basis.

5.3.5.2.1 Project-Level Conformity

Conformity Statement
A chart showing the work flow for developing a conformity statement for TDOT projects is provided in Figure 5-1. The appropriate conformity statements to be included in the air quality technical report and NEPA document are provided in the blue document boxes.

The projects that are exempt per the *Transportation Conformity Regulations* are shown in Table 5-5. Traffic signal synchronization projects are also exempt from conformity per 40 CFR 93.128.

Hot-Spot Analysis
As noted in Figure 5-1, projects located in CO and $PM_{2.5}$ nonattainment or maintenance areas are also subject to localized project-level hot-spot analyses to ensure that the project will not cause or contribute to violations of the NAAQS. These analyses should be conducted as described below.

If a hot-spot analysis indicates that the project would worsen air quality, FHWA will not approve the project as planned. In these situations, mitigation measures might be required and would need to be coordinated and assessed in cooperation with TDOT.

Projects in CO Nonattainment and Maintenance Areas (Shelby County Only)
A CO hot-spot analysis must be completed for non-exempt projects in CO nonattainment or maintenance areas.

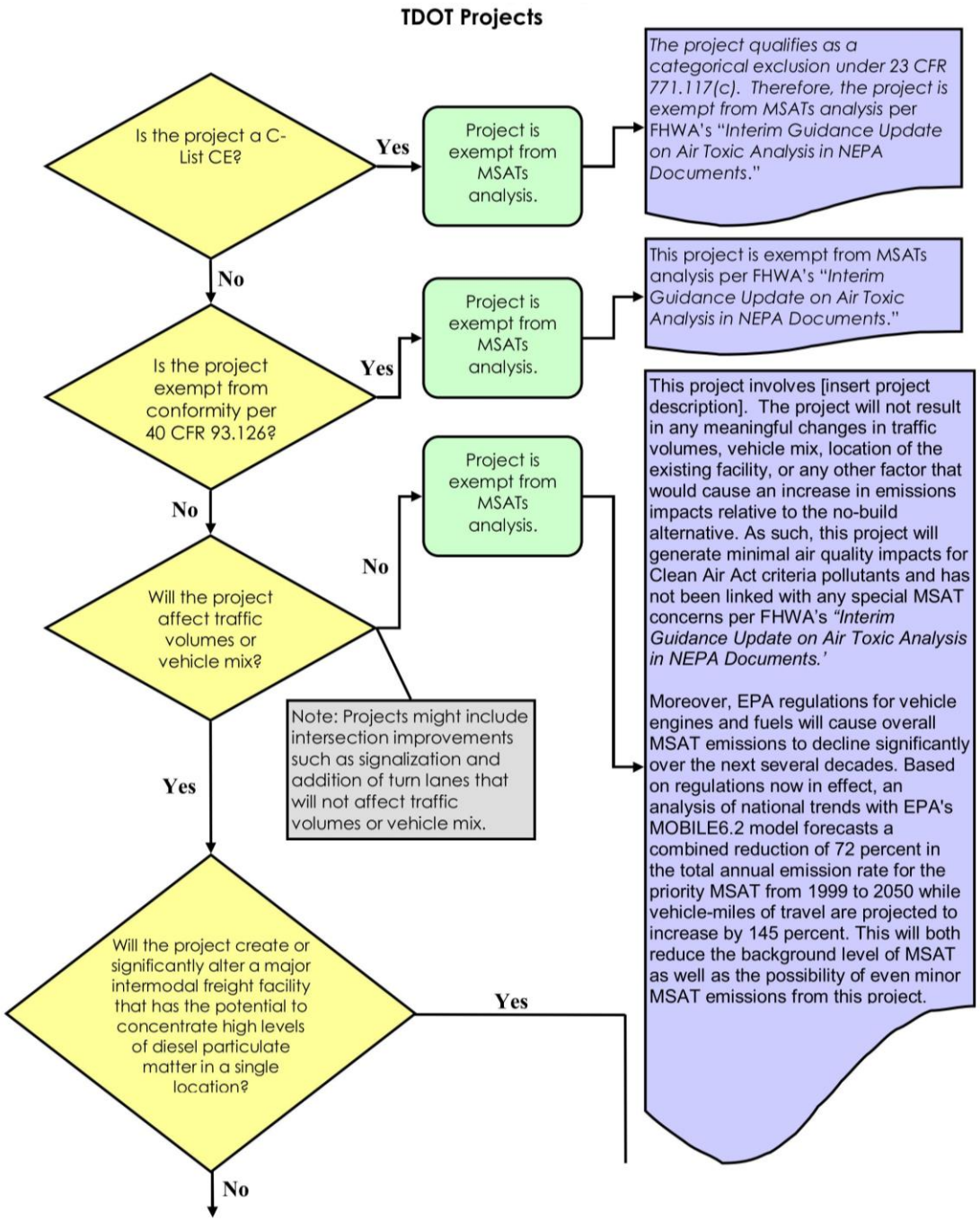
As shown in Table 5-4, the only CO nonattainment or maintenance area in Tennessee is Shelby County which is a maintenance area. All other Tennessee counties are in attainment for CO.

Therefore, non-exempt projects in Shelby County are subject to CO hot-spot analyses. The analysis should be completed in accordance with the *Guideline for Modeling Carbon Monoxide from Roadway Intersections* published by EPA (hereafter referred to as the EPA Guideline) and the *Transportation Conformity Regulations.* The analysis should be completed using the EPA's CAL3QHC air quality dispersion model.

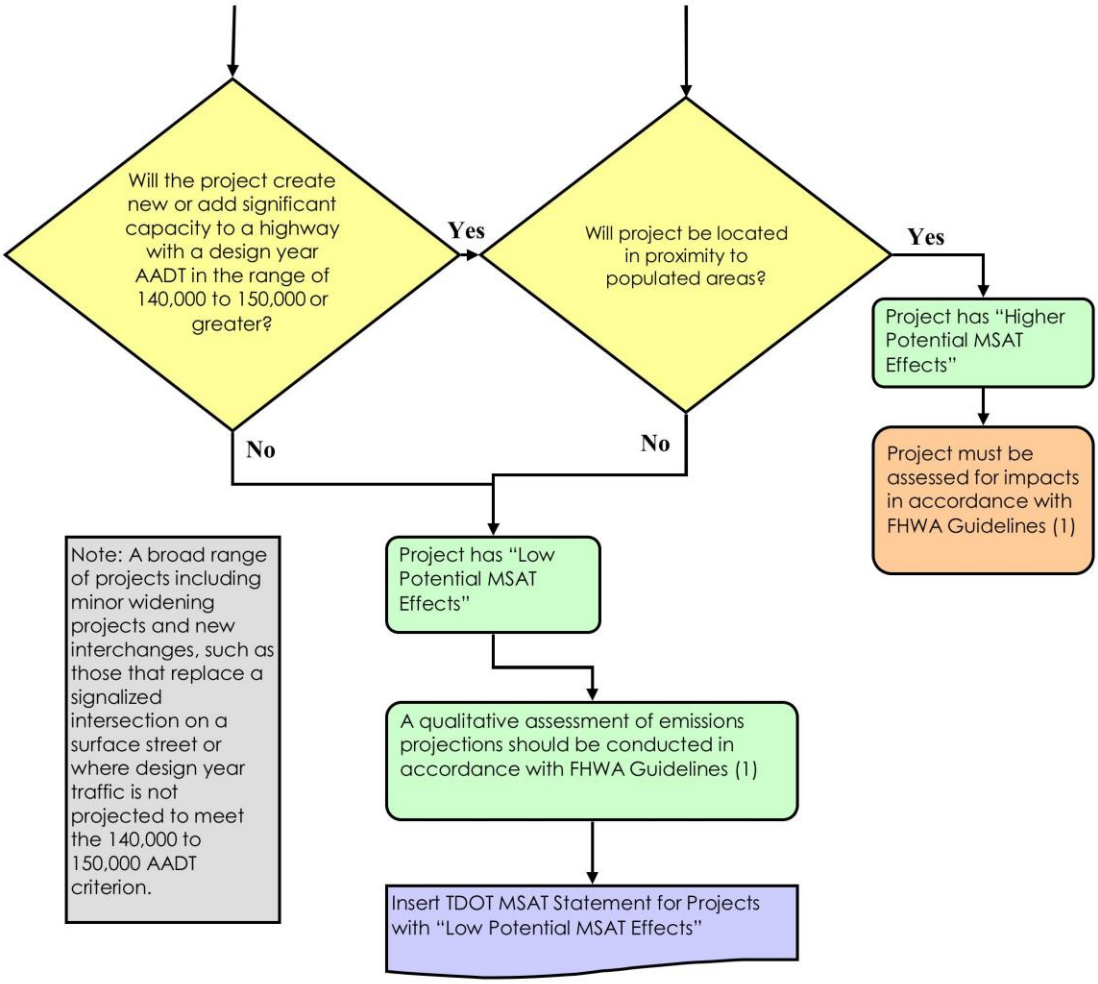
Hot-spot modeling is required for:

- Projects affecting intersections that are at Level-of-Service D or worse or those that will change to Level-of-Service D or worse because of increased traffic volumes related to the project;

Figure 5-1 Mobile Source Air Toxics (MSATs) Workflow



Mobile Source Air Toxics (MSATs) Work Flow



[1] *Interim Guidance Update on Air Toxic Analysis in NEPA Documents*, FHWA, September, 2009.

Hot-spot modeling is not required for a project if all intersections are predicted to operate at LOS C or better.

For projects affecting four or more intersections, a screening procedure based on traffic volumes and level of congestion should be used as described in the EPA Guideline to select the intersections for CO hot-spot modeling. If no exceedances of the CO NAAQS are predicted for the worst-case intersections, lower volume intersections can be assumed to pass the hot-spot test. This screening procedure reduces the amount of modeling required, yet still complies with the intent of the *Transportation Conformity Regulations.*

On December 20, 2010, EPA announced in the Federal Register that it approved the use of EPA"s MOVES model for CO hot-spot analyses with a 2-year grace period. EPA also released guidance on using MOVES for CO hot-spot analysis, *"Using MOVES in Project-Level Carbon Monoxide Analyses."*

During the 2-year grace period, TDOT should be consulted to determined whether the CO emission factors that will be input into CAL3QHC should be determined using the most recent version of the EPA's MOBILE model or the new MOVES model.

Projects in CO Attainment Areas (All counties except Shelby County)
Generally, CO hot-spot analyses should not be conducted for projects located in CO attainment areas. However, TDOT should be consulted to determine if a CO hot-spot analysis is warranted if either of the following conditions occurs:

- The project is a signalized intersection with a projected design year average daily traffic (ADT) volume greater than 80,000 vehicles per day and the intersection is projected to operate at Level-of-Service D or worse in the base year or the design year with the project; or,
- The project is controversial due in part to the potential air quality impacts of the project.

TDOT will make the determination regarding whether a project is controversial.

If a CO hot-spot is required, the analysis should be conducted as described in the previous section.

If the project does not require a CO hot-spot analysis, then the NEPA document should include the following statement:

> *"Based on the screening procedure in the Tennessee Environmental Procedures Manual, this project does not meet the criteria requiring a CO project level hot-spot analysis and will not produce a projected violation of the CO National Ambient Air Quality Standards (NAAQS)."*

Projects in PM Nonattainment and Maintenance Areas

In March, 2006, EPA published the Final Conformity Rule establishing transportation conformity requirements for analyzing the local PM air quality impacts of transportation projects (71 FR 12468). To meet statutory requirements, the Transportation Conformity Rule requires PM hot-spot analyses to be performed for "projects of air quality concern" located in $PM_{2.5}$ and PM_{10} nonattainment and maintenance areas.

All areas in Tennessee are in attainment of the PM_{10} NAAQS. However, six counties listed in Table 5-4 are included in the Knoxville and Chattanooga $PM_{2.5}$ nonattainment areas. Projects in these areas must be reviewed and assessed for potential local $PM_{2.5}$ hot-spot impacts.

The Final Conformity Rule required qualitative PM hot-spot analysis to be performs until EPA releases guidance on how to conduct quantitative PM hot-spot analysis. At the time of the final rule, EPA and FHWA issued *"Transportation Conformity Guidance for Qualitative Hot-spot Analyses on $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas"* for states to use in conducting the required $PM_{2.5}$ hot-spot analyses for "projects of air quality concern."

EPA also stated in the final rule that quantitative PM hot-spot analyses would not be required until EPA released an appropriate motor vehicle emissions model for project-level analyses.

In December 2010, EPA announced in the Federal Register that it approved the use of the MOVES model for PM hot-spot analyses with a 2-year grace period. EPA also announced the availability of its updated PM hot-spot guidance *"Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in $PM_{2.5}$ and PM_{10} Nonattainment and Maintenance Areas."*

EPA's guidance provides information for State and local agencies to meet the $PM_{2.5}$ and PM_{10} hot-spot analysis requirements established in the Final Conformity Rule. The guidance includes examples of projects that are most likely to be an air quality concern, as well as examples of projects that are not considered an air quality concern.

TDOT is responsible for making hot-spot determinations for all projects in $PM_{2.5}$ nonattainment and areas. TDOT's Environmental Division developed a $PM_{2.5}$ Hot-Spot Determination Process and Procedures document that details the hot-spot analysis process for TDOT projects. This document was reviewed and approved by the Knoxville and Chattanooga Interagency Consultations (IAC) Groups.

The $PM_{2.5}$ hot-spot determination process involves classifying all federally-assisted transportation projects in $PM_{2.5}$ nonattainment areas as one of the following categories:

Exempt – Projects that are exempt per the *Transportation Conformity Regulations* as shown in Table 5-5 and traffic signal synchronization projects under 40 CFR 93.128.

Project Not of Air Quality Concern – If a project does not meet the criteria to be classified as exempt, then TDOT will analyze traffic and land use data in accordance with Part 93.123(b) to determine if the project is of concern or not. If a project is on a new or expanded roadway that serves a significant volume of diesel truck traffic, such as a facility with greater than 125,000 AADT and 8 percent or more of the AADT is diesel truck traffic, then this may be a project of air quality concern.

Project of Air Quality Concern – If the project does not meet the requirements of either of the two preceding categories then the project will be classified as a "project of air quality concern" because it has the potential to adversely impact air quality. If TDOT determines and the IAC concurs that a project falls into this classification, then a $PM_{2.5}$ Hot-Spot Analysis is required.

Projects that are exempt do not require hot-spot determinations. However, the IAC must concur with the exempt status of projects in $PM_{2.5}$ nonattainment areas. TDOT routinely submits lists of exempt project to the IAC for concurrence.

TDOT must complete a hot-spot determination for all projects that are not exempt to determine if the project is of air quality concern. TDOT submits all completed hot-spot determinations to the appropriate IAC group for review and concurrence. The IAC group must concur with the hot-spot determination for each project before a conformity determination can be made for the project.

During the 2-year MOVES grace period, TDOT will coordinate with the IAC to determine whether a qualitative analysis should be completed using the EPA's 2006 guidance or whether a quantitative analysis should be completed using EPA's 2010 guidance and the MOVES model.

The air quality technical report and NEPA documents should include the applicable conformity statement and supporting documentation as outlined in Figure 5-1. As noted, TDOT will provide the IAC concurrence information for all projects.

No additional analysis or discussion beyond inclusion of the conformity statement is required for exempt projects or "projects not of air quality concern." "Projects of air quality concern" will be addressed by TDOT on a case-by-case basis.

5.3.5.2.2 Mobile Source Air Toxics (MSATs)

On February 3, 2006, the FHWA released "*Interim Guidance on Air Toxic Analysis in NEPA Documents."* This guidance was superseded on September 30, 2009 by FHWA's "*Interim Guidance Update on Air Toxic Analysis in NEPA Documents."* The guidance is located at:
http://www.fhwa.dot.gov/environment/airtoxic/100109guidmem.htm.

An analysis of the potential MSAT emissions impacts of TDOT projects should be completed in accordance with FHWA's Interim Guidance. A chart showing the work flow for MSATs analysis for TDOT projects is provide in Figure 5-2.

The FHWA has developed a tiered approach for analyzing MSATs in NEPA documents. Depending on the specific project circumstances, the FHWA has identified three levels of analysis:

- No analysis is needed for projects with no potential for meaningful MSAT effects.
- Qualitative analysis for projects with low potential MSAT effects.
- Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

The MSATs assessment should provide a description of the project and must identify the project as one of the three categories listed above. The appropriate TDOT standard MSATs section should then be used as the basis for the development of the MSATs section to be included in the air quality technical report and environmental document.

Projects that might qualify as a "project with higher potential MSAT effects" will require early coordination with TDOT and FHWA. To fall into this category, projects must:

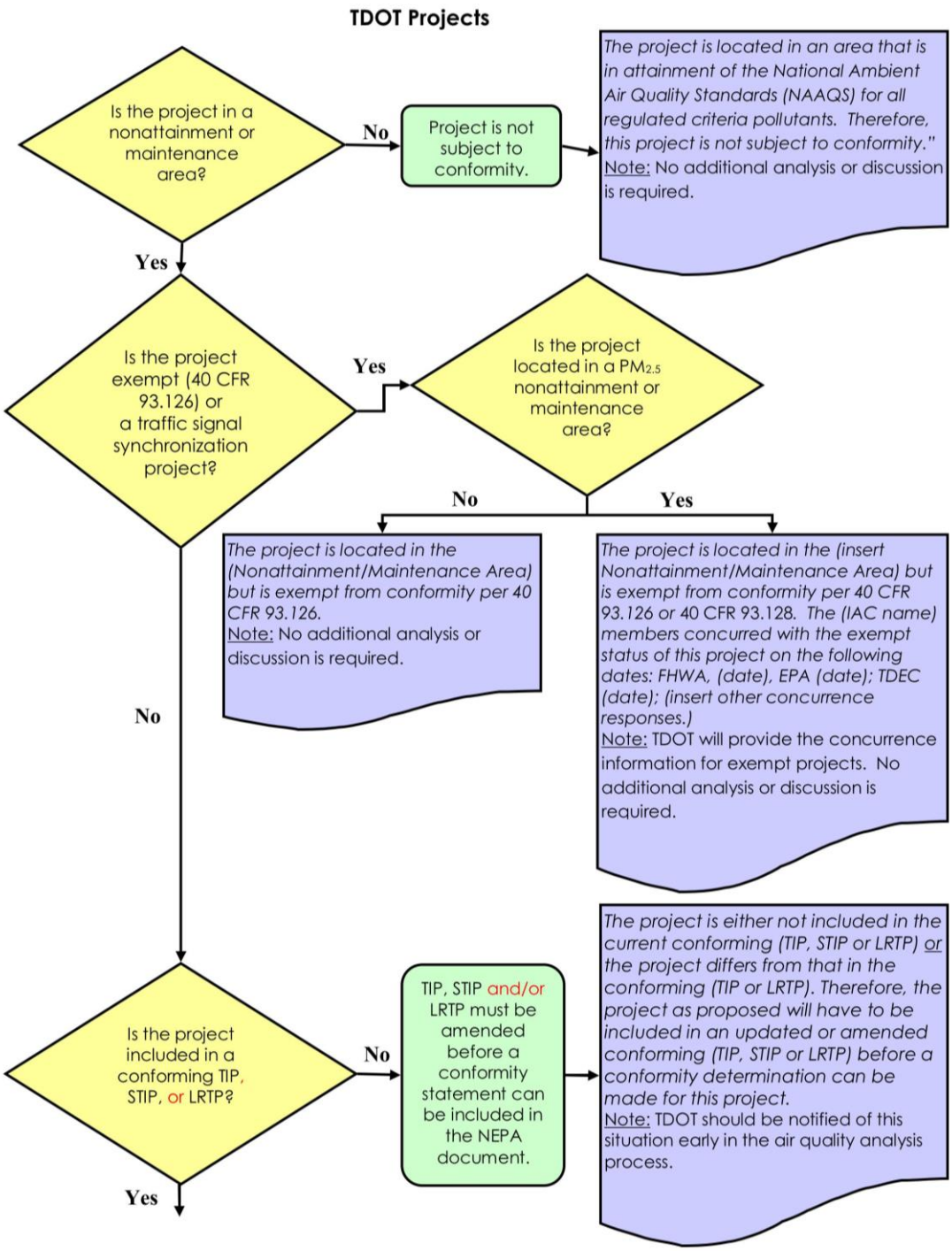
- Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel particulate matter in a single location; or,
- Create new or add significant capacity to urban highways with traffic volumes where the AADT is projected to be in the range or 140,000 to 150,000, or greater, by the design year.

And also

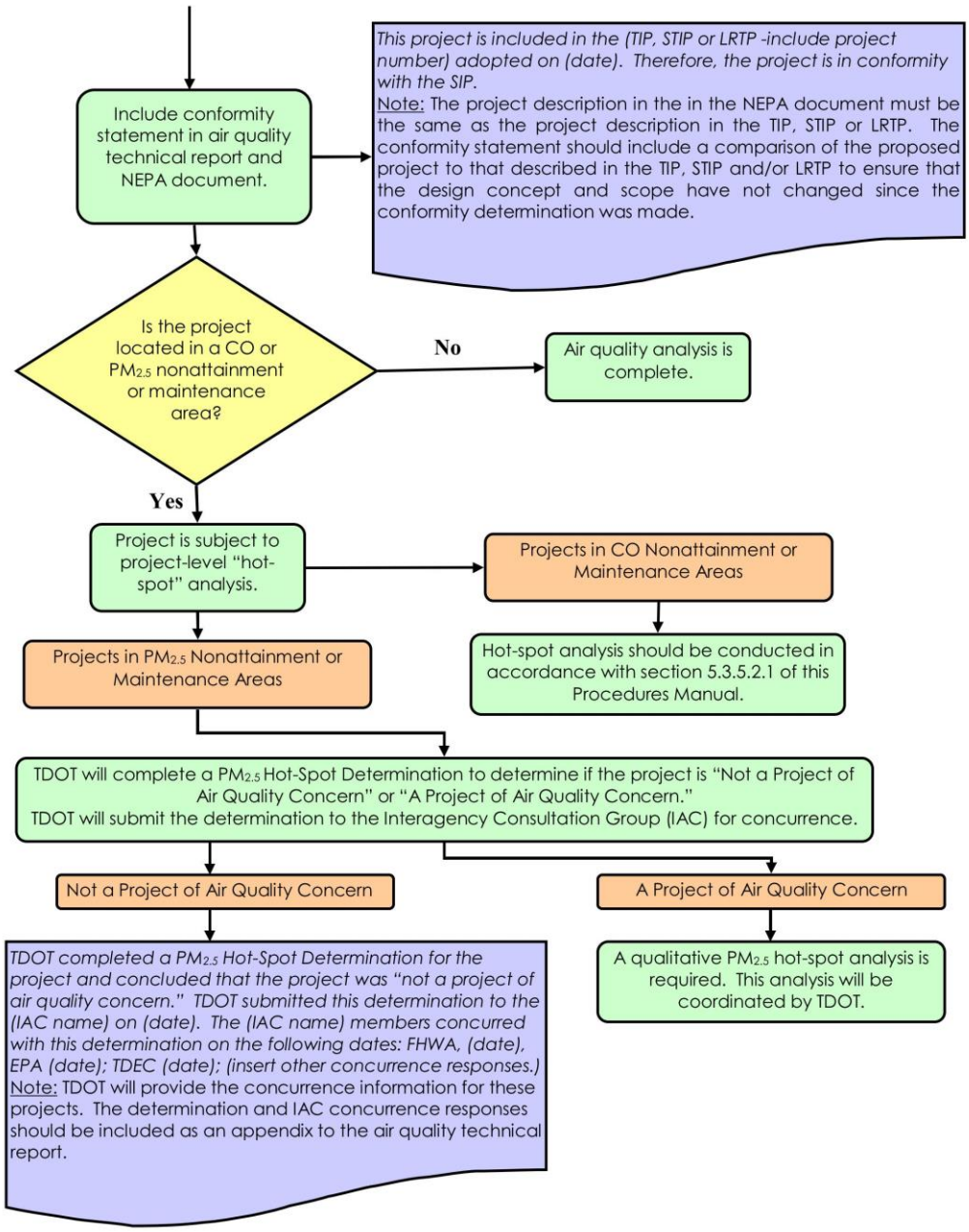
- Be proposed to be located in proximity to populated areas or in rural areas, in proximity to concentrations of vulnerable populations (i.e. schools, nursing homes, hospitals).

TDOT should be consulted early in the air quality analysis process on all projects that might fall into this category.

Figure 5-2 Project-Level Conformity Work Flow



Project-Level Conformity Work Flow
TDOT Projects



5.3.5.2.3 Climate Change

Climate change, also referred to as global warming, is an increase in the overall average atmospheric temperature of the earth due to the trapping of heat in the atmosphere by greenhouse gases. The primary greenhouse gas emitted by human activities in the United States is carbon dioxide (CO_2), which represents approximately 85 percent of total greenhouse gas emissions.
Transportation sources contribute global warming through the burning of petroleum-based fuel. According to FHWA, transportation sources are responsible for approximately one-quarter of the greenhouse gas emissions for the United States. Automobiles and light-duty trucks account for almost two-thirds of emissions from the transportation sector and emissions have grown steadily since 1990.

FHWA is actively involved in efforts to initiate, collect, and disseminate climate-change-related research and to provide technical assistance to stakeholders. FHWA is also involved in climate change initiatives with the U.S. DOT Center for Climate Change and Environmental Forecasting. Information on FHWA research, publications, and resources related to climate change science, policies, and actions can be found on FHWA's Climate Change web site (http://www.fhwa.dot.gov/hep/climate/index.htm).

FHWA currently does not require climate change analysis for plans or projects. FHWA has stated that climate change effects should be addressed in the planning process from both mitigation and adaptation perspectives. The broad geographic scope and time scale of the planning process makes it an appropriate place to consider GHG emissions and the effects of climate change.

FHWA's Tennessee Division has requested that a discussion of the potential climate change effects be included for projects for which an EA or EIS is prepared. TDOT has developed climate change language that should be included in the Air Quality Technical Report and environmental documents for projects requiring an EIS. The template is available on TDOT's web site.

5.3.5.2.4 Construction Air Quality

Most projects will result in the temporary generation of construction-related pollutant emissions and dust that could result in short-term air quality impacts. These construction-related impacts can generally be mitigated through the implementation of Best Management Practices, which are included in TDOT's *Standard Specifications for Road and Bridge Construction*.

As a result, most projects will not require a construction air quality analysis but should include the following statement:

> *"If TDOT's construction specifications apply to this project, construction procedures shall be governed by the Standard Specifications for Road and Bridge Construction as issued by TDOT and as amended by the most recent applicable supplements. All construction equipment shall be*

maintained, repaired and adjusted to keep it in full satisfactory condition to minimize pollutant emissions."

Large scale construction projects located in populated areas may require a more detailed assessment of potential construction air quality impacts and possible assessment of mitigation measures. TDOT will consider the need for a more detailed construction air quality analysis for these projects on a case-by-case basis.

5.3.5.2.5 Indirect and Cumulative Impacts

The forecasted traffic volumes for most projects typically account for any redistribution of traffic that would occur as a result of the project. Therefore, the air quality analysis addresses any indirect traffic-related air quality impacts that might occur.

Additionally, the forecast traffic volumes include expected traffic growth and other planned and programmed projects in the area. As a result, the air quality analysis addresses the traffic-related cumulative air quality impacts of the project.

5.3.5.3 Air Quality Technical Report

TDOT has developed templates for use in the preparation of an Air Quality Technical Report to ensure consistency between project studies. These templates should be used on all TDOT projects and will be provided upon request.

An Air Quality Technical Report should be prepared <u>only if</u> the project is located in a CO or $PM_{2.5}$ nonattainment or maintenance area and a hot-spot analysis was required as part of the project level conformity analysis. For all other projects, the results of the air quality analysis should be documented and summarized in the air quality section of the environmental documents as described below.

The Air Quality Technical Report should have a logical sequence and language that adequately describes the procedures used to complete the analysis. Tables and figures should be used to convey the study results and make the report easily understandable by both a technical reviewer and a lay person.

The Air Quality Technical Report will generally contain the following sections:

- 1.0 Introduction
- 2.0 Air Quality Evaluation
  - 2.1 Transportation Conformity
    - 2.2.1 Carbon Monoxide Hot-Spot Analysis (if applicable)
    - 2.2.2 $PM_{2.5}$ Hot-Spot Analysis (if applicable)
  - 2.2 Mobile Source Air Toxics (MSATs)
  - 2.3 Climate Change (for projects requiring an EIS)
  - 2.4 Construction Air Quality
  - 2.5 Indirect and Cumulative Impacts
- 3.0 Summary and Conclusions

The Air Quality Technical Report should include all applicable correspondence of agency consultation and required concurrence.

5.3.5.4 Air Quality Section of Environmental Document

The air quality section of the environmental document should generally address 1) the transportation conformity requirements for the project, including the results of any required hot-spot analyses, and 2) the potential Mobile Source Air Toxics (MSATs) effects of the project.

TDOT has developed templates for CEs, EAs, EISs and TEERs to ensure consistency between project studies. These templates should be used on all TDOT projects and will be provided upon request.

Table 5-8 Exempt Projects per 40 CFR 93.126

Safety
Railroad/highway crossing.
Hazard elimination program.
Safer non-Federal-aid system roads.
Shoulder improvements.
Increasing sight distance.
Safety improvement program.
Traffic control devices and operating assistance other than signalization projects.
Railroad/highway crossing warning devices.
Guardrails, median barriers, crash cushions.
Pavement resurfacing and/or rehabilitation.
Pavement marking demonstration.
Emergency relief (23 U.S.C. 125).
Fencing.
Skid treatments.
Safety roadside rest areas.
Adding medians.
Truck climbing lanes outside the urbanized area.
Lighting improvements.
Widening narrow pavements or reconstructing bridges (no additional travel lanes).
Emergency truck pullovers.
Mass Transit
Operating assistance to transit agencies.
Purchase of support vehicles.
Rehabilitation of transit vehicles.
Purchase of office, shop, and operating equipment for existing facilities.
Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts, etc.).
Construction or renovation of power, signal, and communications systems.
Construction of small passenger shelters and information kiosks.
Reconstruction or renovation of transit buildings and structures (e.g., rail or bus buildings, storage and maintenance facilities, stations, terminals, and ancillary structures).
Rehabilitation or reconstruction of track structures, track, and trackbed in existing rights-of-way.
Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet.
Construction of new bus or rail storage/maintenance facilities categorically excluded in 23 CFR part 771.
Air Quality
Continuation of ride-sharing and van-pooling promotion activities at current levels.
Bicycle and pedestrian facilities.

Other
Specific activities which do not involve or lead directly to construction, such as:
Planning and technical studies.
Grants for training and research programs.
Planning activities conducted pursuant to titles 23 and 49 U.S.C.
Federal-aid systems revisions.
Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action.
Noise attenuation.

5.3.6 Hazardous Materials

5.3.6.1 Applicable Regulations

While NEPA does not specifically mandate the completion of hazardous materials investigations, other laws do. Hazardous waste sites are regulated primarily by the Resource Conservation and Recovery Act of 1976 (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). RCRA regulates the ongoing manufacture, storage, use, treatment, transportation, and disposal of hazardous substances/wastes from manufacture to final disposal. CERCLA is designed to control, clean up, and designate liability for abandoned, uncontrolled or inactive waste sites. Service stations and other underground storage tank (UST) sites are regulated by the Tennessee Petroleum Underground Storage Tank Act.

TDOT can be liable as an owner of a hazardous waste or releaser of a hazardous substance/waste if it purchases property which has been or is being contaminated with such substances, or if such substances are discovered/released during construction. The 1986 amendments to CERCLA (Superfund Amendments and Reauthorization Act of 1986 (SARA)) expanded the defenses to liability under CERCLA to provide a defense for both private and public “innocent landowners” of land upon which hazardous waste attributed to a previous owner is discovered.

Not all hazardous materials sites have negative impacts to transportation projects. “Brownfields” are abandoned, idled, or underused commercial, industrial, and institutional properties where redevelopment and reuse are complicated by light to moderate contamination from hazardous substances and wastes. These properties are most often in urban areas previously used by industrial and commercial operations that generated waste materials.

The Brownfields Economic Redevelopment Initiative, administered by the EPA, provides assistance, incentives and liability protection to States, local communities, and the private sector for the assessment, clean-up, and economic reuse of these sites. TDOT, in conjunction with FHWA, supports the Brownfields Initiative by encouraging participation in transportation projects that include the use and redevelopment of contaminated sites when appropriate.

5.3.6.2 Study Process for Hazardous Materials

Hazardous waste sites within potential transportation corridors are dealt with by:

Early identification and assessment of all potential right-of-way properties which could be contaminated with hazardous substances/wastes (also adjacent properties from which contamination could migrate);

Early coordination with Federal/State/local agencies to assess the likely degree of contamination and the scope of treatment and disposal measures needed, and;

Early determination and use of measures to avoid or minimize involvement with such properties or to cause responsible parties to undertake appropriate cleanup of the properties to be acquired.

The preferred option of dealing with hazardous waste sites is avoidance, unless the risks of proceeding can be justified. Contaminated property can cause excessive project delays, impacts, costs, and liability. However, experience with minor contamination such as limited contamination with Underground Storage Tanks (USTs), standard asbestos, etc. shows that not all contaminated property must be avoided and some can be dealt with in a relatively predictable manner.

The NEPA-level investigations for hazardous materials are usually prepared by a consultant overseen by the Hazardous Materials Coordinator in the Social and Cultural Resources Office of the Environmental Division. Sometimes, however, the investigations are part of a NEPA consultant contract. The coordinator can provide the scope of work for hazardous materials studies. The coordinator will manage all consultant studies and will ensure that the work is undertaken and completed at the appropriate time in the project development process. All hazardous materials studies will be submitted to the coordinator.

The required study is an Environmental Site Assessment (ESA), a two-phased study. The purpose of the study is to determine if hazardous materials and/or regulated substances are present within, or adjacent to, the proposed right-of-way limits. The ESA process is a phased study process used to determine if a property has been contaminated with hazardous materials and/or regulated substances. If a contaminated property is identified, avoidance, minimization, or mitigation must be considered.

The primary objectives of the ESA are:

- To identify properties as polygons on a map with potential environmental concerns;
- To establish a defense to CERCLA and other liabilities in the event TDOT purchases the property for right-of-way; and
- To develop reasonable procedures to manage contaminated properties where they cannot be avoided.

The two-phased ESA process is comprised of the following levels of investigation:

- Phase I: historical/environmental research and visual assessment; and
- Phase II: sampling and testing, impact analysis, and mitigation development.

Draft Document – Phase I Environmental Site Assessment

All properties for each alternate analyzed in the draft environmental document should be evaluated for potential contamination. The information gathered should be sufficient to compare the scope of potential hazardous waste involvement among project alternatives and support the determination of a preferred alternative. Unless an alternative can be ruled out of consideration and unless all property required for right-of-way can be reliably prejudged to have negligible potential for contamination, the following steps will be taken to assure hazardous waste sites are identified, properly assessed, and avoided where possible:

- Classify existing and past property uses according to the likelihood of hazardous waste contamination. To do this, existing land uses should be screened and past land uses reviewed to categorize each property according to hazardous waste risk. Some examples of high risk land uses include unregulated municipal or private dumps or landfills, waste segregation sites, waste piles, treatment plants and outfalls, oil/plastics/chemical/electrical/electronic/adhesives manufacturing plants, photo/printing/paint/plating/battery shops, automotive junkyards, metals and paper processing plants, mining/agriculture/medical supply facilities, service stations, dry cleaning and other cleaning operations, older buildings with structural asbestos or other contaminants, etc.;
- Existing and past aerial photographs should be studied and compared to assist in identifying contaminating uses and contaminated sites/structures (e.g., ponds and lagoons, pits, depressions, fills, drums, tanks, piping, incinerators, drainages and drainage structures, nearby streambeds);
- Title/Deed histories and other appropriate records should be reviewed;
- Long-time local citizens and workers should be interviewed to obtain additional information about past land uses, potential contamination, and any history of hazardous wastes problems;
- The EPA and State/local regulating or response agencies should be consulted for license permit actions and violation/enforcement/litigation actions against property owners and for general information about local hazardous waste problems such as midnight dumping, use of asbestos in buildings, and past contaminated water problems;
- Confirm and supplement the above information with a visual site survey of all properties which could contain hazardous wastes. Additional evidence could include surface or partially buried containers, discolored soil, seeping liquids, abnormal or dead vegetation or animals, suspect odors, dead-end pipes, abnormal grading, fills, or depressions; and

- Where appropriate, interview current owners of prospective right-of-way parcels to obtain additional information about current and past land uses and potential contamination. Close coordination with landowners is recommended in order to secure access for investigation if needed.

Final Document – Phase II Environmental Site Assessment

For the final environmental document, if avoidance is not possible, the identified potentially contaminated properties associated with the preferred alternative should be evaluated further by additional on-site investigations, including limited on-site sampling and testing of soil/water/air in order to confirm the presence of contamination and estimate its magnitude/extent and the estimated type/cost of cleanup of the confirmed sites.

The determination to conduct testing on the site should be in consultation with EPA and with the State/local regulatory agencies to assure that any sampling/testing or monitoring plan is adequate. This limited testing is key to recognizing the scope/costs/delays that are associated with the preferred alternative and allowing these to be factored into the decision to select the project alternative to be implemented. Early testing of the preferred alternative to confirm and estimate the contamination/cleanup will not only support the determination of the preferred alternative and decision of the alternative to implement but will also facilitate the expanded detailed site investigation and coordination with regulatory agencies, which closely follows in the design and right-of-way stages. In some cases, the extent of contamination problems found through this limited testing could lead to reconsideration of the preferred alternative and selection of another alternative.

The above procedures will be followed for all potentially contaminated properties to which TDOT can obtain access, and TDOT will exhaust every reasonable means to work with property owners and the regulatory agencies to gain access. If voluntary access cannot be obtained, TDOT will seek court-granted access or a limited condemnation action for investigation of potential substantially contaminated property for the preferred alternative, while still pursuing and negotiating for voluntary access. For those instances where access cannot be obtained, the procedure below will be used to estimate the extent, cleanup methods, and costs related to the potential contamination for the final environmental document and project alternative (location) decisions.

For potentially contaminated properties of the preferred alternative where access has been denied, the State will use all information available and the best professional judgment of staff experienced with hazardous waste contamination to estimate either the worst case that could reasonably be expected or the most likely case for the extent/cleanup/cost of the potential contamination. This estimate should be reliable and should take into account all related information which could help refine the estimate, such as the observed characteristics of the site, experience with similar sites in the past, existing records, interviews, previous testing by others, and testing by the State of properties adjacent to the site. The worst case or most likely case for the access-denied sites should then be combined with the results of

investigation/testing of other potentially contaminated properties for the preferred alternative and summarized in the final environmental document.

Note that for projects being processed as Categorical Exclusions (CEs) that do not have comparable draft and final documents, it is expected that the appropriate testing or estimates would be made prior to final approval of the CE, to support that location decision.

Hazardous Materials Documentation Requirements

The results of a hazardous materials investigation must be thoroughly documented in the project environmental documentation and files. The draft environmental document should provide:

- Complete documentation of all steps taken to identify hazardous materials sites;
- A map to clearly delineate the extent of the site(s) in relation to alternative project alignments;
- Information on the number and types of sites/structures and the extent of contamination and alternative treatment/disposal measures needed;
- Results of coordination with EPA and State/local agencies and the public including description of the agencies' previous plans, if any, for cleanup of the site(s);
- Sufficient information to allow a reasonable evaluation of alternatives; and
- Justification for not avoiding the site.

The final document should, for the preferred alternative:

- Describe the results of continuing coordination with EPA and State/local agencies and the public;
- Document the resolution of hazardous waste issues, to the extent possible; and
- To the extent possible, provide a detailed description of the site(s) and contamination, agreed upon treatment/disposal measures, and costs of the remedial plan.

The Phase I and Phase II Hazardous Materials studies, along with the other technical studies, will be submitted to FHWA for review concurrently with the submission of the review copies of the draft and final environmental documents.

5.3.7 Conceptual Stage Relocation Plan

5.3.7.1 Applicable Regulations

The federal Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended, (43 CFR 24) requires that relocation assistance be made available to all displaced persons without discrimination, in order that those persons not suffer

disproportionate burden as a result of projects designed for the benefit of the public as a whole.

5.3.7.2 Study Process for Relocations

The relocation study is prepared by TDOT Regional Right-of-Way staff following a request from the Environmental Division planner. Known as the Conceptual Stage Relocation Plan (CSRP), the purpose of the study is to ascertain the number and type of relocations, to determine whether comparable replacement housing is available and to determine project impacts. The number and type of relocations is one factor used in developing, refining and selecting project alternatives.

The first study phase is completed in the field. Maps are marked up to show the location of residences and businesses that the project has the potential to displace and notations are made of the estimated size of displaced buildings. If handicapped ramps are visible or minority occupants are viewed at houses that may potentially be displaced, notations are also made of this data.

Once the field work is completed, local realtors, the multiple listing service in an area, and/or local officials must be contacted to discuss potential community disruption that the displacements could cause and the availability of replacement housing.

5.3.7.3 Documentation

The data collected by either visual inspection or secondary or community sources in the field and the report that documents the relocation study must include:

- An estimate of the number of households to be displaced, including the family characteristics (e.g., minorities, income levels, the elderly, large families, handicapped residents). At the planning stage, no direct contact is made with the occupants of properties that may be displaced. The survey is done by visual observations that note the existence of minorities, handicap ramps that indicate that disabled or elderly reside there, and property conditions that can indicate income level;
- Identification of any divisive or disruptive effect that the displacements could have on the community, such as separation of residences from community facilities or removal of a business that is critical to the community;
- An estimate of the possible number of businesses to be displaced (size, type, number of employees);
- A description of replacement housing in the area, the ability to provide replacement housing for the families to be displaced, and a description of actions proposed to remedy insufficient housing, including, if necessary, use of the last resort housing provision;
- A description of special relocation advisory services that will be necessary for identifiable unusual conditions, problems that may arise, and the possible solution to those problems;

- Results of consultation with local officials, social agencies and community groups regarding the impacts on the community; and
- An estimate of the time required to clear the project for construction.

FHWA has, in some instances, approved the inclusion of all of the above data in the NEPA document, in lieu of presenting it in a stand-alone report. If done as a stand-alone report, the planner will summarize the study findings for the NEPA document in the relocation section. This section must include a discussion of TDOT's relocation policy, a sample of which can be found in most approved NEPA documents or it can be obtained from the TDOT Right-of-Way Division. The relocation data may also assist in addressing the Environmental Justice Executive Order or the social or economic impact analysis conducted by the planner and described in Section 5.3.10.2. A copy of CSRP is submitted with the NEPA document to FHWA.

5.3.8 Soils and Geology Analysis

5.3.8.1 Applicable Regulations

The soils and geology analysis is not specifically referred to in federal regulations but is needed to address the requirements of 23 CFR Part 771, to "prepare documentation of compliance to a level appropriate to the undertaking's potential to cause significant harm to the environment." The study is also needed to assist in the location of the project.

5.3.8.2 Study Process for Soils and Geology

A preliminary soils and geology (geotechnical) study is undertaken for the NEPA document either by TDOT's Division of Materials and Tests or by a consultant. If the study is to be done by TDOT, the Environmental Division will need to make a request to the Materials and Tests Division to undertake the study.

The purpose of the study is to identify geotechnical features that may impact the project design or the environment. The study will identify the area's topography, soil types, subsurface formations, areas of unstable materials, caves, and sinkholes. In addition, special concerns, such as the existence of acid-producing rock, are identified. Recommendations are also made to address any geotechnical issues identified.

The identification of such issues may require coordination with the Design Division. Some of these issues may result in alignment shifts and others, such as the acid-producing rock, will require commitments to be made in the NEPA document as to how the material will be handled and disposed of properly. The planner will summarize the results of the study for the NEPA document and will include any agreed-upon minimization or mitigation measures. The geotechnical study should be included in the project files. In the post-NEPA design phase, in-depth geotechnical studies will be undertaken, as warranted.

5.3.9 Sections 4(f) and 6(f) Analyses

Two federal regulations apply to projects that impact certain recreational resources: Section 6(f) of the Land and Water Conservation Fund Act of 1965 and Section 4(f)

of the Department of Transportation Act of 1966, as amended. The latter also applies to other types of resources. Description of the regulations and study processes required to meet their respective regulatory requirements are provided in this section.

5.3.9.1 Section 4(f) of the Department of Transportation Act Applicable Regulations

Section 4(f) was created when the U.S. Department of Transportation (USDOT) was formed in 1966 and was initially codified at 49 USC 1653. Amended in 1968 and again in 1983 as part of the overall re-codification of the USDOT Act, the Act applies only to federally-funded or permitted transportation projects. Now found in 49 USC 303, Section 4(f) reads:

(a) It is the policy of the United States Government that special effort be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.

(b) The Secretary of Transportation shall cooperate and consult with the Secretaries of Interior, Housing and Urban Development, and Agriculture, and with the States, in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of lands crossed by transportation activities or facilities.

(c) The Secretary may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation areas or wildlife or waterfowl refuge, or land of an historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, recreation areas, refuge, or site) only if,

(1) there is no prudent and feasible alternative to using that land; and

(2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuges or historic site resulting from such use.

A provision with the same meaning is found at 23 U.S.C. 138 and applies only to FHWA actions. This regulation continues to be referred to as Section 4(f).

Section 4(f) applies to *all* historic sites (historic sites defined as those on or eligible for the NRHP), but only to *publicly owned* public parks, recreation areas, and wildlife and waterfowl refuges. It also applies only if the project impact is considered a “use” under Section 4(f). Three conditions exist under which a “use” occurs:

1. When Section 4(f) property is acquired outright for a transportation project;
2. When there is occupancy of property that is adverse in terms of the preservationist purposes of Section 4(f), primarily applies to historic NRHP eligible or listed resources; and

3. When the proximity impacts of a transportation project on Section 4(f) property, even without the acquisition of the property, are so great that the purposes of the property that qualify the resource for protection are substantially impaired.

"Use" also falls into one of four types:

1. Fee simple - acquisition of right-of-way through direct purchase, permanently converting the property to a transportation use;
2. Permanent easement - e.g., acquisition of an easement for maintenance or utility access;
3. Temporary easement - e.g., an easement that is only needed on a short term basis, for construction, for example, and then is restored to its near original condition. Many conditions apply in which such an easement may not be considered a 4(f) use; and
4. Constructive use - occurs when the project does not physically incorporate land from the resource into the project, but is so close that it severely impacts the resource's activities, and FHWA determines that the project "substantially" impairs the resource. Constructive use is the most complicated use to determine and the findings must be coordinated closely with and approved by FHWA.

Changes to Section 4(f) in SAFETEA-LU

In August 2005, Section 6009(a) of the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), made the first substantive revision to Section 4(f) since the 1966 U.S. Department of Transportation Act. Section 6009, which amended existing Section 4(f) legislation at both Title 49 U.S.C Section 303 and Title 23 U.S.C. Section 138, simplified the process and approval of projects that have only *de minimis* impacts on lands impacted by Section 4(f). Under the new provisions, once the USDOT determines that a transportation use of Section 4(f) property results in a *de minimis* impact, analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. Section 6009 also required the USDOT to issue regulations that clarify the factors to be considered and the standards to be applied when determining if an alternative for avoiding the use of a section 4(f) property is feasible and prudent.

On March 12, 2008 FHWA issued a Final Rule on Section 4(f), which clarifies the 4(f) approval process and simplifies its regulatory requirements. While Section 4(f) remains codified in law at Title 49 United States Code (USC) § 303 and 23 USC § 138, the regulation implementing this law has been moved from 23 CFR 771, FHWA's NEPA implementation regulation, to 23 CFR 774, in order to highlight that Section 4(f) is one of numerous social, economic, and environmental issues that must be considered under the "umbrella" of the environmental review process. In addition to being assigned a new location, the regulation has been reorganized to improve clarity and readability. The text of the final rule can be accessed on-line at http://ecfr.gpoaccess.gov/cgi/t/text/text-

idx?c=ecfr;sid=d2f8dcabc9b29425cf1202dc33970a46;rgn=div2;view=text;node=20080312%3A1.19;idno=23;cc=ecfr;start=1;size=25.

De Minimis Impacts. SAFETEA-LU Section 6009(a) amended the existing Section 4(f) legislation at 23 U.S.C. 138 and 49 U.S.C. 303 to simplify the processing and approval of projects that have only *de minimis* impacts on lands protected by Section 4(f). Under the new provisions, once the USDOT determines that a transportation use of Section 4(f) property results in a *de minimis* impact, analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. The determination of *de minimis* impacts required concurrence from the officials with jurisdiction over the park, recreation area, or wildlife or waterfowl refuge, or in the case of a historic resource, concurrence from the SHPO and other consulting parties. All avoidance, minimization, mitigation, or enhancement measures that are required to be implemented as a condition of approval of the transportation program or project are incorporated as a part of the project.

FHWA issued on December 13, 2005 a memorandum (*Guidance for Determining De Minimis Impacts to Section 4(f) Resources*), which can be found at http://environment.fhwa.dot.gov/projdev/pd5sec4f.asp. The memorandum uses the question-and-answer format to discuss the application of the *de minimis* impact criteria.

TDOT has developed a checklist to be used for the Determination of Section (4) *De Minimis* Finding, which is included in Appendix F, Figure F-21.

Feasible and Prudent Determination. SAFETEA-LU Section 6009 (b) required the USDOT to issue regulations that clarify the factors to be considered and the standards to be applied when determining if an alternative for avoiding the use of a Section 4(f) property is feasible and prudent. The final rule, issued on March 12, 2008, is codified in 23 CFR 774. The Final Rule defines a "feasible and prudent" avoidance alternative as one that "avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property." The definition emphasizes that the use of Section 4(f) property is to be balanced against competing factors, with a "thumb on the scale" in favor of preserving the Section 4(f) property. The competing factors must pose the threat of severe problems or impacts. The definition describes an alternative as not feasible if it cannot be constructed on the basis of sound engineering judgment. A list of factors with a severity that may rise to the level at which an alternative would qualify as "not prudent" is included. The definition of feasible and prudent is located in section 774.17.

Interstate Highway Exemption. In the March 12, 2008 Final Rule, FHWA updated a number of existing exceptions to the Section 4(f) requirements, such as clarifying the applicability of the exception for restoration, rehabilitation, or maintenance of historic transportation facilities, and for the first time codifying several new exceptions that advance the regulation's preservation purpose. These new exceptions include:

- The Interstate System and some of its individual elements;
- Certain trails, paths, sidewalks, bikeways, and recreational facilities that are located within the transportation right of way; and
- Transportation enhancement projects and mitigation activities where use of the Section 4(f) property is solely for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection.

The seven 4(f) exceptions are located in 23 CFR 774.13.

With the Interstate highway exception the federal agencies are not required to consider the vast majority of the Interstate System as historic property under Section 4(f), provided the portion of the system plays an integral component of the entire system. As discussed in Section 5.3.2.1, the only two Interstate Highway resources in Tennessee that have been designated by FHWA as "exceptionally significant features (ESF)" (from a historic perspective) are the I-40 Hernando DeSoto Bridge and the I-55 Memphis and Arkansas Bridge, both connecting Memphis with West Memphis, Arkansas.

Study Process for 4(f)

The Section 4(f) analysis and documentation will be undertaken by the planner or consultant for non-historic resources and by the cultural resource staff for an NRHP listed or eligible historic resource. Occasionally, consultants will prepare Section 4(f) evaluations for TDOT. Section 4(f) is widely acknowledged as a regulation that can be hard to interpret and implement. It is also one of the most widely litigated transportation regulations. It is very important that experienced staff or consultants either directly undertake the analysis or closely oversee it.

The 1987 FHWA Technical Advisory reprinted in Appendix D to this manual contains a section that provides the format and content of the required Section 4(f) Evaluation. An excellent recent 4(f) guide, developed by the Maryland State Highway Administration, entitled *Section 4(f) Interactive Training*, can be accessed at www.section4f.com. This guide contains a description of Section 4(f) resource types, what entails a “use,” and the process for conducting a Section 4(f) analysis. On March 1, 2005, the FHWA issued the *FHWA Section 4(f) Policy Paper*, which replaces and rescinds the September 1987 Section 4(f) Policy Paper and subsequent memoranda and guidance issued by FHWA on Section 4(f). The 2005 Policy Paper provides updated comprehensive guidance on when and how to apply the provisions of Section 4(f) on FHWA projects. A copy of this paper is found on the FHWA website at http://www.environment.fhwa.dot.gov/projdev/4fpolicy.asp. Other information can also be found on FHWA’s website.

Determining if Section 4(f) Resources are Present. The first step in the process is to identify whether Section 4(f) resources exist in the project area. Determination of applicability or non-applicability is made by the FHWA Division Office. The Division Office states whether Section 4(f) does or does not apply to a particular property and why.

There are four main categories of Section 4(f) resources: park and recreation areas, wildlife refuges, cultural resources (historic sites), and other considerations. Parks and recreation areas must be publicly owned and open to the public, its major purpose must be for recreational activity, and it must be significant as a park or recreation area. Wildlife refuges must also be publicly owned, its major purpose must be that of a refuge, and it must be significant as a refuge.

Historic resources do not have to be in public ownership for Section 4(f) to apply. In order to qualify for protection under Section 4(f), a cultural resource must meet the following criteria:

- It must be of National, State or local significance; and
- If it is not on or eligible for listing on the National Register of Historic Places (NRHP), its protection must be considered appropriate by the FHWA.

The items in the group of "other considerations" may or may not be Section 4(f) resources, depending on certain conditions. Some of them may fit into multiple categories - parks and refuges, for example - while others may fit into one category or another, depending on how they're used. The list of other considerations may include:

- Wildlife Management Areas
- School Playgrounds
- Fairgrounds
- Public Multiple-Use Land Holdings
- Scenic Byways
- Wild & Scenic Rivers
- Bodies of Water
- Planned Facilities
- Bikeways
- Trails

A resource's Section 4(f) status is determined not by its name, but by the criteria that define it. No assumptions about the final status of any Section 4(f) resource should be made until the FHWA has reviewed and approved all documentation, including detailed records of the communication and coordination with the official with jurisdiction over the land in question. The determination of whether a Section 4(f) resource exists is based on:

- Significance of the property;
- Primary purpose of the land; and
- Proposed transportation use;

Is the Resource Significant? If Section 4(f) resources exist in the study area, are the resources considered "significant"? The significance of the resource as defined by FHWA, means that in comparing the availability and function of the resource with the objectives of the community, the land in question plays an important role in meeting those objectives. Except under unusual circumstances, only historic

properties on or eligible for inclusion on the National Register are protected under Section 4(f). For publicly owned land considered to be parks, recreation areas, or wildlife or waterfowl refuges, significance determinations are made as a result of a TDOT request to the agencies having jurisdiction over the land. The TDOT letter request to the agency should explain the meaning of the term "significance" for Section 4(f) purposes.

When a potential 4(f) resource is determined not to be a Section 4(f) resource after a review of its significance, the draft NEPA document should include this determination analysis.

Is there a Section 4(f) Use of the Resource? If the resource is considered significant, the second step is to determine if there is a "use" of the property as described above. This can be a "tricky" process, particularly in regard to historic resources. The *Section 4(f) Policy Paper* and the *Section 4(f) Interactive Training* provide easy-to-understand guidance that can assist with this determination. It is important to note that not all direct property takes will be considered a "use" and that even though there is no direct property take, the project's impacts might be considered a "use." Experienced staff or consultants must make this preliminary determination, which will need confirmation from FHWA.

Does a Programmatic Section 4(f) Evaluation apply? At this point, it is necessary to determine whether any of the five national Section 4(f) programmatic evaluations apply to the resource and "use" type. Certain types of actions can be processed as a "programmatic" evaluation. These are generally for projects where the "use" is considered minor, either in size or in level of effect for cultural resources. The primary advantage of the programmatic 4(f) is that it saves time, it requires only one document, has no comment period, and is approved by the FHWA Division office. Early coordination is necessary with the official having jurisdiction over the resource (e.g., the USACE if an individual permit is required, the SHPO, or other interested parties). Whether prepared by TDOT or a consultant, the document must be closely coordinated with FHWA. The content of the individual 4(f) and programmatic evaluation is similar. The five types of programmatic evaluations that have been approved for use nationwide are:

1. **Independent Bikeway and Walkway Construction Projects** – can be used for constructing bikeways/walkways on parks and recreational properties;

2. **Historic Bridges** – applicable for uses involving bridges that are individually eligible for the National Register of Historic Places;

3. **Minor Involvements with Historic Sites** – can be used where a project involves a minor take from a property eligible for the National Register of Historic Places. No contributing elements may be demolished and the Section 106 effect determination must be "no adverse effect" or "no historic properties affected";

4. **Minor Involvements with Parks, Recreation Areas, and Wildlife and Waterfowl Refuges** – applicable to minor property takes/encroachments into

parks, recreation areas and wildlife/waterfowl refuges. The programmatic evaluation gives details on what constitutes "minor."; and

5. **Net Benefits** – can be used where the proposed project, with mitigation, would actually result in an overall "net" benefit to the Section 4(f) property.

The two programmatic evaluations addressing minor involvements cannot be used for projects being processed as Environmental Impact Statements. The net benefits programmatic evaluation, which was published in the *Federal Register* on April 20, 2005, and the historic bridge programmatic, can be used with all NEPA processing options.

FHWA provides guidance on the conditions that must be met for a project to be processed as one of these five programmatic evaluations; the level of evaluation needed for avoidance alternatives, and the documentation that must be presented in support of the findings. The guidance is found at http://environment.fhwa.dot.gov/projdev/4fnspeval.asp.

The March 12, 2008 Final Rule makes it clear that the programmatic evaluation merely establishes a simpler approach to compliance for certain classes of projects and does not in itself provide an exemption to Section 4(f) requirements. The new rule specifies the process for applying an existing programmatic evaluation as well as the process for developing a new one. Requirements for programmatic evaluations are now listed in 23 CFR 774.3(d) and 774.5(c).

What is the Proposed Transportation Use of the Resource? If it is found that the project will involve a "use" from a "significant" Section 4(f) resource, then location or design alternatives must be examined that would avoid the 4(f) resource. When a project will involve a "use" from more than one Section 4(f) resource, the analysis needs to evaluate alternatives that avoid *each* and *all* 4(f) resources. Design avoidance alternatives should be in the immediate area of the property and may involve minor alignment shifts, a reduced facility (i.e., reduced cross section), use of retaining walls, or any combination of these features.

If the preferred alternative will involve a Section 4(f) use, then it must be proved that no prudent or feasible alternatives exist. This also is a complicated process. To prove that no such alternatives exist, it must be documented that "unique problems" are present when there are truly unusual factors or when the costs or community disruption reach extraordinary magnitude. According to the FHWA *Section 4(f) Policy Paper*:

> *When making a finding that an alternative is not feasible and prudent, it is not necessary to show that any single factor presents unique problems. Adverse factors such as environmental impacts, safety and geometric problems, decreased traffic service, increased costs and other problems such as these may be considered collectively. A cumulation of problems such as these may be a sufficient reason to use a 4(f) property, but only if it creates truly unique problems. . . In*

> *applying the standard of "unique problems," the nature, quality, and effect of the taking of the 4(f) property may be considered to show that there are truly unusual factors, or cost or community disruption of extraordinary magnitude.*

The Final Rule, codified in 23 CFR 774, clarifies the factors to be considered and the standards to be applied when determining if an alternative for avoiding the use of a Section 4(f) property is feasible and prudent. Section 774.3(c) states that if the analysis concludes that there is no feasible and prudent avoidance alternative, then FHWA may approve only the alternative that causes the least overall harm in light of the statute's preservation purpose. The least overall harm is determined by balancing the following factors:

(i) The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);

(ii) The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;

(iii) The relative significance of each Section 4(f) property;

(iv) The views of the official(s) with jurisdiction over each Section 4(f) property;

(v) The degree to which each alternative meets the purpose and need for the project;

(vi) After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and

(vii) Substantial differences in costs among the alternatives.

Once that alternative has been selected, all reasonable measures to minimize that harm or mitigate adverse impacts to the property in question must be included in the project before Section 4(f) approval can be granted.

The finding of "no prudent or feasible" alternatives can only be made by FHWA. FHWA will; however, consider agency comments.

Format for Section 4(f) Evaluation. A Section 4(f) Evaluation must be prepared if a 4(f) use is identified. The Draft Section 4(f) Evaluation is prepared during the draft NEPA document stage (EA or DEIS). The recommended format for this document is described in the Technical Advisory in Appendix D. For each Section 4(f) resource, the documentation must include:

1. Proposed Action. Where a separate Section 4(f) evaluation is prepared, describe the proposed project and explain the purpose and need for the project.

2. Section 4(f) Property. Describe each Section 4(f) resource which would be used by any alternative under consideration. The following information should be provided:

   (a) A detailed map or drawing of sufficient scale to identify the relationship of the alternatives to the Section 4(f) property;

   (b) Size (acres or square feet) and location (maps or other exhibits such as photographs, sketches, etc.) of the affected Section 4(f) property;

   (c) Ownership (city, county, state, etc.) and type of Section 4(f) property (park, recreation, historic, etc.);

   (d) Function of or available activities on the property (ball playing, swimming, golfing, etc.);

   (e) Description and location of all existing and planned facilities (ball diamonds, tennis courts, etc.);

   (f) Access (pedestrian, vehicular) and usage (approximate number of users/visitors, etc.);

   (g) Relationship to other similarly used lands in the vicinity;

   (h) Applicable clauses affecting the ownership, such as lease, easement, covenants, restrictions, or conditions, including forfeiture; and

   (i) Unusual characteristics of the Section 4(f) property (flooding problems, terrain conditions, or other features) that either reduce or enhance the value of all or part of the property.

3. Impacts on the Section 4(f) Property(ies). Discuss the impacts on the Section 4(f) property for each alternative (e.g., amount of land to be used, facilities and functions affected, noise, air pollution, visual, etc.). Where an alternative (or alternatives) uses land from more than one Section 4(f) property, a summary table would be useful in comparing the various impacts of the alternative(s). Impacts (such as facilities and functions affected, noise, etc.) which can be quantified should be quantified. Other impacts (such as visual intrusion) which cannot be quantified should be described.

4. Avoidance Alternatives. Identify and evaluate location and design alternatives which would avoid the Section 4(f) property. Detailed discussions of alternatives in an EA or DEIS need not be repeated in the Section 4(f) portion of the document, but should be referenced and summarized. However, when alternatives (avoiding Section 4(f)

resources) have been eliminated from detailed study, the discussion should also explain whether these alternatives are feasible and prudent and, if not, the reasons why.

5. Measures to Minimize Harm. Discuss all possible measures that are available to minimize the impacts of the proposed action on the Section 4(f) property(ies). Detailed discussions of mitigation measures in the EA or DEIS may be referenced and appropriately summarized, rather than repeated.

6. Coordination. Discuss the results of preliminary coordination with the public official having jurisdiction over the Section 4(f) property. Generally, the coordination should include discussion of avoidance alternatives, impacts to the property, and measures to minimize harm. In addition, the coordination with the public official having jurisdiction should include, where necessary, a discussion of significance and primary use of the property.

The conclusion that there are no feasible and prudent alternatives is not normally addressed at the draft Section 4(f) evaluation stage. Such conclusion is made only after the draft Section 4(f) evaluation has been circulated and coordinated and any identified issues adequately evaluated.

The draft Section 4(f) evaluation can be done as a stand-alone document for inclusion in an appendix of the draft NEPA document or it can be integrated into the body of the document. If included in the appendix, it must be briefly summarized and referenced in the body of the document. The FHWA will review the preliminary draft 4(f) evaluation and must provide clearance before it is circulated in the NEPA document or as a stand-alone Draft Section 4(f) Evaluation. The preliminary draft evaluation report submitted to the FHWA needs to include a description of the property, a map and the supporting information used to make the decision. The Draft Section 4(f) Evaluation must be sent to the regional office of the Department of Interior and, as appropriate, to the Forest Supervisor of affected National Forest properties.

After the draft NEPA document stage, if the selected alternative involves a Section 4(f) use, all of the information from the Draft Section 4(f) Evaluation should be included in the Final Section 4(f) Evaluation. In addition, according to the Technical Advisory, the final document must include:

1. A discussion of the basis for concluding that there are no feasible and prudent alternatives to the use of Section 4(f) property. The supporting information must demonstrate that “there are no unique problems or unusual factors involved in the use of alternatives that avoid these properties or that the cost, social, economic and environmental impacts, or community disruption resulting from such alternatives reaches extraordinary magnitudes” (23 CFR 771.135(a)(2)). This language should appear in the document together with the supporting information.

2. A discussion of the basis for concluding that the proposed action includes all possible planning to minimize harm to the Section 4(f) property. When there are no feasible and prudent alternatives that avoid the use of Section 4(f) property, the Final Section 4(f) Evaluation must demonstrate that the preferred alternative is the feasible and prudent alternative with the least harm on the Section 4(f) resources after considering mitigation to the Section 4(f) resources.

3. Concluding statement as follows, "Based on the above considerations, there is no feasible and prudent alternative to the use of land from the (identify Section 4(f) property) and the proposed action includes all possible planning to minimize harm to the (Section 4(f) property) resulting from such use."

The final document must also include a summary of all formal coordination with the Department of Interior and, if appropriate, the U.S. Forest Service and copies of all relevant Section 4(f) comments received.

The Final Section 4(f) Evaluation is generally either included as a chapter in the final NEPA document or in the appendix as a stand-alone report. If included in the appendix, it must be briefly summarized and referenced in the body of the document.

5.3.9.2 Section 6(f) of the Land and Water Conservation Fund Act Applicable Regulations

The purpose of the Land and Water Conservation Fund (L&WCF) Act of 1965 (36 CFR 59) is to "assist in preserving, developing and assuring accessibility to all citizens of the United States of America of present and future generations...such quality and quantity of outdoor recreational resources as may be available and are necessary and desirable for individual active participation." The program provides matching grants to states and local governments through the U.S. Department of Interior, National Park Service (NPS), for the acquisition and development of public outdoor recreation areas and facilities.

Section 6(f) of the Act contains provisions to protect the federal investment and the quality of resources developed with L&WCF assistance. Section 6(f) protects grant-assisted areas from conversions to other uses, and states that:

> *No property acquired or developed with assistance under this section shall, without the approval of the Secretary, be converted to other than public outdoor recreation uses. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing comprehensive statewide outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at least equal fair market value and reasonably equivalent usefulness and location.*

For Tennessee resources developed with L&WCF grants, TDEC is responsible for compliance and enforcement of these provisions. The pertinence of Section 6(f) to

transportation projects is that if a TDOT project proposes to take land from a recreational resource that has been wholly or partially developed with a L&WCF grant, the project must be coordinated with TDEC, Division of Recreational Services, Grants Program Office, and replacement land of "reasonably equivalent usefulness and location" must be found.

Study Process for 6(f)

The planner must identify whether a project will take land from any local or state parks. If any land will be taken, the project must be coordinated with the park owner, whether it is state or local government. This coordination is intended to make them aware of the potential project impacts, to get their input on the project and its impacts, to determine the significance of the resource, and to determine if there are any restrictions or covenants attached to the park land, for example, was L&WCF grant money used to develop the facility?

Once the planner receives the comments, the planner should draft and send a letter to TDEC stating that the project may take land from a park. The letter should summarize the coordination that has occurred with the entity that has jurisdiction over the park. If known, the letter should acknowledge that TDOT has been informed that L&WCF grant monies were utilized in park development. The project location, in relation to the park and its boundaries must be depicted on a map that accompanies this letter.

In its comments, TDEC will inform TDOT or confirm whether the park has been wholly or partially developed with L&WCF grant monies. The involvement could range from planning activities, to the installation of playground equipment, to the development of a new park.

If the park has been developed at any funding level with L&WCF monies, during the draft NEPA document stage, the planner must coordinate with TDEC on the issue of locating replacement land for the land to be taken, if TDEC is in agreement with proceeding with the project in that manner. The planner must work with the TDOT Right-of-Way Division staff to identify land that is suitable and to identify the monetary value of the land to be replaced and possible replacement land. TDOT must submit to TDEC one original and one copy of an appraisal report prepared by a licensed appraiser and establishing the fair market value of the property to be converted (taken). The replacement property must be of at least equal fair market value as the conversion property. The correspondence must also include documentation describing the entity responsible for the costs associated with obtaining the appraisals and the land replacement. A statement indicating that the property proposed for replacement is of reasonably equivalent usefulness and location as that being converted must also be included.

Replacement land may be adjacent to the park where land will be taken or adjacent to another state or local park. Once an agreement is reached with TDEC, the process and results are summarized in the draft NEPA document. Any commitments made are then reaffirmed in the final NEPA document.

5.3.9.3 Section 6(f) and 4(f) Differences

While Section 4(f) evaluations may encounter Section 6(f) properties, some key differences exist:

- Section 4(f) applies only to USDOT programs and projects, while Section 6(f) applies to programs and policies of any federal agency; and
- Mitigation is more flexible under Section 4(f). Section 6(f) requires replacement lands of equal value, location and usefulness as the impacted lands, while Section 4(f) may or may not include replacement lands.

While Section 6(f) is integral to Section 4(f) compliance if L&WCF are used, Section 4(f) is not integral to Section 6(f). Section 6(f) involvement should be discussed in the Section 4(f) Evaluation and in the separate parklands and recreational resources section of the NEPA document, if applicable.

5.3.10 Other Impact Analyses

Other technical analyses needed for the NEPA document are described below and include:

- Social and Community Impacts
- Environmental Justice and Non-Discrimination
- Economic and Business Impacts
- Land Use Planning and Land Use Impacts
- Farmland Impacts
- Visual Quality Impacts
- Traffic and Accident Impacts
- Construction Impacts
- Wild and Scenic Rivers Impacts
- Floodplain Impacts
- Pedestrian and Bicycle Considerations
- Energy Impacts
- Indirect and Cumulative Impacts

These impact analyses can be conducted by the Environmental Division planner and/or consultant. The analyses are done for inclusion in the NEPA document and

do not generally require a stand-alone report.[2] Differing levels of field work, coordination, data collection and analysis are required to substantiate or understand a project's potential impacts. The analysis can include:

- Review of census data;
- Use of GIS for spatially locating different types of data;
- Using data provided by other TDOT divisions;
- Conducting Internet searches;
- Reviewing project plans and other mapping;
- Obtaining and reviewing planning documents;
- Coordination with state/federal agencies, local government, and the public; and
- Conducting a field review of the project area.

Many tasks require a field review of the project area to enable an accurate depiction of existing conditions and impact assessment. One field review and a marked up set of plans and notes can facilitate many of the analyses needed for the NEPA document. For example, during the field review the planner can collect information for use in the environmental justice, social and community, economic and business, community facilities and land use impact analyses. If new or planned development is discovered during the field review, it is important to inform the project designer or the Project Manager. A review of approved NEPA documents, both EAs and EISs, can provide the planner with a good idea of the level of analysis needed and can suggest a possible format for presenting the analysis.

5.3.10.1 Social/Community Impacts

Applicable Regulations

Assessing community impacts is needed for practical reasons, but is also required and supported by federal regulations, policies and Executive Orders, for example:

- Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA);
- NEPA;
- Title VI of the Civil Rights Act of 1964, and related statutes;
- 23 USC 109(h), Standards (1970);
- 23 CFR 771, Environmental Impact and Related Procedures; and
- Executive Order 12898 on Environmental Justice.

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[2] In rare cases, significant issues may warrant a stand-alone study be undertaken, and its results summarized in the NEPA document.

Study Process

Community Impact Assessment (CIA) is a fluid and iterative process that occurs throughout the life of a transportation project – from planning through construction and monitoring. The basic steps of the process are:

1. Define the project and study area
2. Develop a community profile
3. Analyze impacts
4. Identify Context Sensitive Solutions
5. Document findings

Public involvement is an integral part of each of these steps.

The level of effort involved in each step is a function of the size and complexity of the project, the level of controversy involved, and the potential for significant community impacts. If a project requires preparation of an EIS, it will also require a more detailed community impact assessment. The findings would be incorporated into the EA or EIS, a separate technical report, or both. For smaller or less controversial projects, the results might simply be documented in the project files and summarized for use in the next phase of the project. If an issue surfaces that is of considerable concern to an affected community, it should be assessed regardless of the nature of the project. This will assure that it is adequately addressed and does not stop the project later in the process. Below is a brief description of each component or step of the CIA process.

1. Define the Project and Study Area

The first step of the CIA process entails gaining an understanding of the proposed project and its potential to impact the surrounding community or communities, and defining the study area boundary for the assessment of community impacts. Having a good understanding of the proposed project and its potential to impact communities is essential to properly scope and develop the project. The Environmental Division planner or consultant should obtain information on the proposed project as early in the project development process as possible. This information should include: project purpose, project need(s), potential alternatives, logical termini, a general (order of magnitude) estimate of potential impacts, and an identification of potential community issues. Information on project history and prior planning studies associated with the project such as visioning activities, comprehensive plans, and traffic studies undertaken by communities and/or planning partners, should also be obtained. This information can be obtained through review of available project files, field reconnaissance, and interviews with project sponsors, planning partners, project stakeholders, and TDOT staff. Upon obtaining an understanding of the proposed project, boundaries for the CIA study area can be established.

The CIA study area should reflect the varied physical and social boundaries that help define the geographic limits of the community. CIA practitioners need to recognize that social impacts can occur throughout a community and are not limited in extent to those areas immediately adjacent to a proposed transportation project. The CIA study area, because of the wide-ranging nature of community impacts, may involve a broader area than the typical project study area boundaries, which are generally based on the direct physical impacts of the alternatives under consideration.

The CIA study area may include a synthesis of the following community boundaries:

- Physical boundaries – boundaries attributable to man-made elements (bridges, roadways, buildings, etc.) or land use characteristics.
- Natural boundaries – boundaries attributable to natural features of the landscape; such as topography, watersheds, bodies of water, wildlife habitat, and vegetative natural communities.
- Administrative boundaries – political boundaries and boundaries attributable to such organizations as school districts and infrastructure authorities.
- Social boundaries – boundaries attributable to ethnic concentrations, influence and extent of social, civic, and religious backgrounds.
- Economic boundaries – boundaries attributable to areas and types of employment and commercial opportunities.

While the limits of some of these boundaries are easily identified, the interpretation of others will require input from various community stakeholders.

The CIA study area boundaries should be clearly delineated on project mapping and graphics and made available to the public in a variety of forums (plans, displays, public meetings, project websites, newsletters, etc.). The CIA study area boundaries should be periodically reassessed throughout the course of the project development process and modified, as necessary, based on community stakeholder input and/or relative to changes in the proposed action, or in the dynamics of the affected community.

Depending upon the length of the project development process, it may be necessary to reassess earlier findings to assure that the assessment is accurate or to repeat the steps to address new impacts that are identified later in the process. To streamline the process, the planner or consultant should strive to anticipate future needs and collect relevant data on all potential impacts early in the process.

2. Develop a Community Profile

The development of community baseline conditions involves the collection of qualitative and quantitative data from field observations, published agency sources, prior transportation studies, community organizations, municipal governments, and community and individual coordination activities. The documentation of community resources should not focus only on the physical location of resources, but also on the

function, value, quality, and capacity of those resources. CIA is not only a collection and assessment of the physical location of resources and structures, but also the functional and social characteristics of those features as they relate to the community's "quality of life."

To adequately characterize a community, information on a wide variety of community characteristics should be collected. A list of recommended community considerations on which to base the development of community baseline conditions is discussed later in this document. In addition, it is recommended that a Community Context Audit, developed as part of TDOT's Context Sensitive Solutions initiative, should be completed during this step.

Comprehensive plans at both the municipal and county level can provide a wealth of information on communities and often include vision statements, and community goals, objectives, and values related to quality of life concerns. Comprehensive plans and other relevant planning studies, documents and ordinances should be reviewed as part of the development of baseline conditions. Public involvement during this step can include a range of activities aimed at gathering information from community stakeholders and presenting the collected baseline information to the stakeholders.

The goals of these activities are to verify that the study team has adequately identified baseline conditions and to ensure a thorough understanding of important community issues. The identification and review of baseline conditions should be performed in consultation with the MPO or RPO, local officials, and other community stakeholders. The baseline conditions should be reassessed periodically throughout the project development process and modified as necessary.

A variety of information sources can be consulted to develop the profile. These may include both primary sources, such as public meetings, interviews, or fieldwork and secondary sources, such as newspapers, minutes of public hearings, community or facility plans.

3. Analyze Impacts

Analyzing project impacts involves uncovering potential community impacts, collecting information on the nature of those impacts, and determining the relative intensity of those impacts. This analysis needs to occur for each major project alternative, including the "No-Build" scenario. Establishing the consequences of doing nothing helps to clarify what impacts can be attributed to the project and the relative magnitude of those impacts, in relation to the potential benefits. In addition, conducting this analysis for each alternative provides a meaningful basis for comparing alternatives and selecting a final alternative.

Community impact analysis addresses three general categories of impacts: direct, indirect, and cumulative. Potential impacts can be explored in a variety of ways, through evaluation of primary or secondary data, basic problem solving, discussions with knowledgeable persons, and public involvement. An effective community impact assessment requires a solid understanding of the community, direct observation of the affected area, and some research and evaluation of data. It does not, however,

require or necessarily benefit from sophisticated models or many hours of technical analysis.

4. Identify Context Sensitive Solutions
In concert with the TDOT's commitment to Context Sensitive Solutions (CSS), it should be the goal of every project to develop and identify transportation improvements/solutions that are context sensitive and help the project fit more harmoniously into the community. These context sensitive solutions should be developed in collaboration with the impacted communities.

If adverse impacts are identified, potential methods to address them may be explored. Solutions to adverse impacts fall into the following four categories:

- **Avoid** – Alter the project so the impact does not occur.
- **Minimize** – Modify the project to reduce the severity of an impact.
- **Mitigate** – Alleviate or offset an impact or replace an appropriated resource.
- **Enhance** – Add a desirable or attractive feature to the project to make it fit more harmoniously into the community.

5. Document Findings
The results of the CIA are used for decision-making throughout the project development process. Therefore, it is important to document this information in a clear and concise manner for reference during the environmental and future project phases. All assessment materials (e.g., maps, analyses, public comments, survey responses, minutes of meetings, etc.) should be collected and maintained in the project file. A written summary of this material should be prepared near completion of the environmental phase, both for inclusion in the NEPA document as well as for reference as the project moves into the next phase of project development.

This written summary may be prepared for direct inclusion in the NEPA document, or a separate stand-alone report can be prepared for summarization and reference in the NEPA document. Generally a separate technical report is prepared if the complexity of the project, severity of the impacts, or quality of data justify a specialized technical report.

Guidance exists in the Technical Advisory (Appendix D) and several other publications, such as *Community Impact Assessment: A Quick Reference for Transportation (*Publication No. FHWA-PD-96-036). This publication can be viewed at http://www.ciatrans.net/CIA_Quick_Reference/Purpose.html. TDOT is also developing a stand alone *Community Impact Assessment Manual.*

5.3.10.2 Environmental Justice and Non-discrimination

Applicable Regulations

Title VI of the Civil Rights Act and Executive Order 12898 on Environmental Justice relate to the programs and projects of federal agencies and their impacts to minority and low-income populations.

Title VI, 42 U.S.C. 2000d et seq., was enacted as part of the landmark Civil Rights Act of 1964. It prohibits discrimination on the basis of race, color, and national origin in programs and activities receiving federal financial assistance.

Executive Order 12898 and the FHWA compliance procedures (FHWA Order 6640.23, December 2, 1998) requires identifying and addressing disproportionately high and adverse human health and environmental effects, including the interrelated social and economic effects of their programs, policies and activities on minority and low-income populations in the United States. FHWA Order 6640.23 provides the following definitions:

- Low-Income Population means any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed FHWA program, policy, or activity.

  Low-Income means a household with income at or below the U.S. Department of Health and Human Services poverty guidelines.

- Minority Population means any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who would be similarly affected by a proposed FHWA program, policy, or activity.

  Minority means a person who is:

  - Black (having origins in any of the black racial groups of Africa);
  - Hispanic (of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin) regardless of race;
  - Asian American (having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or
  - American Indian and Alaskan Native (having origins in any of the original people of North America and who maintain cultural identification through tribal affiliation or community recognition).

- Adverse Effects means the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects, which may include, but are not limited to: bodily impairment, infirmity, illness or death; air, noise, and water pollution and

soil contamination; destruction or disruption of man-made or natural resources; destruction or diminution of aesthetic values; destruction or disruption of community cohesion or a community's economic vitality; destruction or disruption of the availability of public and private facilities and services; vibration; adverse employment effects; displacement of persons, businesses, farms, or nonprofit organizations; increased traffic congestion, isolation, exclusion or separation of minority or low-income individuals within a given community or from the broader community; and the denial of, reduction in, or significant delay in the receipt of benefits of FHWA programs, policies, or activities.

- Disproportionately High and Adverse Effect on Minority and Low-Income Populations means an adverse effect that:
  - Is predominately borne by a minority population and/or a low-income population; or
  - Will be suffered by the minority population and/or low-income population and will be appreciably more severe or greater in magnitude than the adverse effect is that will be suffered by the non-minority population and/or non-low income population.

A CEQ publication entitled *Environmental Justice—Guidance under the National Environmental Policy Act* provides a good overview of the regulations and assessment process (http://ceq.eh.doe.gov/nepa/regs/ej/justice.pdf). Environmental Justice issues may arise at any time during NEPA and even in early project planning prior to the commencement of NEPA. TDOT must consider these issues, as appropriate, at every step of the project development process. Environmental Justice issues cover a broad range of impacts that fall under the NEPA umbrella, including impacts on the natural or physical environment and interrelated social, cultural, and economic impacts. Staff that is undertaking an assessment of whether Environmental Justice issues may be pertinent to a project should be highly sensitive to the history or circumstances of a particular community or population, the particular type of impact, and the nature of the proposed action.

FHWA provides the following guiding principles for identifying Environmental Justice issues:

- Agencies should consider the composition of the affected area, to determine whether minority populations, low-income populations, or Indian Tribes are present in the area affected by the proposed action, and if so whether there may be disproportionately high and adverse human health or environmental effects on minority populations, low income populations or Indian tribes;
- Agencies should consider relevant public health data and industry data concerning the potential for multiple or cumulative exposure to human health or environmental hazards, to the extent such information is reasonably available. For example, data may suggest there are disproportionately high and adverse human health or environmental

effects on a minority population, low income population or Indian Tribe from the agency action. Agencies should consider these multiple or cumulative effects, even if certain effects are not within the control or subject to the discretion of the agency proposing the action;

- Agencies should recognize the interrelated cultural, social, occupational, historical or economic factors that may amplify the natural and physical environmental effects of the proposed agency action. These factors should include the physical sensitivity of the community or population to particular impacts; the effect of any disruption on the community structure associated with the proposed action; and the nature and degree of impact on the physical and social structure of the community;
- Agencies should develop effective public participation strategies. Agencies should, as appropriate, acknowledge and seek to overcome linguistic, cultural, institutional, geographic, and other barriers to meaningful participation, and should incorporate active outreach to affected groups; and
- Agencies should assure meaningful representation in the process. Agencies should be aware of the diverse constituencies within any particular community when they seek community representation and should endeavor to have complete representation of the community as a whole. Agencies also should be aware that community participation must occur as early as possible for it to be meaningful.

Study Process

The data collected above for social/community impacts are combined with public outreach and a field review to determine if the project has the potential to impact low or minority populations and, if so, to determine if these impacts are disproportionate. The data utilized include race, color, national origin, age and level of income of the overall population, as well as the existence of any minority or low-income populations or communities. GIS can spatially plot the U.S. Census demographic data collected for this analysis.

In the NEPA document, the planner first presents the baseline data. The discussion of this information in the text should be accompanied by data tables. Such tables provide an easy to read overview of the data and they also provide a means for referencing the data later in the document. Then, the planner should describe community involvement and any issues identified by the community that are related to Environmental Justice. The planner must develop and present a clear statement in the NEPA document of whether the project alternative(s) will or will not involve an environmental justice issue, i.e., will it have a disproportionately high or adverse effect on minority and low-income populations? In this assessment, it is important to recognize that impacts on such populations may be different from impacts on the general population due to a community's distinct cultural practices.

When determining whether impacts are disproportionately high and adverse, FHWA suggests that the following three factors be considered:

1) Whether there is or will be an impact on the natural or physical environment that significantly (as defined in NEPA) and adversely affects a minority or low-income population. Such effects may include ecological, cultural, human health, economic or social when those impacts are interrelated to impacts on the natural or physical environment;

2) Whether environmental effects are significant (as defined by NEPA) and are or may have an adverse impact on minority and low-income populations that exceeds or is likely to appreciably exceed those of the general population or other appropriate comparison group; and

3) Whether the environmental effects occur or would occur in a minority or low-income population affected by cumulative or multiple exposures from environmental hazards.

When a disproportionately high and adverse effect on a low-income population or minority population has been identified, an analysis should be done to show how the effects are distributed within the affected community. Displaying available data spatially, through GIS, can provide an effective visualization of the distribution of impacts among the various demographic populations.

Lastly, when Environmental Justice issues are identified, TDOT should encourage members of the communities that may suffer a disproportionately high and adverse human health or environmental effects from a proposed project to develop and comment on possible alternatives as early as possible in the planning process.

5.3.10.3 Economic and Business Impacts

The economic and business impact analysis can be prepared by the planner or consultant by first creating a baseline economic profile. Data/information for this analysis can be obtained from:

- U.S. Census (employment, income);
- Tennessee Department of Labor (County Economic Profiles, unemployment data);
- Local Economic Development Office, Chamber of Commerce, Planning Office;
- Field review to locate existing and planned businesses;
- Local government—tax base data;
- City/County websites—may contain list of large employers and their locations and number of employees; and
- USDA, National Agricultural Statistics Service, Census of Agriculture.

Once the baseline is established, the planner must determine the economic and business impacts. To prepare the impact analysis, the planner should address, as pertinent, the questions below:

- Will the project encourage businesses to move to the area, or to relocate within the area, close to or outside the area?
- Will the project increase or diminish visibility for a commercial area of traffic-related businesses?
- Will the project increase or decrease parking for businesses?
- Will access changes help or harm business viability, including operating farms?
- How will the project affect employment (e.g., will it facilitate a new industrial park and more jobs).
- Will the project affect land/property values (e.g., changes may provide improved access to an area, thereby increasing property values or values may decline as a function of a property's proximity to the facility or as a result of a new undesirable feature).
- Will the project spur economic development?
- How will the project affect the tax base and property values (e.g., remove taxable property from the tax base and change property values)?

5.3.10.4 Land Use Planning and Land Use Impacts

The planner or consultant should conduct a records check, a field review and a visit to the local planning office to collect the data needed to determine the project's potential impacts to land use and whether the project is consistent with area plans. In addition, contact with the local planning office can reveal land development projects in the project area that are under consideration, in the planning stages, or are under construction. It is not unusual for such changes to have occurred in the project area after the time the project was flown for aerial photography or after the time that TDOT coordinated with local officials during the very early project development stage (e.g., at the Needs Assessment or TPR stage).

The planner should mark up a set of project plans in the field indicating land uses throughout the corridor. During this field review or by telephone, the planner should talk with city/county or development district planning staff and obtain applicable excerpts or a copy of any comprehensive plans (including the transportation element) and information on any developments that are being considered or are planned or approved in the project corridor. The planner or consultant should also ask if either zoning or subdivision regulations are in place in the project area.

Tennessee Code Annotated 6-58-106 (Public Chapter 1101, adopted in 1998) outlined the need for cities and counties to evaluate their potential growth over the next twenty years and define their responsibility to manage growth, ensure efficient use of land, and provide appropriate public service standards. The law requires each county prepare a growth plan that places parameters on growth within the county, identified as municipal urban growth boundaries, county planned growth areas, and rural areas. These delineations are based on land needs and public

service capabilities of each area. The result is intended to guide growth within each county in a more efficient manner. The planner or consultant should ask if an urban growth plan has been approved and if it has, to request an Urban Growth Boundary map that outlines growth boundaries around the developed towns and cities. The boundaries are placed to depict areas where a locality believes it has the capability to serve water, sewer and other infrastructure within the next 20 years.

If the planner or consultant uncovers any planned development in the project alignment, the planner or consultant should notify the preparer of the functional plans and/or the Project Manager and discuss how the issue will be addressed.

The planner or consultant can also consult with local government and check in the field the locations of parks, recreation facilities, and community services, such as fire stations, ambulance services, schools, and hospitals.

The land use data will form the basis for the land use impact analysis conducted by the planner or consultant. The baseline land use discussion should describe:

- The general character of land use in the area (e.g., areas of agricultural, residential, commercial or industrial uses, locations of community services). For a long corridor project, this may be done from one end to the other (e.g., The project begins in an area that is populated by small farms. As it proceeds northward, the area is populated with ca. 1970s subdivision development. The county high school is on the north side of the subdivision development on the west side of the subject roadway. At the project's northern end, the area has commercial strip development, including a large box retailer).
- Whether there are any planned developments in the area.
- Existing land use plans and controls, including the growth plan, if one exists.

Issues to be examined in the impact analysis discussion include:

- Is the project consistent with the comprehensive development plan of an area, and its transportation element, if one exists?
- Will the project cause changes in land use? Will it induce commercial development at an interchange where no development or no commercial development now exists? Will the development that would likely occur require changes to the zoning or subdivision ordinance? Will the project bypass an area lined with highway service businesses, eliminating the need for such services at that location? Will the project change a rural area to an area desirable for industrial development?
- How will the project affect growth of an area? Is it consistent with the Urban Growth Boundary, if one exists?

5.3.10.5 Farmland Impacts

Applicable Regulations

The farmland impact assessment is undertaken by the planner during Initial Coordination and is coordinated with the state office of the Natural Resource Conservation Service (NRCS). Guidance is available on FHWA's Environmental Guidebook on the FHWA website: http://environment.fhwa.dot.gov/guidebook/chapters/v1ch5.asp.

The purpose of the Farmland Protection Policy Act of 1981 (FPPA) is to "minimize the extent to which Federal programs contribute to the unnecessary and irreversible conversion of farmland to non-agricultural usages, and to ensure that Federal programs are administered in a manner that, to the extent practicable, will be compatible with State, unit of local government, and private programs and policies to protect farmland." If farmland, as defined in the Act, is converted to non-agricultural use by a project and if there are adverse effects (as defined by NRCS when the impact rating on the AD-1006 form exceeds 160), FHWA and TDOT must examine alternatives to minimize the impacts. Pursuant to the FPPA, "farmland means prime or unique farmlands."

Six situations exist where land does not meet the FPPA definition of farmland and no coordination with NRCS is needed:

1. Land is not farmland, either through its soil type as indicated on NRCS soils mapping as not suitable for agriculture, or through consultation with NRCS. This also applies if land needed for right-of-way is clearly not farmland (e.g., rocky and/or mountainous terrain, sand dunes). Completion of a Farmland Impact Rating Form (Form AD-1006) is not necessary;
2. Land is urban (or within a designated Urban Growth Boundary). Completion of an AD-1006 form is not necessary;

3. For linear development, if land has already been converted for industrial, commercial, residential or recreational activity. Completion of an AD-1006 form is not necessary;
4. If the arrangements for borrow areas or disposal sites are not directed by TDOT, then completion of an AD-1006 form is not necessary for these activities;
5. A state has a LESA (Land Evaluation and Site Assessment) system (which Tennessee does not have); or
6. Farmland with low potential. Completion of the AD-1006 form is needed to make this determination, but it is not necessary to coordinate with the NRCS.

Study Process

For projects requiring coordination with the NRCS, the planner or consultant completes Parts I and III of the Form AD-1006 during initial coordination (see Chapter 4, Section 4.3.4.1). This form and the instructions for completing it can be found at NRCS's website: http://www.nrcs.usda.gov/programs/fppa/. A copy of the form is in Appendix F, Page F-8. The planner completing the form will need to utilize available plans to calculate the amount of right-of-way that may be needed from land that does not fall under the six exceptions above.

TDOT will send the AD-1006 form[3], together with a copy of all maps showing the locations of project alternatives to the NRCS state office. The NRCS is required to respond within 45 days and will either complete Parts II, IV or V or mark a "No" in Part II indicating that no farmlands are involved. Part V will contain a value rating of between 0 and 100 (the higher the rating, the greater the impact). Pursuant to this Act, FHWA coordinates an assessment of the potential farmland impacts for its project with the Tennessee NRCS office through the completion of Form AD-1006.

If farmland involvement is indicated on the form by the NRCS, then TDOT must undertake the assessment needed to complete Part VI. This task will require review of aerial photographs and quad maps, or possibly even a field review. In-depth directions for this task are on the NRCS website shown above. Then, Part VII must be completed to determine the level of significance of the farmland involvement. Projects receiving a total score of less than 160 points require only minimal level of consideration for protection and no alternatives are required to be evaluated. For sites scoring 160 or higher, TDOT must consider alternatives that convert less farmland or convert farmland of lower value.

A copy of the completed AD-1006, if one is required for the project, should be included in the NEPA document. The NEPA document should summarize the steps

[3] The old AD-1006 was a carbon form that had two carbon copies. Generally today, a photocopy is used or a copy is printed from the Internet.

taken to comply with the FPPA and the results of the coordination. Any steps taken to reduce the amount of farmland impacts should also be discussed.

5.3.10.6 Visual Quality Impacts

Applicable Regulations

One of the most readily recognized effects of a transportation project is its visual presence. FHWA regulations do not specifically require the inclusion of a visual impact analysis in NEPA documents. NEPA, however, states that visual effects ("esthetics") are one environmental factor that must be considered during the environmental impact analysis.

Study Process

A visual impact assessment will be prepared for the project area. FHWA's 1990 *Guidance Material on the Preparation of Visual Impact Assessments* is out of print and FHWA has indicated that there are no plans to reprint it. USDA Forest Service and the U.S. Department of the Interior, Bureau of Land Management (BLA) both have visual assessment methodologies that are similar to FHWA's and are acceptable to FHWA as alternative processes to undertake. The BLA *Visual Resources Manual (Manual 8400 - Visual Resource Management)* can be found at http://www.blm.gov/nstc/VRM/8400.html. The 1997 USDA Forest Service manual is *Landscape Aesthetics: A Handbook for Scenery Management*, Agriculture Handbook 701; it is currently not available online but can be requested by contacting:

USDA Forest Service Southern Region Regional Office
1720 Peachtree Street, Suite 760S
Atlanta, GA 30309
Phone: 404-347-4177 Fax: 404-347-4821

It is important to recognize that the level of visual analysis needed for the NEPA document needs to be commensurate with the scope and magnitude of a project and its impacts, as well as public concerns. In general, for an EIS when there is a potential for visual impacts, a visual impact assessment should be prepared and summarized in the NEPA document. The need for a discussion of the visual effects of a proposed project in an EA depends on the visual characteristics of the proposed project area. If the visual environment encompasses visually sensitive elements or if it is considered unique by its viewers, a visual analysis may be warranted.

The public nature of highways and their visual prominence in the environment require that visual impacts—both positive and negative—be adequately addressed and considered in project planning. Community acceptance of a project may also be strongly influenced by its visual effects.

Whether the analysis is prepared for direct insertion into the NEPA document or as a stand-alone visual impact analysis, the following visual issues should be addressed:

- Describe the visual environment;

- Identify the visual quality of the area. The existing landscape is considered to have a high visual quality when its setting (landforms, water, vegetation, manmade development) have striking characteristics that convey visual excellence. High visual quality can be present in natural, rural or urban settings;
- Identify visually sensitive resources/locations. This could include, for example, areas with historic or culturally important resources, areas of recognized scenic beauty, parks, and residential areas;
- Describe the views looking to and from the highway;
- Describe potential visual impacts—both positive and negative. Highways will result in some degree of visual change in an area. The analysis should identify the project's level of effect on visually sensitive resources/locations based on changed views to or from the resources and the perceptions of viewers; and
- Describe feasible measures to minimize or mitigate adverse visual impacts.

5.3.10.7 Traffic and Crash Impacts

Study Process

In most cases, the NEPA Documentation Office staff requests a traffic and crash report from the Project Planning Division, Safety Planning and Travel Data Office. A map is included with the request (Note: The Environmental Division has developed a form to request traffic and crash data). Once the information is received by the planner, it will assist with several tasks, some of which are completed by the planner and others that are completed by other TDOT offices or consultants. The information is used as follows:

- By the planner to identify safety and/or community impacts for discussion in NEPA document;
- By the Safety Planning and Travel Data Office or consultant to prepare a Level of Service Analysis (for the planner's discussion in the Purpose and Need and/or Alternatives Chapters of the NEPA document); and
- By the consultant or Air and Noise Section staff for the noise impact analysis (for the planner to summarize in the impacts discussion of the NEPA document).

The traffic data received include existing, or baseline, traffic and projected traffic, with or without the project. Traffic is assigned to the local roadway network and is depicted on a map. This information can be used for both a level of service analysis and for conducting air and noise analyses.

In the traffic impact analysis, the planner needs to show how the proposed project is alleviating traffic congestion, particularly if this is included as one of the purposes of

the project. In order to do this, for example, for a new roadway, a level of service analysis must be done for existing local roads currently being used, such as parallel routes. This analysis would show how these roadways operate under existing conditions, and how they will be improved under future conditions with the proposed improvements. In other words, if one of the purposes of the project is to "relieve traffic congestion", as is often the case, the document writer must objectively prove that the improvements are accomplishing this objective.

TDOT's traffic data are also included in the printouts of the crash data. The printouts include a summary sheet (or sheets), worksheets and attached computer generated data sheets. (A key/legend is required to read and understand the data sheets and can be obtained from the Safety Planning and Travel Data Office.) The summary sheet indicates the total number of crashes, and numbers of injuries and fatalities. It also contains the statewide average rate for the road type and other comparative rates. Using the data sheets, planners can also identify accident locations by log mile and accident types. These can be mapped by the planner to identify the actual accident locations. This also graphically depicts locations that have had frequent accidents, if any exist.

The crash rate analysis was prepared to identify any high crash locations by route segment. This is the first step toward identifying any problem locations. The section crash rates are based on the number of crashes on a specified section, the average daily traffic on the roadway, the time frame of analysis, and the length of the section. They are expressed in terms of crashes per one million vehicle miles. A section's crash rate is then compared to a statewide critical crash rate based in part on the Tennessee statewide average crash rate. The comparison is expressed as a ratio of the section crash rate to the critical crash rate and is referred to as the critical crash rate factor. The critical crash rate factor is the threshold above which there is a statistical certainty (at a 99.5% confidence level) that the section crash rate exceeds the average crash rate and is not mistakenly shown as higher than the average due to randomly occurring crashes. In practical terms, sections with a critical crash rate factor greater than one are considered high crash locations and are potential candidates for safety improvements.

The section crash rate is also compared directly to the statewide average crash rate provided by TDOT. Section rates that exceed the statewide average crash rate but not the critical crash rate may be problem areas, but they are not statistically proven to be higher crash areas. Therefore, this second comparison is used to identify a second tier of highway sections that may have crash problems and could be considered for safety improvements (if warranted) based on further analyses.

5.3.10.8 Construction Impacts

Study Process

The planner will prepare the analysis of a project's potential adverse construction impacts. The discussion for the NEPA document should address construction-related concerns such as, but not limited to the following:

- Maintenance of traffic and access;
- Employment benefits;
- Waste disposal;
- Utility relocation;
- Discovery of unknown archaeological sites;
- Erosion control;
- Air quality; and
- Noise.

In some of these areas, impacts will be very similar from project to project. A review of the construction impact section of previously approved NEPA documents will provide guidance on how to address each of these issues, but some projects will require more analysis to be completed in areas of concern. The construction-related commitments to avoid and minimize impacts should be outlined in the NEPA document. Several commitments are standard to TDOT and are in accordance with TDOT's *Standard Specifications for Road and Bridge Construction,* TDOT's Statewide Storm Water Management Program, and FHWA's Best Management Practices.

5.3.10.9 Wild and Scenic Rivers Impacts

Applicable Regulations

The planner must determine if federally-designated Wild and Scenic Rivers, or those under study for designation, are in the project area. Rivers are designated under the federal Wild and Scenic Rivers Act. According to the Act, "certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations."

Currently, no Tennessee rivers are under study and only one river has been designated: the Obed Wild and Scenic River in Morgan and Cumberland Counties in East Tennessee on the Cumberland Plateau. The designated "river" includes the segment of the Obed River from the western edge of the Catoosa Wildlife Management Area to its confluence with the Emory River. It also includes Clear Creek from the Morgan County line to the confluence with the Obed River, Daddys Creek from the Morgan County line to the confluence with the Obed River and the Emory River from the confluence with the Obed River to Nemo Bridge. Over 45 miles of creeks and rivers are included in this wild and scenic river area. The list of designated and study rivers can be found at http://www.rivers.gov/wildriverslist.html.

Study Process

If a project has the potential to adversely impact the Obed River, or any rivers added to the listing for study or through designation, early coordination must be undertaken with the U.S. Department of Interior, National Parks Service. Potential effects of the project must be analyzed; adverse effects include alteration of the free-flowing nature of the river, alteration of the setting or deterioration of the water quality. If adverse effects are identified, consultation with the NPS must be undertaken to avoid or mitigate the impacts. In addition, publicly-owned waters of designated rivers are subject to Section 4(f), and public lands adjacent to designated rivers may be subject to Section 4(f). For each alternative that takes land, coordination with the NPS will provide information on the management plan, specific affected land uses and any necessary Section 4(f) coordination.

The Tennessee Scenic Rivers Act of 1968 designated scenic rivers. A list and map showing the state's 13 designated Scenic Rivers can be found at http://www.state.tn.us/environment/na/scenicrivers/. For the NEPA document, the planner should identify the existence of these rivers in the study area and describe the project's potential impacts.

5.3.10.10 Floodplain Impacts

Applicable Regulations

Protection of floodways and floodplains is required under 23 CFR 650A, which is explained in FHWA's policy guide on assessing floodplain impacts that can be found at http://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0650a.htm. Protection of floodplains and floodways is also required by Executive Order 11988 *Floodplain Management* and USDOT Order 550.2 *Floodplain Management and Protection*. The intent of these regulations is to avoid or minimize highway encroachments within the 100-year (base) floodplains, where practicable, and to avoid supporting land use development which is incompatible with floodplain values. The Technical Advisory (Appendix D) also addresses floodplain impacts.

Study Process

A preliminary analysis is needed in the NEPA phase to determine whether a project alternative will encroach on any base (100-year) floodplain and/or regulatory floodway, and if so the "worst-case" amount of encroachment. That is, the amount of encroachment (generally in acres) if no structures are built to span part or all of an area.

The planner should work with an ecologist or engineer to undertake the level of floodplain analysis needed. The first step in the process is to consult the National Flood Insurance Program (NFIP) Flood Insurance Rate Maps (FIRM) if such maps are available for the subject community. Information of community participation in NFIP is available in the *National Flood Insurance Program Community Status Book,* which is available through the website of the Federal Emergency Management Agency (FEMA): http://www.fema.gov/fema/. The FIRM, aerial photographs, and USGS quadrangle maps are all needed to conduct the analysis.

If NFIP maps exist for a community, they must be reviewed. Frequently asked questions regarding the NFIP maps are found at the website and FEMA maps can also be viewed on-line or ordered from the FEMA flood map store. It is helpful to overlay the floodplain limits on project mapping, such as functional plans or USGS quad maps. If a highway project encroaches on the base floodplain within a NFIP-participating community, the floodplain administrator of the local government that has land use jurisdiction should be notified. Communities in the regular NFIP program generally have detailed flood insurance studies performed. In such communities, the NFIP map will be an insurance rate map and in the majority of cases, a regulatory floodway is in effect. The local floodplain administrator should also be asked to provide the planner with a copy of local floodplain regulations, if they exist. Communities in the NFIP emergency program usually have no completed flood insurance study and only limited floodplain data. For these communities the map will be a hazard boundary map, without a regulatory floodway.

The environmental document should identify the locations and sizes of floodplains. If applicable, the document should state that "no significant encroachments of the floodplain are anticipated that would result in a potential for interruption of a transportation facility which is needed for emergency vehicles or provides the community's only evacuation route; a significant risk, including property loss or hazard to life; or a significant adverse impact on the natural and beneficial floodplain values."

If an alternative results in a floodplain encroachment or supports incompatible floodplain development having significant impacts or requires a commitment to build a particular structure size or type, the NEPA document must include an evaluation and discussion of practicable alternatives to the structure or to the significant encroachment. The evaluation must also include a preliminary analysis of whether the encroachment would be consistent with or require a revision to the regulatory floodway. If a floodway revision is necessary, the final NEPA document must include evidence from FEMA and the applicable local floodplain regulatory agency that such revision would be acceptable.

A detailed floodplain study, a "Location Hydraulic Report" is undertaken by the TDOT Structures Division generally in the permitting or design phase of the project. According to the Technical Advisory, the following items should be included in the Location Hydraulic Report, which should be "commensurate" with the level of environmental risk or impact:

- Flooding risks;
- Impacts on natural and beneficial floodplain values;
- Support of incompatible floodplain development (i.e., any development that is not consistent with a community's floodplain development plan);
- Measures to minimize floodplain impacts; and

- Measures to restore and preserve the natural and beneficial floodplain values.

5.3.10.11 Pedestrian and Bicycle Considerations

Applicable Regulations

There are growing efforts throughout the United States to improve conditions for bicycling and walking. Congress recognized this need in 1991 when it passed the Intermodal Surface Transportation Efficiency Act (ISTEA). ISTEA included a spending package that increased the responsibilities of local and state governments to plan and implement bicycle and pedestrian facilities. The funding infusion provided by ISTEA and continued by the Transportation Efficiency Act for the 21st Century (TEA-21) in turn fueled even stronger efforts to build trails and to renovate streets and roadways for bicycling and walking. Section 1202(a) of TEA-21 states that "bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use are not permitted." That section of TEA-21 also states that "transportation plans and projects shall provide due consideration for safety and contiguous routes for bicycles and pedestrians."

In addition, 23 USC 109(n) states that the Secretary of the USDOT "shall not approve any project or take any regulatory action under this title that will result in the severance of an existing major route or have significant adverse impact on the safety for non-motorized transportation traffic and light motorcycles, unless such project or regulatory action provides for a reasonable alternate route or such a route exists."

FHWA considers non-motorized modes of transportation to be an integral part of their mission and a critical element of the local, regional and national transportation system. To varying extents, pedestrians and bicycles will be present on many transportation facilities and it was the intent of TEA-21 that all new and improved transportation facilities be planned, designed and constructed with this in mind. The passage of SAFETEA-LU has not altered the intent of TEA-21.

In March 2010, FHWA adopted a *Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations* (http://www.dot.gov/affairs/2010/bicycle-ped.html). The purpose of the policy statement was to reflect the FHWA's support for the development of fully integrated active transportation networks to accommodate people of all ages and abilities, including people too young to drive, people who cannot drive, and people who choose not to drive. The statement reads "The DOT policy is to incorporate safe and convenient walking and bicycling facilities into transportation projects. Every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems. Because of the numerous individual and community benefits that walking and bicycling provide — including health, safety, environmental, transportation, and quality of life — transportation agencies are encouraged to go

beyond minimum standards to provide safe and convenient facilities for these modes."

With the adoption of this policy statement, FHWA encouraged states, local governments, and public and private agencies and organizations to adopt similar policy statements and to go beyond minimum design standards and requirements to create safe, attractive, sustainable, accessible, and convenient bicycling and walking networks.

Study Process

"Due consideration" of bicycle and pedestrian needs should include, at a minimum, a presumption that bicyclists and pedestrians will be accommodated in the design of new and improved transportation facilities. In the planning, design, and operation of transportation facilities, bicyclists and pedestrians should be included as a matter of routine, and the decision to not accommodate them should be the exception rather than the rule. There must be exceptional circumstances for denying bicycle and pedestrian access either by prohibition or by designing highways that are incompatible with safe, convenient walking and bicycling.

TDOT's Bicycle and Pedestrian Policy (Policy No. 530-01, adopted September 1, 2004), is "to routinely integrate bicycling and walking options into the transportation system as a means to improve mobility and safety of non-motorized traffic."

If non-motorized transportation is already a feature of a facility, the continuation of that function should be considered in project development. In addition, changes in traffic or traffic patterns may transform a pedestrian-friendly environment into one in which walking or biking residents are at risk of injury. A discussion of the results of this consideration should be included in the NEPA document. If routes are truncated or removed, replacement routes should be developed and discussed in the NEPA document.

5.3.10.12 Energy Impacts

A detailed energy analysis is needed only for large-scale projects. For most projects, the NEPA document should discuss in general terms the construction and operation requirements and conservation potential of the project alternative(s). The planner can review previously completed NEPA documents for examples of acceptable discussions.

For large-scale projects with potential substantial energy impacts, the discussion should include:

- Direct energy impacts from energy consumed by vehicles using the facility; and
- Indirect energy impacts from project construction and/or changes in type of vehicle usage or numbers of vehicles.

The final NEPA document should discuss any conservation measures that will be implemented as part of the preferred alternative, for example, high occupancy vehicle incentives and measures to improve traffic flow.

5.3.10.13 Indirect and Cumulative Impacts

Section 5.1.1.2 defines the concepts of indirect and cumulative impacts and provides references for analyzing these impacts. The degree to which indirect and cumulative impacts need to be evaluated in a NEPA document depends on the potential for the impacts to be significant and varies by resource, project type, geographic location and other factors. Indirect and cumulative impacts should be addressed, particularly when preparing an EA or EIS, with other agencies and the public during early coordination activities or scoping. The issue of indirect and cumulative impacts can be discussed on a resource-by-resource basis, and/or discussed in a separate section in the Impacts Chapter of the NEPA document.

5.4 Refine Alternatives, as Warranted by Impact Findings

The impact studies and public involvement activities may identify major issues that must or should be addressed before an alternative is presented in the draft NEPA document.

Such issues could include:

- Need to evaluate alternatives to avoid Section 4(f) use and determine if they are prudent or feasible;
- Existence of a historic family cemetery in an area where the alignment can be slightly shifted to avoid impacts;
- Archaeological sites (e.g., Can the alignment be shifted to avoid a National Register-eligible site or sites?);
- Extensive wetland impacts (e.g., Are there alternatives that would either avoid or minimize impacts?);
- Environmental justice (e.g., What can be done to avoid disproportionately high and adverse impacts on a minority population?); and
- How can access be provided from the proposed controlled access road to a new industrial park or an existing large industrial employer?

These issues should be displayed on an updated “environmental constraints” map by the Environmental Division planner or by a consultant. The planner should ask for assistance from the Natural Resources Office or the Social and Cultural Resources Office, as needed. At a minimum, the planner should prepare a memorandum for transmittal to the project concept designer or the Project Manager, calling these issues to his/her attention.

The Project Manager, planner and project designer, and as applicable, the staff of Natural Resources Office or the Social and Cultural Resources Office, or the consultant, should then meet to discuss how these issues impact the project alignment, the technical studies that may have already begun or will soon begin, and the project schedule. Addressing issues at this early project stage through minor alignment shifts or other means may save time and avoid problems at later project stages.

It is important to note that any shifts in project alignment, whether minor or major, may require additional technical field studies and analyses or study updates to be completed in the “added” project impact area. Examples include the need for archaeological studies in areas within the new project area that were not previously surveyed or updating the numbers of displacements where additional right-of-way would be required.

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6.0 PREPARE ENVIRONMENTAL DOCUMENTATION

The results of the environmental analysis as well as the description of the proposed action are presented in a NEPA document. The documentation is provided in one of the following formats:

- Categorical Exclusion (CE)
- Environmental Assessment (EA)
- Environmental Impact Statement (EIS)

For more information on how to prepare an environmental evaluation, refer to the FHWA Technical Advisory T6640.8A, *Guidance for Preparing and Processing Environmental and Section 4(f) Documents*, which is contained in full in Appendix D of this manual.

This chapter provides general instructions for the preparation of a Categorical Exclusion (CE), an Environmental Assessment (EA), a Finding of No Significant Impact (FONSI), a Draft Environmental Impact Statement (EIS), a Final Environmental Impact Statement (FEIS), and a Record of Decision (ROD). For each type of document, the chapter presents a brief overview of the applicability of the class of action; the required and suggested content and format of the documentation; procedures for internal and FHWA review and approval of the draft and final documents; how the approved document is circulated for agency and public comment; public hearing requirements; and how comments are handled. The chapter also discusses environmental reevaluations that are required after the environmental clearances have been approved, as well as the need for and requirements of a Supplemental Environmental Impact Statement (SEIS). The chapter concludes by discussing the current emphasis on the need to improve the quality of environmental documents.

6.1 Requirements for a Categorical Exclusion

As discussed in Chapter 3, “NEPA Process Options,” a Categorical Exclusion (CE) is an action or activity that meets one of the definitions contained in 40 CFR 1508.4 and, based on past experiences with similar actions, does not involve significant environmental impacts. 23 CFR 771.177(c) and (d) define two categories of CEs based on the action’s potential for impacts. The level of documentation for a particular CE depends on which category the action falls under. If the likelihood of significant impacts is uncertain even after CE-related studies have been conducted, TDOT should consult with FHWA to determine whether an EA or an EIS should be prepared. If significant impacts are likely to occur, an EIS must be prepared (23 CFR 771.123(a)).

In addition to the two categories of CEs defined in 23 CFR 771.177 (c) and (d), TDOT processes two other types of CEs – Programmatic and Bridge. The requirements of each of these CEs are discussed in the following sections. TDOT

has developed a series of electronic templates for use in documenting CEs. Links to these templates are provided in the following sections.

6.1.1 "C" List CEs

The "C-list" actions, as defined in 23 CFR 771.117 (c), are those actions that meet the criteria for CE in the CEQ regulations (Section 1508.4) and 23 CFR 771.117(a) and normally do not require any further NEPA approvals by FHWA. This list of 20 C-list categories of actions are primarily non-construction actions, such as planning grants for training and research, or limited construction actions, such as pedestrian facilities, utility installations, landscaping and fencing. Experience has shown that because of their limited nature, these types of activities never or almost never cause significant environmental impacts. The 20 actions are listed in Chapter 3, Section 3.5.1 of this manual.

Any necessary technical studies and documentation for these C-list CEs are maintained by TDOT and the documentation is not generally sent to FHWA for approval, except where unusual circumstances exist.

There may be instances in which other environmental laws apply to these types of projects. The FHWA Technical Advisory lists examples where one of the C-list actions could require some level of documentation. These examples include the installation of traffic signals in a historic district, or a proposed noise wall using land protected by Section 4(f). In those specific instances, Section 106 or Section 4(f) would apply and specific documentation may be required. The level of documentation would be discussed and developed in consultation with FHWA.

6.1.2 "D" List CE

The "D-list" includes those activities that have a higher potential for impact, but the impacts would still be minor in nature, thus allowing the action to meet the criteria for a CE. 23 CFR 771.117(d) lists 12 examples of actions that fall under this group, but the D-list group is not just limited to the 12 examples provided (the 12 examples are listed in Chapter 3, Section 3.5.2 of this manual). Other actions with similar scopes of work may qualify as a D-list CE. These include such actions as resurfacing, installation of highway ramps, bridge rehabilitation, and construction of weigh stations or rest areas.

Some documentation must be provided for an action that falls into the D-list so that the FHWA can determine if the CE classification is appropriate. The level of information is dependent upon the action's potential level of impact, controversy, or inconsistency with other agencies' environmental requirements.

Where adverse environmental impacts are likely to occur as a result of the project, the level of analysis should be sufficient to define the extent of the impact, identify appropriate mitigation measures and address known and foreseeable agency and public concerns.

At a minimum, the D-list CE documentation would include the following:

- Description of the proposed action, including the immediate surrounding area;
- Discussion of any specific areas of concern, such as wetlands, relocations or Section 4(f);
- A list of other federal actions required for the proposal; and
- Any concurrence letters from the State Historic Preservation Office (archaeological and/or historic architectural resources) and U.S. Fish and Wildlife Service (endangered species).

The documentation should also address unusual circumstances associated with the project, if any. Where there are unusual circumstances, TDOT should undertake sufficient early coordination with agencies, public involvement and environmental studies to determine whether there is the potential for significant impacts.

If it is determined that the project is not likely to have significant impacts, the results of the environmental studies, coordination and public involvement should adequately support that conclusion and should be included in the CE documentation. The CE documentation is transmitted to FHWA for approval. The transmittal includes a cover letter signed by the TDOT Environmental Division. TDOT has developed an electronic template for D-list CEs, which replace the previous letter or report format.

6.1.3 Bridge CEs

TDOT has a specific format to address bridge rehabilitation projects, which would generally fall under the D-List CE requirements (see above).

6.1.4 Programmatic CEs

Some types of projects are processed programmatically. On February 3, 1997, FHWA and TDOT entered into a “Programmatic Categorical Exclusion Agreement,” in which TDOT and FHWA agreed in advance with the classification of certain projects as identified in 23 CFR Part 771.117(d) as CEs.

Programmatic CEs are described in Chapter 3, Section 3.5.3. These Programmatic CEs are completed by documenting that all of the criteria Programmatic Categorical Exclusion Agreement are met. TDOT maintains documentation of the Programmatic CE in its files.

6.1.5 CE Approval Process

Environmental studies and documentation for C-list and Programmatic CEs are not submitted to FHWA for approval; they are maintained by TDOT.

CE documentation for D-list and Bridge CE actions is submitted to the FHWA Division office for concurrence following internal reviews of the draft CE documentation by TDOT’s Environmental Division staff. FHWA reviews the

submitted documentation and requests additional information or clarification as needed. Once the comments are addressed, FHWA indicates its concurrence with the CE determination by signing the CE document and informing TDOT of the concurrence.

Publication or circulation of the final CE is not required. Copies of the approved CE are maintained in the project files in the TDOT Environmental Division.

6.2 Environmental Assessment (EA)

6.2.1 EA Process

The preparation of an Environmental Assessment (EA) is intended to help FHWA and TDOT make the determination that the project would have no significant impacts and an EIS would not be needed, or that an EIS is needed. The EA documentation focuses on those resources or features that TDOT and FHWA have determined are likely to cause a significant impact. At any point in the EA process when it appears that the action is likely to have significant impacts on the environment, an EIS must be prepared.

6.2.2 EA Content

The EA is intended to be a concise document that does not include detailed or lengthy descriptions of information that has been gathered. The technical studies that form the basis of the conclusions presented in the EA should be referenced in the EA, and copies of those studies are maintained in the project files by TDOT and FHWA. Once the EA is approved by FHWA, the technical studies with the exception of precise archaeological location data (written descriptions and maps) may be made available to the public or agencies that ask to review them.

The EA should incorporate good quality maps and/or exhibits and tables to help minimize the volume of documentation and to help present background data and summarize technical analyses.

6.2.3 EA Outline and Format

6.2.3.1 Required Elements

The Technical Advisory suggests the following format for an EA.

- Cover Sheet. The cover page provides the name of the project, and identifies the state and federal lead agencies, cooperating agencies, and the deadline for submitting comments. See Appendix E, Figure E-12, for an example.
- Purpose and Need for Action. This chapter should include a description of the proposed action, the length and termini of the project, the project background, its consistency with existing plans, and the transportation or other needs that the proposed action is intended to satisfy. See Section 2.3, “Defining the Project,” for a discussion of specific elements of the purpose and need statement.

- Alternatives. This chapter discusses the alternatives that are under consideration in the EA, including the no-action or no-build alternative, which serves as a baseline for comparison, and one or more build alternatives. The no-action or no-build alternative is a viable alternative that should be considered equally with all other alternatives. This section also identifies and briefly describes those alternatives that were considered initially and found not to be reasonable or feasible, and thus were dropped from further consideration.
- Existing Conditions and Environmental Consequences. This chapter presents a brief description of the affected environment, sufficient to allow the reader to grasp the environmental setting, and describes the social, economic and environmental impacts and consequences of the proposed action. The level of analysis described should be sufficient to adequately address the impacts and appropriate mitigation measures, and address known and foreseeable public and agency concerns. The individual resource discussions focus on the technical areas that are described in Chapter 5, "Impacts Analysis," of this manual.
- Comments and Coordination. This chapter describes the early and ongoing coordination activities, summarizes key issues and pertinent information received from the public and agencies, and lists those agencies and persons that were consulted.
- Appendices. The appendix or appendices generally contain analytical information that substantiates an analysis that is important to the document, such as a Biological Assessment of threatened or endangered species or the Noise Impact Analysis.
- Section 4(f) Evaluation. If a Section 4(f) resource is encountered in the project, a Section 4(f) Evaluation must be prepared and circulated. The draft Section 4(f) Evaluation is usually included in the EA document, either as a separate chapter or in an appendix. See Section 5.3.9.1 for information on the preparation and contents of the Section 4(f) evaluation.

TDOT requires four other specific components as a part of the EA document:

- Signature Page. This page replicates information on the cover sheet, but also contains a line for the FHWA approval signature and date, and identifies the names, addresses and telephone numbers of the FHWA and TDOT contact persons for the document. This page is placed immediately inside the cover. (See Appendix E for a sample EA signature page, Figure E-13.)
- Summary. A brief summary is placed after the signature page to summarize the proposed action, the alternatives considered, and the primary benefits and adverse impacts. It states whether there is a Section 4(f) impact, and lists permits that may be necessary.

  The summary also includes a statement regarding the SAFETEA-LU statute of limitations on filing claims that challenge permits, licenses, or

approvals issued by federal agencies for certain transportation capital projects. The following paragraph is a sample of the language to be used:

> *FHWA may publish a notice in the* Federal Register*, pursuant to 23 USC §139(l), indicating that one or more Federal agencies have taken final action on permits, licenses, or approvals for the subject transportation project. If such notice is published, claims seeking judicial review of those Federal agency actions will be barred unless such claims are filed within 180 days after the date of publication of the notice, or within such shorter time period as is specified in the Federal laws pursuant to which judicial review of the Federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the Federal laws governing such claims will apply.*[1]

- Environmental Commitments Green Paper. At the end of the Summary is a list of the environmental commitments that have been identified in the EA. Standard requirements of the TDOT *Standard Specifications for Road and Bridge Construction* should not be included in this section. This section should capture commitments that are specific or unique to this project, so that during subsequent project phases (Design, Right-of-Way, Construction, and Maintenance), these commitments will not be lost. To increase the visibility of the environmental commitments section, it must be printed on green paper.
- Coordination Appendix. Coordination letters received from agencies, organizations and the public as a result of initial and ongoing coordination are included in the appendix. In addition, evidence of Section 106 coordination is included in the appendix; this includes letters from TDOT and FHWA to agencies, organizations and American Indian tribes as well as their response letters.

Other information as appropriate may be included in the EA document. The specific organization of the EA may be determined on a project-by-project basis, but at a minimum must include the information shown above.

6.2.3.2 Mandatory EA Template

In 2009 the TDOT Environmental Division developed a template to be used in the preparation of all new EAs. The template established the minimum content and format requirements for the standardization of an EA document so that project reviewers, resource and regulatory agencies and the public would know where to consistently locate information in various environmental documents. Additionally, a standardized template will enable TDOT staff and consultants to understand what

[1] For more information, see FHWA Memorandum dated December 1, 2005, *Interim Guidance on the Use of 23 USC §139(1) Limitation on Claims Notices, w*hich is found at http://www.fhwa.dot.gov/hep/intgui_limclms.htm.

information is needed in the environmental document to ensure that the document is procedurally and scientifically defendable. The template incorporates the principles of the national initiative, "Improving the Quality of NEPA Documents."

In conjunction with the EA template, TDOT has also developed a formatting guideline for use in preparing EAs.

6.2.3.3 Checklist

Table F-1 in Appendix F is a checklist that must be used when preparing and submitting EA documents for review prior to the document being submitted to the FHWA. A completed copy of the EA Checklist must be signed by the TDOT Project Manager or the Consultant Project Manager responsible for the EA. The completed checklist must be submitted to the TDOT Environmental Division NEPA Documentation Office Planner along with the EA document. This checklist contributes to TDOT's Environmental Document Quality Assurance Process, described later in Section 6.6.2.

6.2.4 EA Approval Process

Once the EA document is drafted and reviewed by TDOT, an administrative draft of the EA must be submitted to the FHWA Division office and the TDOT Civil Rights Office for review. A copy of the Conceptual Stage Relocation Plan is included with this submittal. Cooperating agencies also are requested to review the administrative draft of the EA prior to final approval by FHWA. After the TDOT Environmental Division planner or consultant addresses the comments made by cooperating agencies and FHWA, the final EA is prepared and submitted to FHWA for approval and clearance.

The TESA Concurrence Point 3 occurs during this step (see Section 4.5, "Tennessee Environmental Streamlining Agreement," for a discussion of the concurrence points). The participating agencies are provided a preliminary EA for review and comment, and have 45 days from receipt of the document to provide a response (an additional 15-day period may be requested by a participating agency). The participating agencies are asked to provide concurrence on the adequacy of the preliminary EA.

Upon final approval, the appropriate FHWA Division Office representative signs the EA signature page. This signed page is then sent to the TDOT Environmental Division for signature by TDOT. The fully signed signature page is copied and included in the copies of the approved EA that are printed and made available for public inspection.

6.2.5 Public and Agency Review and Comments

Circulation of the EA to agencies and the general public is not required by the NEPA or CEQ regulations; however, the EA must be made available for public inspection and, according to 23 CFR Part 771.119, a Notice of Availability (NOA) briefly describing the action and its impacts shall be sent to the affected units of federal, state, and local government. This NOA (which should be published in local newspapers) will identify the locations where the document can be reviewed. In

addition to having copies at TDOT's main office and regional office, copies are placed in the public libraries in the county (or counties) where the proposed project would occur. TDOT may also place electronic versions of the EAs on the TDOT website.

While federal regulations do not require a public hearing for an EA, TDOT's general practice is to hold a public hearing. Whether or not a public hearing is held, 23 CFR 771.119 requires that comments be accepted during the 30-day period following the date that the EA is made available (the date of the NOA). TDOT's approved public involvement procedures, available at http://www.tdot.state.tn.us/documents/pip.pdf, describe specific requirements for publishing notices of hearings and conducting the hearings.

When a public hearing is held, 23 CFR 771.119(e) requires that at least 15 days notice be provided in advance of the hearing. The notice of the hearing must be advertised in local newspapers, and the advertisement must state where the EA can be obtained or reviewed. The 30-day time frame for public comments from the date of the NOA also applies. TDOT permits written public comments to be sent in during the 21-day period following the public hearing, although TDOT has the flexibility to extend the time period for receipt of comments on a project-by-project basis, if warranted.

The EA is available for review at the public hearing. TDOT policy provides for one or more court reporters to be present at public hearings to record public comments. Written comments submitted at the hearing or during the comment period are incorporated into a public hearing transcript, which is made available for public review in the same locations where copies of the EA are placed.

After the public/agency comment period is closed, the TDOT Environmental Division planner or a consultant prepares a public comment summary. The comment summary includes comments from the public hearing(s) and those submitted in writing. TDOT provides a copy of the hearing summary, including the public hearing transcript(s), to FHWA.

The TDOT Environmental Division planner coordinates with appropriate staff within Environmental Division and other divisions to determine how the comments will be resolved. The planner then prepares a response to each comment or category of comments. A summary of the comments and how the comments were resolved will be included in the FONSI, if there are no significant impacts. If significant impacts have been identified, an EIS must be prepared.

6.2.6 Selection of the Preferred Alternative

Agency input and public comments are considered by TDOT in the selection of the preferred alternative to be carried forward. The EA may have addressed only the no-build and a build alternative, in which case TDOT must make only one decision, whether or not to proceed with the proposed action. If the EA included evaluation of a Transportation System Management (TSM) alternative and/or more than one build alternative, then the decision is more complicated. TDOT will first make the decision

whether to build or not build. If the decision is to build, then TDOT must evaluate and determine which of the TSM or build alternatives will be the preferred alternative.

The TESA Concurrence Point 4 occurs during this step (see Section 4.5, "Tennessee Environmental Streamlining Agreement," for a discussion of the concurrence points). Based on output from Concurrence Point 3, along with any issues, concerns and/or opportunities identified during the public hearings, the Environmental Division planner prepares and forwards to the TESA participating agencies a Preferred Alternative and Mitigation Package. The package may include the following information:

- Preferred Alternative and Mitigation Summary that describes the various elements of the preferred alternative, the various elements of the proposed mitigation, and includes a map locating the elements of the preferred alternative and mitigation;
- Narrative describing the various elements of the preferred alternative;
- Rationale for recommending the preferred alternative; and
- Summary of major public and agency issues and how they were addressed.

The participating agencies are asked to review and concur with the proposed preferred alternative and preliminary mitigation within 45 days of their receipt of the package (a participating agency has the option to request an additional 15 days for review). Based on the output of Concurrence Point 4, the TDOT Environmental Division planner either prepares a FONSI or initiates an EIS if significant impacts are identified.

6.3 Finding of No Significant Impact (FONSI)

A Finding of No Significant Impact (FONSI) is both the decision by FHWA that the project has no significant impacts and the documentation of that decision. A determination that the project will have no significant impacts is made by FHWA, following consideration of the analysis presented in the EA, consideration of comments on the EA made by agencies and the public, TDOT's selection of the preferred alternative, and any changes in the proposed action based on the comments received.

6.3.1 Preparation of FONSI Document

6.3.1.1 Required Elements

The draft FONSI is prepared by the TDOT Environmental Division planner or a consultant for submission to FHWA as a recommendation.

According to the Technical Advisory, the following items must be incorporated in the FONSI document:

- Identification of the preferred alternative and explanation of its selection over other alternatives that were evaluated in the EA;
- Description of changes in the proposed action and mitigation measures resulting from the comments received, and any impact of the changes;
- Confirmation of the final mitigation measures for the project (the environmental commitments shall be printed on green paper and included at the front of the FONSI);
- Any necessary findings, agreements or determinations (e.g., Final Section 4(f) Evaluation and a fully executed Section 106 Memorandum of Agreement); and
- Discussion of the public and agency comments received and appropriate responses to those comments.

6.3.1.2 Mandatory FONSI Format

In the past, the approved EA document was generally used as the basis for the FONSI document, with the text revised to identify the preferred alternative. The most substantial changes generally occurred in the Summary, Alternatives, and Coordination chapters of the EA. Throughout the document text and on the graphics, however, the name of the alternative chosen was changed to "Selected" or "Preferred" Alternative, and graphics were revised to show the preferred alternative. The coordination chapter included a summary of the public hearing comments.

In 2009, FHWA and TDOT moved toward a more abbreviated format, in which the approved EA is incorporated by reference and technical and other supporting documentation is included in appendices.

TDOT has developed an electronic template to be used in the preparation of the FONSI document. The FONSI template is a form that allows users to input data and information without having to worry about document formatting and styles. The template provides grey text boxes for inserting project specific information and discussions (i.e., dates, names of agencies, project descriptions). In other areas of the template standardized text is already in place.

6.3.2 FONSI Approval Process

TDOT submits a draft of the FONSI to FHWA along with a copy of the public hearing transcript and a request that a finding of no significant impact be made.

Following the reviews by FHWA and the cooperating agencies, revisions to the draft FONSI document are made.

The final draft of the FONSI document is then prepared by the planner or consultant and transmitted by TDOT to FHWA, along with a separate original title page for the appropriate FHWA representative to sign and date. Once the FONSI is signed, final copies of the FONSI are printed and distributed.

The FONSI title page includes a statement similar to the following:

> *The FHWA has determined that this project will not have any significant impact on the human environment. This Finding of No Significant Impact is based on the attached Environmental Assessment, which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the need, environmental issues and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an environmental impact statement is not required. The FHWA takes full responsibility for the accuracy, scope and content of the attached EA.*

As provided in 23 CFR 771.119(h), when FHWA expects to issue a FONSI for an action, a minimum of 30 days is required between the date the EA is made available for review and the date that the FHWA makes its final decision.

6.3.3 Distribution of the FONSI

Formal distribution of the FONSI is not required. Copies of the signed FONSI are sent to FHWA, to the project's cooperating agencies, and to various TDOT Divisions. An NOA, generally in the form of a letter, must be sent by TDOT to federal, state and local agencies likely to have interest in the action. TDOT also publishes a legal notice in local newspapers in the project area to advertise the availability of the FONSI at a local public library nearest the project area, the TDOT Region Office, and on TDOT's website.

6.4 Environmental Impact Statement (EIS)

6.4.1 Overview of the EIS Process

When a proposed action is likely to have a significant impact on the environment, an EIS must be prepared. The purpose of the EIS is to provide full and open evaluation of environmental issues and alternatives, and to inform decision-makers and the public of reasonable alternatives that could avoid or minimize adverse impacts and enhance the quality of the environment.

As discussed in Chapter 3, Section 3.2, Project Initiation and Determination of Class of Action, a provision of SAFETEA-LU now requires TDOT to initiate the environmental review process by sending a notification letter to FHWA prior to the issuance of the Notice of Intent (NOI). The notification letter informs FHWA of the type of work, termini, length and general location of the proposed project, together with a statement of any federal approvals anticipated to be necessary for the proposed project. The timing of the notification is flexible and occurs when the project is sufficiently defined and the project sponsor (TDOT) is ready to proceed with the NEPA phase.

As soon as practical after the decision has been made to prepare an EIS, the TDOT Environmental Division planner or the consultant prepares a NOI with assistance from the FHWA. The FHWA reviews the NOI and submits it for publication in the *Federal Register*. Guidelines for preparation of the NOI are in the Technical Advisory, located in Appendix D of this manual. A more recent document entitled,

Federal Register Document Drafting Handbook (October 1998 revision) provides detailed instruction on preparing Notices for the Federal Register. The document, along with more recent supplements, can be found at http://www.archives.gov/federal-register/write/handbook/.

When the NOI is published, TDOT also publishes a similar announcement in local newspapers and sends a package of information to federal, state and local government agencies with possible interest in the project as well as organizations and individuals that may be interested. This package may be referred to as the early or initial coordination package or a scoping information package.

The NOI initiates the early agency coordination and public involvement process that provides information for the definition of alternatives, issues and impacts. This is also called "scoping," a term with specific meaning under the CEQ regulations. Scoping is described in Chapter 4, Section 4.2.2.

The EIS is prepared in two stages – Draft and Final - both of which are official documents with specific status under CEQ regulations. The Draft EIS or DEIS provides the opportunity for government agencies and the public to review a proposed project, its alternatives, the purpose and need of the project, the affected environment, the environmental consequences of the proposed action, and potential mitigation measures. The Final EIS or FEIS is prepared after the circulation and comment period for the DEIS, the evaluation of comments received, and the identification of the preferred alternative. The FEIS is circulated for review, after which FHWA will issue a Record of Decision or ROD, which describes the basis of FHWA's decision, identifies alternatives that were considered, and confirms the specific mitigation measures that are to be incorporated into the project.

6.4.2 Preparation of the DEIS

The FHWA Technical Advisory presented in Appendix D of this manual contains substantial detail on the format and content of an EIS. The following sections summarize the format and content and the process by which the DEIS is reviewed and approved for circulation and public comment.

6.4.2.1 Format and Content of DEIS

The Technical Advisory contains a recommended format for all EISs. This format is used for both a DEIS and an FEIS. For consistency with the CEQ regulations, the following 12 sections should be included in an EIS:

- Cover
- Summary
- Table of Contents
- Purpose and Need for Action
- Alternatives
- Affected Environment

- Environmental Consequences
- List of Preparers
- List of Agencies, Organizations and Persons to Whom Copies of the Statement are Sent
- Comments and Coordination
- Index
- Appendices

Descriptions of the sections are provided below.

Cover

The Technical Advisory specifies that an EIS should have a cover sheet that includes the following items. (See Appendix E, Figure E-15 for a sample EIS cover page.)

- EIS number (assigned by FHWA);
- Name of the project to include Route, Termini, City or County and State;
- Identify that it is a Draft Environmental Impact Statement (or Final or Supplemental EIS, as appropriate);
- Statement of Applicable Federal Regulation: 42 U.S.C. 4332 (2) (c);
- Name of Federal Lead Agency (FHWA);
- Name of State Lead Agency (TDOT);
- Names of Cooperating Agencies; and
- One paragraph abstract of the DEIS/FEIS.

The Technical Advisory also requires the following items, which are generally shown on the title/signature page that is placed immediately inside the cover.

- Signature line for FHWA and date;
- Signature line for TDOT and date;
- Names, addresses, and telephone numbers of the FHWA and TDOT persons to contact for additional information on the DEIS/FEIS; and
- Date, name and address for submittal of comments on the DEIS.

See Appendix E for a sample EIS title/signature page, Figure E-15.

Summary

The summary, or executive summary, is placed after the document cover. The summary should include the following:

- A brief description of the project;

- A description of major actions proposed by other government agencies in the same geographic area;
- A summary of all reasonable alternatives considered;
- A summary of major environmental impacts, beneficial and adverse;
- Any areas of controversy;
- Any unresolved issues with other agencies; and
- A list of other federal actions likely to be required for the project (such as permits, land transfers, Section 106 MOA, etc.).

Statute of Limitations: The summary should also include a statement regarding the statute of limitations on filing claims that challenge permits, licenses, or approvals issued by federal agencies for certain transportation capital projects. The following paragraph is a sample of the language that may be used, as suggested in the FHWA Memorandum of December 1, 2005, "Interim Guidance on the Use of 23 USC §139(1) Limitation on Claims Notices":

> *FHWA may publish a notice in the* Federal Register*, pursuant to 23 USC §139(l), indicating that one or more Federal agencies have taken final action on permits, licenses, or approvals for the subject transportation project. If such notice is published, claims seeking judicial review of those Federal agency actions will be barred unless such claims are filed within 180 days after the date of publication of the notice, or within such shorter time period as is specified in the Federal laws pursuant to which judicial review of the Federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the Federal laws governing such claims will apply.*

Environmental Commitments Green Sheet: TDOT also requires that a list of the environmental commitments that have been identified in the DEIS be included at the end of the summary. Standard requirements of the TDOT *Standard Specifications for Road and Bridge Construction* should not be included in this section. It should capture commitments that specific or unique to this project, so that during subsequent project phases (design, right-of-way, construction, and maintenance), these commitments will not be lost. To increase the visibility of the environmental commitments section, it must be printed on green paper.

Table of Contents

The table of contents follows the summary. The table of contents should include major sections of chapters, a list of figures or exhibits, a list of tables, and the titles of appendices.

Purpose and Need Chapter

The EIS Purpose and Need chapter is one of the most important elements of the project, and needs to be well documented in the EIS. Guidance for preparing Purpose and Need chapters is contained in Section 2.3.1 of this manual. The

discussion should be clear and specific, and support the need for the project. Some of the common needs are transportation demand, safety, legislative direction, consistency with adopted transportation plans, modal interrelationships, system linkages, and the condition of the existing facility.

The DEIS Purpose and Need chapter forms the basis of the no-build alternative discussed in the Alternatives chapter of the DEIS and will assist in the identification of reasonable alternatives and the selection of the preferred alternative.

While not detailed in the Technical Advisory, this chapter generally provides the following type of information, in addition to a discussion of the purpose of and need for the project:

- Concise definition of the project;
- Description of the project setting or study area;
- Discussion of the background of the project and related projects;
- Identification of the project's consistency with other plans;
- Discussion of the project's logical termini and independent utility; and
- A list of federal and state actions that would be required for the project.

Alternatives Chapter

The EIS Alternatives chapter identifies and describes the alternatives that are under consideration in the DEIS, discusses how they were selected and refined to represent a reasonable range of alternatives for the action, and demonstrates how they meet the purpose and need of the project. The alternatives discussed in this chapter of the DEIS will provide a clear basis for choice among the options.

For alternatives identified early in project development and found not to be reasonable (i.e., would not meet the purpose and need for the project or would have unacceptable consequences), the chapter should briefly explain why these alternatives were dismissed from further consideration (23 CFR 771.123 (c)).

In the DEIS stage, all reasonable alternatives should be discussed at a comparable level of detail. At this stage there is no requirement for a preferred alternative to be identified prior to the publication of the DEIS, but according to 40 CFR 1502.14 (e), if the agency has officially identified its preferred alternative(s), the DEIS must state that and explain why the alternative is preferred. The other viable alternatives must still be evaluated sufficiently.

The following range of alternatives should be considered when determining reasonable alternatives:

- No-Action or No-Build Alternative. This alternative must be addressed in the EIS. It may include short-term minor reconstructions such as safety

upgrades or maintenance projects. While it may not meet the purpose and need of the project, it serves as a benchmark against which to measure or compare the impacts of the other alternatives.

- Transportation System Management (TSM) Alternative. This alternative would include design options such as high-occupancy vehicle (HOV) lanes, ridesharing, or signal synchronization to enhance the operation of the existing facility. The alternative should be included where applicable. If it is dismissed from further consideration because it would not meet the project's purpose and need, that decision should be explained.
- Mass Transit Alternative. This alternative could include vanpools, bus systems and rail systems, and is typically considered for urban areas. Consideration of this alternative may be accomplished by referring to the regional or area transportation plan or by an independent analysis during early project development.
- Build Alternative(s). Both improvements to existing roadways and roadways on new locations should be evaluated. A representative number of reasonable alternatives must be presented and evaluated in the DEIS, as required by 40 CFR 1502.14 (a). The Technical Advisory advises that where a large number of reasonable alternatives exist, only a representative number of the most reasonable alternatives, covering the full range of options, must be presented.

Each alternative should be briefly described using text, tables and figures, as appropriate. The discussion should identify the alternative's termini, location, costs, and project concept (such as number of lanes, median width, turn lanes, location of intersections and access control). The description of the alternatives should also include any specific features of the alternative that would be useful to the comparison of alternatives, such as number of structures and stream crossings or tunnels.

Graphics showing the location of the alternatives in the project area and the typical section(s) are helpful to readers in understanding the project.

The chapter should state that the final decision on the preferred alternative will be made after the alternatives' impacts and comments on the DEIS have been fully evaluated and the public has had the opportunity to comment, even if an agency preferred alternative has been officially identified by TDOT.

Affected Environment Chapter

This chapter provides a concise description of the existing social, economic and natural environmental character of the project area, to set the stage for the evaluation of impacts.

The description of the existing environment should provide a single description of the general project area rather than separate descriptions for the individual alternatives.

The characteristics of the project area that are generally described include, but are not necessarily limited to, the following:

- Land Uses and Land Use Plans
- Social Characteristics
- Economic Characteristics
- Farmlands
- Transportation
- Air Quality
- Noise
- Water Resources/Quality
- Wetlands
- Secondary & Cumulative Impacts
- Floodplains
- Wildlife and Vegetation
- Soils and Geology
- Threatened and Endangered Species
- Wild and Scenic Rivers
- Historic Resources
- Archaeological Resources
- Visual Character
- Hazardous Materials

The specific characteristics and issues include those that were identified during early coordination and scoping.

The discussions for individual topics should be limited to data, information, issues, and values that have a bearing on possible impacts, mitigation measures, and on the selection of an alternative. The amount of data and analysis is commensurate with the importance of the impact.

Tables, figures, and photographs should be used to give a clear understanding of the area. Sensitive locations and features should be labeled on figures and briefly described in the text. The specific locations of archaeology sites and threatened and endangered species should not be shown on report graphics.

Environmental Consequences Chapter

This EIS chapter describes the probable impacts of all of the alternatives under consideration to the affected environment and documents the methodologies used in the evaluations and analyses. The impact assessment should identify both beneficial and adverse impacts as well as indirect and cumulative impacts. Refer to Section 5.1, “Types of Impacts,” for a description of impact types. The EIS Environmental Consequences chapter also describes the measures proposed to mitigate adverse impacts. The information is used to prove a basis for comparison of the no-build and the build alternatives.

The Technical Advisory offers two principal formats for organizing the Environmental Consequences chapter - by alternatives or by impacts. A chapter organized by alternatives would discuss the impacts and mitigation measures separately for each alternative. This organization might be more useful or understandable when the DEIS addresses numerous alternatives or where the impacts are substantially different for the various alternatives. A chapter organized by impacts would be more useful where there are few alternatives and/or the impacts are similar among the alternatives. Regardless of the organization of the chapter (by alternatives or by impact category), the impact assessment should relate to the social, economic and environmental characteristics described in the Affected Environment chapter.

Figures and tables are helpful in illustrating the comparison of impacts among the various alternatives. Individual tables may be used to present impacts such as

relocations, noise impacts, historic/archaeological impacts, etc. Use of a summary matrix of impacts at the beginning or end of the chapter provides a concise, side-by-side comparison of alternatives for each impact category.

The following information should be included in the DEIS for each reasonable alternative:

- A summary of studies undertaken, any major assumptions made; and supporting information on the validity of the methodology if it is not generally accepted as state-of-the art;
- Sufficient supporting information or results of analysis to establish the reasonableness of the conclusions on the impacts;
- A discussion of potential mitigation measures; and
- A discussion, evaluation and resolution of important issues on each alternative.

The authors of the DEIS should take care not to use loosely the words “significant” or “significantly” when describing levels of effect. The terms have particular meaning when used in the NEPA process. CEQ states that “significantly” as used in NEPA requires consideration of context and intensity (40 CFR 1508.27). If an impact is determined to be significant, the determination must be supported by factual information.

Potentially significant impacts most commonly encountered by transportation projects are listed below. It is important to note that this list is not all inclusive; there may be other impact areas that should be included for a specific project:

Land use
Farmland
Social conditions
Community impacts
Relocations
Economic conditions
Environmental Justice
Pedestrians and bicyclists
Air quality
Noise
Water quality
Permits
Wetlands
Wildlife
Floodplain
Wild and Scenic Rivers
Threatened or endangered species
Historic and archaeological resources
Parks and recreation areas
Hazardous waste sites
Visual quality
Energy
Construction-related
Indirect and cumulative impacts

The technical studies and other impact analyses needed for the DEIS are described in Chapter 5, Impact Analysis, of this manual.

Even though the Technical Advisory lists this chapter separately from the Affected Environment chapter, there is a trend toward combining Affected Environment and Environmental Consequences into a single chapter, so that the existing conditions,

potential impacts and mitigation measures for each impact type can be discussed together. See Section 6.6, Improving the Quality of NEPA Documents, for an example of an alternative outline of an EIS, with a combined Affected Environment/Environmental Consequences chapter.

Comments and Coordination

This chapter summarizes the early coordination or scoping process, agency and community meetings, and the key issues and pertinent information and comments received from agencies and the public through these efforts. Copies of pertinent correspondence with each cooperating agency, other agencies, organizations and the public are included in a Coordination Appendix, and are referenced in the DEIS chapters where appropriate.

Under NEPA, FHWA is not considered a commenter when it is the lead federal agency for the project. FHWA comments and letters on the NEPA documentation are not included in the DEIS or FEIS according to Section V.J.2 of the Technical Advisory (see page D-36 in Appendix D of this manual).

List of Preparers

CEQ regulations (40 CFR 1502.17) require that the EIS provide the names of those persons primarily responsible for preparing the DEIS documentation or substantial background studies. This list includes TDOT, other state agencies, and consultant staff persons who made a substantial contribution to the preparation of the documentation or studies. The list should also include the FHWA person(s) primarily responsible for preparation or review of the DEIS. For each person, the section should provide a very brief summary of their qualifications including educational background and professional experience as well as their area of responsibility in the EIS. The information may be presented in a table format, and may be in either a chapter or an appendix.

List of Agencies, Organizations and Persons to Whom Copies of the Statement are Sent

This section of the DEIS may be either a chapter or an appendix. It contains the names of all agencies, organizations and individuals who are sent a copy of the DEIS (40 CFR 1502.10).

Index

An optional element of the DEIS is the index. The index lists the subjects alphabetically, with page numbers where each of the subjects are found. According to the CEQ's *Forty Most Asked Questions*, Question 26a, an EIS index should have a level of detail sufficient to focus on areas of the EIS that are of reasonable interest to any readers. It is not restricted to the most important topics, nor does it have to identify every conceivable term or phrase in the EIS.

Appendices

The DEIS may include one appendix or several. The intent of the appendix is to incorporate material that provides greater detail than the summaries contained in the DEIS main text. The Technical Advisory states that the appendices should:

- Consist of material prepared specifically for the EIS;
- Consist of material that substantiates an analysis fundamental to the EIS;
- Be analytical and relevant to the decision to be made; and
- Be circulated with the EIS even if they are bound separately from the DEIS. Other reports and studies referred to in the DEIS should be readily available for review or for copying at a convenient location.

TDOT requires that the following material be included in appendices to the DEIS.

- Initial Coordination Responses;
- Section 106 Coordination (correspondence regarding Section 106 with SHPO, other consulting parties and Native American Tribes); and
- Biological Assessment and/or ecological response letters.

Other technical information may be included in the appendices for the specific project.

TDOT is in the process of developing an EIS standard format, similar to the form-like template that has been developed for EAs, as described above in Section 6.2.3.2.

6.4.2.2 DEIS Review and Approval Process

The initial draft of the DEIS is prepared by the TDOT Environmental Division planner and/or a consultant. The initial internal review of the DEIS is conducted within the TDOT Environmental Division. Table F-2 in Appendix F is a checklist that must be used when preparing and submitting EIS documents for review prior to the document being submitted to FHWA. A completed copy of the EIS Checklist must be signed by the Consultant Project Manager or the TDOT Project Manager responsible for the EIS. The completed checklist must be submitted to the Environmental Division NEPA Documentation Office Planner along with the EIS document. This checklist contributes to TDOT's Environmental Document Quality Assurance Process, described later in Section 6.6.2.

Following revisions based on Environmental Division reviews, the revised DEIS may be circulated to other divisions within TDOT, including Project Planning, Roadway Design, and Structures. During the review process, TDOT's Civil Rights Office is sent a copy of the DEIS to review for compliance with Title VI of the Civil Rights Act of 1964. A quality check of the revised DEIS will be conducted by TDOT Environmental Division staff before the DEIS is submitted to the FHWA Division Office for review.

The revised DEIS is sent to FHWA for review, comment and approval. If the earlier draft was not sent to other TDOT divisions, the DEIS should be sent to them for review. The copies sent to FHWA and the TDOT Civil Rights Office should be accompanied by the Conceptual Stage Relocation Plan.

The TESA Concurrence Point 3 is held at this point to allow the cooperating agencies and participating agencies the opportunity to review the DEIS document

and determine its adequacy prior to approval and circulation. (See Section 4.5, Tennessee Environmental Streamlining Agreement, for a discussion of the concurrence points.)

Following the review of all comments received, the DEIS is revised and submitted to FHWA for approval. Once FHWA has approved the DEIS and the appropriate FHWA Division representative has signed and dated the cover page, copies of the approved DEIS are printed and distributed. TDOT also signs and dates the approved DEIS cover.

6.4.2.3 DEIS Distribution and Circulation Process

Notice of Availability

Copies of the signed DEIS, along with a transmittal letter, are sent under FHWA's signature to the Environmental Protection Agency (EPA) Office of Federal Activities (see 40 CFR 1506.9). Upon receipt of the DEIS copies, the Office of Federal Activities EIS Filing Section prepares a Notice of Availability of the DEIS for publication in the *Federal Register*. EPA assigns a unique identifier number to each EIS, different from the FHWA identifier number. This number will be used for the FEIS and any other correspondence with EPA or publication in the *Federal Register* pertaining to the project.

The Notice of Availability contains the name of the project, the locations where copies may be obtained or reviewed, the date by which comments should be received, and the address of the person to whom comments are to be sent. The minimum time frame for comment is 45 days, as set forth in 23 CFR 771.123(i).

Notices of Availability are generally published only on Fridays in the *Federal Register*. A DEIS must be in the hands of EPA by the end of the preceding week before the notice can be published on the following Friday. At the same time as the publication in the *Federal Register*, TDOT should publish a notice of availability in local newspapers.

Circulation of DEIS

FHWA's NEPA regulations, 23 CFR 771.123 (g) state that the DEIS must be made available to the public and transmitted to agencies for comment no later than the time the document is filed with EPA. It also lists the types of agencies and persons that should be sent a copy of the DEIS:

- Public officials, interest groups, and members of the public known to have an interest in the proposed action or the DEIS;
- Federal, state and local agencies expected to have jurisdiction or responsibility, or interest or expertise in the action; or
- State and federal land management entities that may be significantly affected by the proposed action or any of the alternatives.

TDOT's initial coordination list references (for each specific agency) the number of copies of the DEIS that must be sent.

The Technical Advisory specifies the number of copies of the DEIS that are distributed to EPA and the Department of the Interior as follows (unless the agency has indicated a different number of copies to the FHWA Division Office):

- EPA Headquarters – Five copies to the following address (the address has changed since the Technical Advisory was issued; the current address is listed below):

  U.S. Environmental Protection Agency
  Office of Federal Activities
  EIS Filing Section
  Mail Code 2252-A, Room 7241
  Ariel Rios Building (South Oval Lobby)
  1200 Pennsylvania Avenue, NW
  Washington, DC 20460
  For all deliveries by courier, including express delivery services other than the U.S. Postal Service, please use 20004 as the Zip Code

- EPA Regional Office (Atlanta) – Five copies to the following address (the current address is listed below):

  U.S. Environmental Protection Agency
  Environmental Assessment Office
  EIS Review Section
  61 Forsyth Street, SW
  Atlanta, GA 30303

- Department of the Interior – 12 copies to the following address (the current address is listed below.):

  U.S. Department of Interior
  Office of Environmental Planning and Compliance
  Main Interior Building, MS 2342
  1849 C Street, NW
  Washington, D.C. 20240

A transmittal letter is prepared to accompany the single copy or copies of the DEIS that are sent to government agencies, groups and individuals. While it is not required, the use of a mail merge program to personalize each transmittal letter is recommended. With the exceptions listed below, the transmittal letters are printed on Division letterhead, and are signed by the designated Environmental Division representative. A sample letter is in Appendix E of this manual, Figure E-16.

The transmittal of copies of the DEIS to the Advisory Council on Historic Preservation and EPA is the responsibility of the FHWA Division Office. The transmittal letters are printed on FHWA letterhead and signed by an FHWA representative.

The planner provides to the FHWA Division Office a copy of the transmittal letters and the distribution list along with FHWA's copies of the DEIS. A sample letter is included as Figure E-17 in Appendix E.

A DEIS is widely circulated to government agencies and the public. One to two hundred copies of the document may be produced for the initial round of distribution, and for later requests. Copies of the DEIS and any separate appendices are placed in libraries in the counties and cities where the project is located, and at the appropriate TDOT regional office. An electronic copy of the DEIS should also be submitted to the TDOT website manager, who will place the DEIS on TDOT's website.

6.4.2.4 DEIS Public Hearing

23 CFR 771.111(h) requires states to develop procedures approved by the FHWA to carry out public involvement and public hearings for the federal-aid highway program. Among other requirements, this legislation requires that "one or more public hearings or the opportunity for hearings be held by the state highway agency at a convenient time and place for any Federal-aid project which requires significant amounts of right-of-way, substantially changes the layout or functions of connecting roadways or of the facility being improved, has a substantial adverse impact on abutting property, otherwise has a significant social, economic, environmental or other effect, or for which the FHWA determines a public hearing is in the public interest."

TDOT's policy is to hold one or more public hearings for a DEIS. This hearing is termed by TDOT as a "NEPA Public Hearing." The intent of this hearing is to present the plans for the project and obtain public input on the project, its alternatives, and its environmental impacts. 23 CFR 771.123 (h) requires that the DEIS be available at least 15 days before the public hearing. A NOA must be placed in a newspaper similar to a public hearing notice or accompanying the public hearing notice and advising where the DEIS is available for review, how copies may be obtained, and where comments shall be sent.

23 CFR 771.111(h) provides a listing of information that should be explained, as appropriate at the public hearing:

- Purpose of and need for the project, and its consistency with local plans;
- Alternatives and major design features;
- Impacts of the project;
- Relocation assistance program and right-of-way acquisition process; and
- TDOT's procedures for receiving public comments, both oral and written.

TDOT policy provides for one or more court reporters to be present at the public hearing(s) to record public comments. Written comments submitted at the hearing(s) or during the comment period are incorporated into a public hearing transcript, which is made available for public review in the same locations where copies of the DEIS were placed.

6.4.2.5 Public and Agency Comments on DEIS

23 CFR 771.123 (i) requires at least a 45 day comment period for a DEIS; the 45 day clock starts with the date of the NOA. Section 6002 (139 g 2) of SAFETEA-LU requires that the comment period for a DEIS may not be more than 60 days from the NOA, unless (i) a different deadline is established by agreement of the lead agency, the project sponsor, and all participating agencies; or (ii) the deadline is extended by the lead agency for good cause. (For all other comment periods for agency or public comments in the environmental review process, a period of no more than 30 days from availability of the materials on which comment is requested.) If an individual or agency requests additional time after the official comment period ends, TDOT shall advise FHWA of the request.

Following the close of the public/agency comment period and receipt of the public hearing transcript, the comments made at the hearing(s) and those made in writing are summarized in a comment summary. This summary is prepared by TDOT Environmental Division staff or a consultant. TDOT provides a copy of the hearing summary, which includes the public hearing transcript(s) and all written comments to FHWA.

TDOT also determines how the comments will be resolved and prepares a response to each comment or category of comments. A summary of the comments and how the comments were resolved will be included in the FEIS.

6.4.2.6 Selection of Preferred Alternative

The comments from agencies and the public are used by TDOT to help select the preferred alternative to be carried forward into the FEIS. The DEIS may have addressed only the no-build and a single build alternative, in which case TDOT must make only one decision, whether or not to proceed with the proposed action. If the DEIS included evaluation of a Transportation System Management or TSM alternative and/or more than one build alternative, then the decision is more complicated. TDOT will first make the decision whether to build or not build. If the decision is to build, then TDOT must evaluate and determine which of the TSM or build alternatives will be the preferred alternative.

The decision on the preferred alternative is made by TDOT, with full consideration paid to public comments and environmental impacts as well as constructability and funding issues. The Environmental Division prepares a memo for TDOT management that summarizes the issues and provides guidance for the selection of an alternative. TDOT management then holds a meeting with the division directors or other appropriate staff, at which time a decision is made.

CEQ requires that the FEIS identify the agency's preferred alternative in the Alternatives Chapter (40 CFR 1502.14(e)). The agency's preferred alternative is the one that the agency believes will fulfill its "statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors." The concept of the agency's preferred alternative is different from the "environmentally preferable alternative," although in some cases they may be one in the same. (See CEQ's *Forty Most Asked Questions*, Question 4a, reprinted in Appendix B of this manual).

The environmentally preferable alternative is the alternative that promotes the national environmental policy as expressed in NEPA Section 101. This is the alternative that "causes the least damage to the biological and physical environment; it also means the alternative that best protects, preserves and enhances historic, cultural and natural resources." (*Forty Questions*, 6a).

The TESA Concurrence Point 4 occurs during this step (See Section 4.5, Tennessee Environmental Streamlining Agreement, for a discussion of the concurrence points). Based on output from Concurrence Point 3, along with any issues, concerns and/or opportunities identified during the public hearings, the TDOT Environmental Division planner prepares and forwards to the TESA agencies a Preferred Alternative and Mitigation Package. The package may include the following information:

- Preferred Alternative and Mitigation Summary that describes the various elements of the preferred alternative, describes the various elements of the proposed mitigation, and includes a map locating the elements of the preferred alternative and mitigation;
- Narrative describing the various elements of the preferred alternative;
- Rationale for recommending the preferred alternative; and
- Summary of major public and agency issues and how they were addressed.

The participating agencies are asked to reviewed and concur with the proposed preferred alternative and preliminary mitigation, within 45 days of their receipt of the package (with an additional 15 day extension, if requested). Based on the output of Concurrence Point 4, the TDOT Environmental Division planner prepares the FEIS.

6.4.3 Final Environmental Impact Statement (FEIS) Process

6.4.3.1 FEIS Purpose

The FEIS is prepared as a revision of the DEIS, to address substantive comments on the DEIS and to identify the preferred alternative. Possible responses can include: modifying the alternatives; conducting additional analysis; making factual corrections, and/or explaining why comments do not warrant further agency response. Additional environmental and engineering studies may need to be completed on the preferred alternative to resolve substantive comments raised during the review of the DEIS.

The FEIS describes the mitigation measures that are to be incorporated into the proposed action, and documents compliance, to the extent possible, with all applicable environmental laws and Executive Orders, or provides reasonable assurances that their requirements can be met. If significant issues remain unresolved, the FEIS must identify those issues and the consultation efforts undertaken to resolve them (23 CFR 771.125 (a)).

6.4.3.2 FEIS Format and Content

The FHWA offers three variations of the format and content of the FEIS, which are summarized below and described in more detail in Appendix D, page D-35 (Technical Advisory):

- Traditional FEIS (format same as DEIS);
- Condensed FEIS (incorporates the bulk of the DEIS by reference); and
- Abbreviated FEIS (appropriate when only minor corrections are needed to the DEIS and when comments do not require a response).

The traditional approach is the most commonly used approach. Under this approach, the FEIS uses the same format as the DEIS while addressing the substantive comments. The FEIS also updates the DEIS with respect to:

- Public involvement and agency coordination activities completed during and after circulation of the DEIS;
- Modifications to the preferred alternative;
- Changes in the assessment of alternatives as the result of additional engineering or environmental studies;
- Final mitigation measures;
- Final Section 4(f) evaluation;
- Fully executed MOA in appendix, as needed;
- Environmental findings, such as wetlands or floodplain findings, if applicable; and
- Cover sheet changed to reflect that the document is an FEIS.

Discussed below are some specific additions, by chapters, that must be addressed in the FEIS:

Alternatives Chapter

The FEIS must identify the preferred alternative and should discuss the basis for its selection. If the preferred alternative is modified after the DEIS, the FEIS should clearly identify the changes and discuss the reasons why any new impacts are not significant.

Environmental Consequences Chapter

The FEIS must discuss the impact and mitigation measures of the preferred alternative. This discussion may require that additional information be gathered to firm up the mitigation measures or elaborate on impacts, or address issues raised in the comments on the DEIS. The FEIS should also identify any new impacts and their significance resulting from modifications to the preferred alternative as well address substantive new circumstances that may have arisen since the circulation of the DEIS. The FEIS must also identify those unresolved issues with other agencies.

List of EIS Recipients

The FEIS should identify those entities that submitted comments on the DEIS, and those receiving copies of the FEIS.

Comments and Coordination Chapter

The FEIS should discuss the public involvement activities held during the comment period, including descriptions of notices and hearings, if held. The chapter should include a copy of substantive comments from the USDOT Secretary, cooperating agencies, and other commenters on the DEIS. If there are large numbers of comments, the comments may be summarized (an acceptable method is to group the comments by category, such as neighborhood concerns, ecological issues, historic issues, etc). An appropriate response should be provided for each substantive comment. When the DEIS text is revised to reflect the comment, the response should indicate where revisions are made. The response should adequately address the issue or concerns raised, or explain why the comment warrants no further response.

The Comments and Coordination chapter should also document compliance with requirements of all applicable environmental laws, Executive Orders and other related requirements. Where possible, all environmental issues should be resolved before the FEIS is submitted. When disagreement exists after the DEIS, coordination should be undertaken with the agencies to resolve the issue. In the event the issue cannot be resolved, the FEIS should explain the remaining unresolved issue, what steps have been taken to try to resolve it, and the positions of the respective agencies.

If any important issues raised on the preferred alternative remain unresolved, the FEIS must identify those issues and the consultation and other efforts made to resolve them.

6.4.3.3 FEIS Review and Approval Process

The review and approval process for the FEIS is the same as that described above for the DEIS (Section 6.4.2.2).

6.4.3.4 FEIS Distribution and Circulation Process

Notice of Availability

Copies of the signed FEIS, along with a transmittal letter, are sent under FHWA's signature to the EPA Office of Federal Activities. Upon receipt of the FEIS copies, the Office of Federal Activities EIS Filing Section prepares a Notice of Availability of the FEIS for publication in the *Federal Register*. EPA uses the unique identifier number assigned at the time the DEIS Notice of Availability was published.

The publication of the notice in the *Federal Register* initiates the minimum 30 day review period, before which the Record of Decision (ROD) may be issued by the FHWA.

Distribution of FEIS

The FEIS must be transmitted to any persons, organizations or agencies that made substantive comments on the DEIS or requested a copy. The transmission must be no later than the time the document is filed with the EPA.

TDOT's initial coordination list includes (for each specific agency) the number of copies of the FEIS that must be sent.

The Technical Advisory specifically lists the number of copies of the FEIS that should be sent to EPA and to DOI:

- EPA Headquarters – Five copies (see address in Section 6.4.2.3, DEIS Distribution and Circulation Process)
- EPA Regional Office – Five copies (see address in Section 6.4.2.3, DEIS Distribution and Circulation Process)
- DOI Headquarters – Seven copies (see address in Section 6.4.2.3, DEIS Distribution and Circulation Process)

A transmittal letter is prepared to accompany each individual or group of copies of the FEIS that are sent to government agencies, groups and individuals. While it is not required, the use of a mail merge program to personalize each transmittal letter is recommended. With the exceptions listed below, the transmittal letters are printed on TDOT Environmental Division letterhead and signed by the designated TDOT Environmental Division manager.

The transmittal of copies of the FEIS to the Advisory Council on Historic Preservation and the EPA is the responsibility of the FHWA Division Office. The transmittal letters are printed on FHWA letterhead and are signed by an FHWA representative.

A copy of the transmittal letters and the distribution list are provided to the FHWA Division Office.

TDOT must also publish a NOA in local newspapers, indicating how copies may be obtained, locations where copies are available, and contact information for submitting comments. Copies of the FEIS are placed in libraries in the counties and cities where the project is located, and at the appropriate TDOT regional office. An electronic copy of the FEIS should also be submitted to the TDOT website manager, who will place the document on TDOT's website.

No public hearing is required for the FEIS.

6.4.4 Record of Decision (ROD)

6.4.4.1 ROD Purpose

As 23 CFR 771.126(e) explains, the FEIS is not an Administrative Action and does not commit FHWA to approve any future grant request to fund the preferred alternative. To obtain final approval of the proposed action under NEPA, FHWA must indicate its acceptance in the form of a concise public Record of Decision or ROD (40 CFR 1505.2). The signed ROD constitutes environmental clearance for the project under NEPA, meaning that TDOT can proceed with right-of-way acquisition and final design of the project.

6.4.4.2 ROD Format and Content

While the ROD cross-references and incorporates by reference the FEIS, the ROD must explain the basis of the FHWA's decision on the project as completely as possible. Additionally the following issues should be specifically addressed in the ROD:

- Where the selected alternative is different from the environmentally preferable alternative, the ROD should clearly state the reasons for not selecting the environmentally preferable alternative (40 CFR 1505.2 (b);
- If lands protected by Section 4(f) are a factor in the selection of the preferred alternative, the ROD should state how the Section 4(f) lands influenced the decision; and
- If significant impacts are expected, the ROD must explain the merits of the proposed action warranting the impacts.

The Technical Advisory states that the following key items must be addressed in the ROD:

- Decision: Identify the preferred alternative (incorporation of information in the FEIS by reference is recommended to reduce detail and repetition);
- Alternatives Considered: Describe each alternative considered briefly and explain the balancing of values, which formed the basis for the decision. Identify the important factors used in the decision-making process and provide justification for weighting of the values. Such values may include social, economic, environmental, cost-effectiveness, safety, traffic, service, community planning;
- This section must identify the environmentally preferable alternative. If this alternative is not the preferred alternative, the section must clearly state the reasons for not selecting it;
- Section 4(f): Summarize the basis for any Section 4(f) approvals where applicable;
- Measures to Minimize Harm: Describe the specific measures adopted to minimize harm and identify standard measures such as erosion control. State whether all practicable measures to minimize harm have been incorporated into the decision and, if not, why such measures were not included;
- Monitoring/Enforcement Program: Describe any monitoring or enforcement program that has been adopted for specific mitigation measures, as outlined in the FEIS; and
- Comments on FEIS: Identify all substantive comments received on the FEIS and provide appropriate responses.

6.4.4.3 Approval of ROD and Distribution

TDOT prepares the ROD with assistance from the FHWA. By law, FHWA cannot sign the ROD any sooner than 30 days after publication of the NOA of the FEIS in the *Federal Register*, or 90 days after the publication of the NOA of the DEIS, whichever is longer (23 CFR 771.127 (a)).

6.4.4.4 Revised ROD

A revised ROD should be prepared in the following situations (23 CFR 771.127 (b)):

- If FHWA and TDOT subsequently chose to approve an alternative that was not identified as the preferred alternative but was fully evaluated in the FEIS; or
- If a subsequent change is made to the mitigation measures or findings discussed in the ROD.

A revised ROD is subject to review by the FHWA offices that reviewed the FEIS. To the extent possible, the ROD should be distributed to all persons, organizations, and agencies that received a copy of the FEIS. No public hearing or NOA is required.

6.5 Continuous Activities and Reevaluations

The approved CE, FONSI, or ROD documents represent final environmental clearances for a project under NEPA. Given that many projects require extensive time to develop and many projects undergo staged construction, there is often a lag time between environmental approvals and construction letting. Right-of-way acquisition, utility relocations, design, and other routine project activities that occur after the environmental clearance are evidence of continuous activity on a project. The letting of subsections of the project for construction also constitutes evidence of continuous activity.

During the project development period between the environmental clearance and project construction, the environmental baseline conditions of the project area may change, as well as environmental regulations and policies that govern impact analyses and the development of mitigation measures. There may also be changes to the project during the project development and design process that require additional review of environmental impacts.

CEQ has anticipated two forms of documentation for confirming that environmental clearances remain current: Reevaluations and Supplemental EA/EISs.

6.5.1 Reevaluations

After the approval of an EIS, EA, or CE (including a Programmatic CE), 23 CFR 771.129(c) requires that TDOT will have to consult with FHWA prior to requesting any major approval or grant, to establish whether or not the approved environmental document or CE designation remains valid. The FHWA must assure that the environmental documentation for the proposed action is still valid, prior to proceeding with major project approvals or authorizations. This is accomplished through a reevaluation.

6.5.1.1 Reevaluation Timing and Purpose

TDOT will conduct a reevaluation of the environmental decision document prior to FHWA authorization of right-of-way funds for property acquisition. This is referred to as a "right-of-way reevaluation." The reevaluation for a CE, EA and EIS will be submitted to the FHWA Division Office for review and approval, and must be approved prior to authorization of right-of-way funds. For a Programmatic CE, the reevaluation is not submitted to FHWA and TDOT maintains the documentation in the project files. If less than three years has elapsed since environmental approvals or CE designation, a written reevaluation will not be required at that time.

After a period of three years has elapsed since receiving environmental approvals or an approved right-of-way reevaluation, TDOT will conduct a reevaluation of the CE, EA or EIS prior to FHWA authorization of construction funds before the project letting. This is referred to as a "construction reevaluation." This will be submitted to the FHWA Division Office for review and approval, and must be approved prior to authorization of construction funds. For a Programmatic CE, the reevaluation is not submitted to FHWA and TDOT maintains the documentation in the project files. If less than three years has elapsed since environmental approvals or approval of a right-of-way reevaluation, a written reevaluation will not be required at that time.

The written reevaluation documents a decision being made. The purpose of the reevaluation is two-fold:

- To ensure that the project design is being developed in a way that is consistent with previous commitments in the CE, FONSI or ROD; and
- To address changes in the design, planned mitigation measures, and the project area, as well as for managing the unanticipated late discovery of sensitive environmental resources.

In addition, as required by 23 CFR 771.129, a written reevaluation is necessary for a project requiring an EIS in the following circumstances:

- An acceptable FEIS has not been received by FHWA within three years after the date of circulation of the DEIS. The purpose of this reevaluation is to determine whether or not to supplement the draft EIS or to develop a new draft EIS; or
- Before further approvals are granted if major steps to advance the action (authority to undertake final design, acquire a significant portion of the right-of-way, approval of plans, specifications and estimates) have not occurred within three years after the approval of the FEIS, supplemental FEIS or the last major FHWA approval or grant.

The written reevaluation of the FEIS is written by the TDOT Environmental Division staff in consultation with FHWA, and addresses all current environmental requirements. The entire project is revisited to assess any changes in the project or project area that have occurred and their effect on the adequacy of the FEIS.

If there are new significant impacts, then a Supplemental EIS or a new EIS must be prepared. That decision is made by FHWA in consultation with TDOT, and is documented in the written reevaluation.

6.5.1.2 Reevaluation Format and Content

According to the Technical Advisory, written reevaluations do not have a required format, although TDOT typically uses a memorandum or letter format. Because the original NEPA document is the approved environmental documentation, the approved document is not rewritten or amended. Instead, the reevaluation is documented separately and included in the project files.

The reevaluation focuses on changes in the project, its surroundings and impacts, and any new issues identified since the last environmental documentation. To accomplish the reevaluation, TDOT reviews current right-of-way or construction plans to ensure that no significant changes have occurred, and it may be necessary to conduct field reviews, additional studies and agency coordination. The results of these reviews, studies and written coordination are included in the reevaluation documentation.

Additional public involvement that has occurred since approval of the final environmental document should also be described. TDOT documents and describes all efforts undertaken to reevaluate the project. The reevaluation must state that no significant changes have occurred, if that is the final determination. If there are any changes, such as new construction near the proposed improvement, the details are discussed in the reevaluation letter, and it is noted how the proposed project will change as a result.

The written reevaluation must also add a PM 2.5 Hot Spot Analysis for any environmental document in the appropriate counties that were approved prior to April 6, 2006. See Table 5-3 for a list of Tennessee counties that have been designated as being non-attainment for PM 2.5.

Projects are often broken into smaller sections for funding and/or construction purposes. The reevaluation for the various sections must consider the entire project addressed in the original environmental document. The reevaluation should mention which section(s) of the project is now being advanced to right-of-way or construction plans.

6.5.1.3 Approval of Reevaluation

The written reevaluation is prepared by TDOT Environmental Division staff and submitted to the FHWA Division for review and approval. A copy of the written reevaluation and the FHWA approval are placed in the project files.

6.5.2 Supplemental EIS

6.5.2.1 SEIS Purpose and Scope

A Supplemental EIS (SEIS) is necessary when major changes, new information, or further developments occur to the project that would result in significant environmental impacts not identified in the most recently distributed DEIS or FEIS

(40 CFR 1502.9(c)). The SEIS does not normally require re-initiating the environmental process; instead, the SEIS is for the last approval (DEIS, FEIS or ROD). The need for a SEIS may be revealed through a reevaluation, as discussed above in Section 6.5.1.

A SEIS is needed in the following cases:

- Changes are made in the design or scope of the project after the DEIS, FEIS, or ROD, and these changes would result in significant environmental impacts not evaluated in the EIS; or
- New information or circumstances relevant to the environment would result in significant adverse environmental impacts not evaluated in the DEIS or FEIS.

A SEIS is not needed if:

- The changes to the proposed action, new information, or new circumstances would result in a lessening of the adverse environmental impacts evaluated in the EIS without causing other environmental impacts that are significant and were not evaluated in the EIS; or
- FHWA decides to approve an alternative that was fully evaluated in an approved FEIS but not identified as the preferred alternative. In this case, a revised ROD would be issued.

When the significance of the new impacts is uncertain, TDOT Environmental Division staff develop the appropriate environmental studies to assess the impacts of the changes, new information or new circumstances. In some instances, FWHA may direct that an EA be prepared.

In some cases, a SEIS may be required to address issues of limited scope, such as the extent of proposed mitigation, a location change or a design variation for a limited portion of the overall project. In these situations, the preparation of the SEIS does not necessarily prevent the granting of new approvals, require the withdrawal of previous approvals, or require the suspension of project activities not directly affected by the supplement.

6.5.2.2 SEIS Format and Content

The Technical Advisory states that if the project changes or new information does not result in new or different significant environmental impacts, FHWA should document that determination. After a FEIS, the documentation would take the form of a note to the files. For a DEIS, the documentation could be a discussion in the FEIS.

The supplement is to be developed using the same process and format as the original document (i.e., DEIS, FEIS and ROD), except that scoping is not required. Some projects, however, may warrant scoping.

The SEIS should provide sufficient information in order to briefly describe the proposed action, the reasons why a supplement is being prepared, and the status of the previous environmental document.

The SEIS should reference the valid portions of the previous EIS rather than repeating them. Unchanged impacts may be briefly summarized and referenced. The SEIS should also address new environmental requirements that have become effective since the previous EIS was prepared, to the extent that the new regulations apply to the portion of the project that is being evaluated and is relevant to the subject of the SEIS. The SEIS should also summarize the results of any reevaluations that have been performed for portions of, or the entire project. The SEIS will thus represent an up-to-date consideration of the project and its environmental effects.

6.5.2.3 Approval of SEIS and Distribution

The SEIS will be reviewed and distributed in the same manner as a DEIS and FEIS.

According to the Technical Advisory, the transmittal letter of the SEIS should indicate that copies of the EIS being supplemented are available and will be provided to anyone who requests it.

6.6 Quality Assurance Process

6.6.1 Improving the Quality of Environmental Documents

FHWA in conjunction with the American Association of State Highway and Transportation Officials (AASHTO) have issued a report on an initiative to improve the quality of EISs and EAs written to comply with NEPA. The report can be found at http://www.environment.transportation.org/pdf/IQED-1_for_CEE.pdf.

The report identifies the core principals of quality NEPA documents:

Principal 1 - Tell the story of the project so that the reader can easily understand the purpose and need of the project; how each alternative would meet the project goals, and the strengths and weaknesses associated with each alternative.

Principal 2 – Keep the document as brief as possible, using clear concise writing; an easy-to-use format; effective graphics and visual elements; and discussion of issues and impacts in proportion to their significance.

Principal 3 – Ensure that the document meets all legal requirements in a way that is easy to follow for regulators and technical reviewers.

The recommendations stress the use of plain language with effective visual elements (pictures, simulations, graphs, figures, tables, etc.).

The report also offers an alternative organization for headings in an EA or EIS, with the use of question and answer headings to help direct readers to the information they are most interested in. Figure 6-1. provides an example of how the traditional EIS format might be transformed into a question and answer format.

The report does not provide a template, but does endorse a basic blueprint as an effective organization for most EIS documents. The blueprint sets forth the following components for NEPA documents, each of which should focus on telling the project decision-making story clearly, while still meeting legal sufficiency needs:

- Document Summary;
- Main Body; and
- Appendices and Technical Reports.

The blueprint differs from traditional NEPA documents in two key areas. It combines the Affected Environment and Environmental Consequences discussions into one chapter. The intent of combining these discussions is to provide readers with a full understanding of which environmental issues are significant in the project area and how each alternative affects them.

In addition, the blueprint divides the Alternatives chapters into two separate chapters. One chapter identifies preliminary alternatives, explains the screening process, and discusses how alternatives were developed. A separate chapter provides a comparison of the reasonable alternatives that were carried forward for detailed study, and describes the preferred alternative once it is identified or selected.

Figure 6-1. Reader-Friendly EIS Question and Answer Headings.

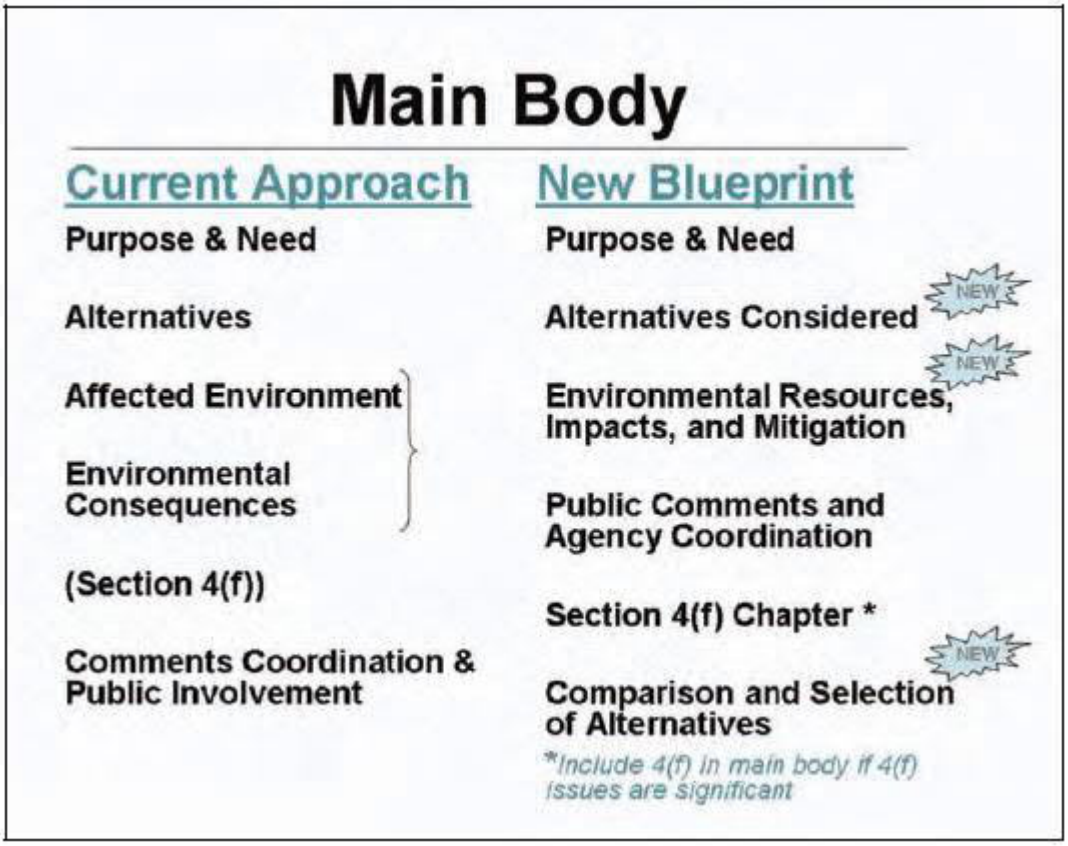
Question-and-Answer EIS/EA Headings	
Traditional EIS	**Reader-Friendly EIS**
Purpose and Need	Why do we need the project?
Project termini and why are they logical	Where is the project located and why were these boundaries selected?
Alternative Description Structures Design Standards Illumination Pedestrian and Bicycle Facilities Construction	What is the alternative? How would it be built? How would it change access? How would it affect travel times and traffic flow? How would pedestrians and bicycles be affected?
Impacts and Mitigation Land Use Noise Social and community impacts	How would it change the character and land use in the project area? How would noise levels change? How would the alternative affect neighborhoods and the people who live there?

Source: *Improving the Quality of Environmental Documents, May 2006.*

Figure 6-2. provides a comparison of the organization of the traditional NEPA document and the suggested blueprint.

Regardless of the format used, a quality document requires careful management of the entire document creation process, starting early in the process.

Figure 6-2. Example of New Blueprint for Reader Friendly EIS.



Source: *Improving the Quality of Environmental Documents, May 2006.*

6.6.2 TDOT's Environmental Document Quality Assurance Process

In order to improve the overall quality of documents provided to FHWA and other resource agencies for their review and concurrence, TDOT has established an Environmental Document Quality Process. This process is designed to ensure the overall quality of the document and to minimize correctable errors,

Quality Assurance (QA) as jointly defined by various national agencies means "All those planned and systematic actions necessary to provide confidence that a product or facility will perform satisfactorily in service." More simply stated, quality assurance can be defined as "making sure the quality of a product is what it should be."

Quality Assurance is an all-encompassing term that includes Quality Control (QC) by the NEPA Planner (internal or consultant) and acceptance by TDOT, and the use of qualified personnel and industry accepted engineering and planning practices by both parties. Additionally, quality assurance requires joint agency/industry support and the implementation of quality assurance specifications.

The term “quality control/quality assurance” or “QC/QA” has often been used in the past synonymously with quality assurance. The term QC/QA has been applied historically by some transportation agencies wherein quality control was viewed as the consultant or contractor’s responsibility and quality assurance was seen as the agency's responsibility. However, consistent with the accepted definition of quality assurance, quality control is not a separate function but rather is one of the core elements of quality assurance. Accordingly, “quality assurance” or simply “QA” is considered to be the proper term.

The TDOT Environmental Document Quality Assurance Process will apply to all documents being sent to external agencies as part of the TESA concurrence process and to the submission of draft environmental documents and final environmental documents to FHWA for review and approval. The process also applies to the preparation of environmental documents for state funded projects (TEER).

The Environmental Document Quality Assurance Process can be initiated in one of two ways depending on whether the document has been developed internally by TDOT staff or by a consultant as illustrated in

Figure 6-3 and discussed below. Yellow boxes denote activities performed by consultants, green boxes denote TDOT tasks, and orange boxes reflect FHWA actions.

Document Prepared Internally by TDOT

In cases where TDOT staff is preparing a document, TDOT will assign the document to a NEPA planner and technical studies are conducted, completed, and approved. TDOT staff then prepares the environmental document based on the technical studies conducted. Upon completion, the document goes to TDOT for internal review prior to submission to FHWA.

TDOT will perform a quality assurance check on the document. This quality assurance review will be conducted by the TDOT Point of Accountability, the appropriate TDOT Environmental Division Regional Manager and the TDOT Environmental Division Quality Coordinator. If the document is determined to not meet quality standards and/or has other content specific or technical issues, the document is sent (with comments) back to the TDOT staff member who prepared the document. Required edits are made and it is resubmitted for TDOT quality assurance review until it is approved. Figure 6-4 shows the coversheet that must be completed and signed by the Project Manager to confirm that internal quality reviews have been conducted. (Note: TEER documents are not reviewed by FHWA.)

Document Prepared by a Consultant

If a consultant is being utilized to develop an environmental document, the first step in the document quality process is for TDOT to issue a work order to authorize that consultant to prepare the environmental document. As part of the work order process, the consultant is required to provide documentation of its internal quality assurance process. This documentation is provided in the form of a quality assurance plan for the project.

Figure 6-3. Environmental Document Quality Process.

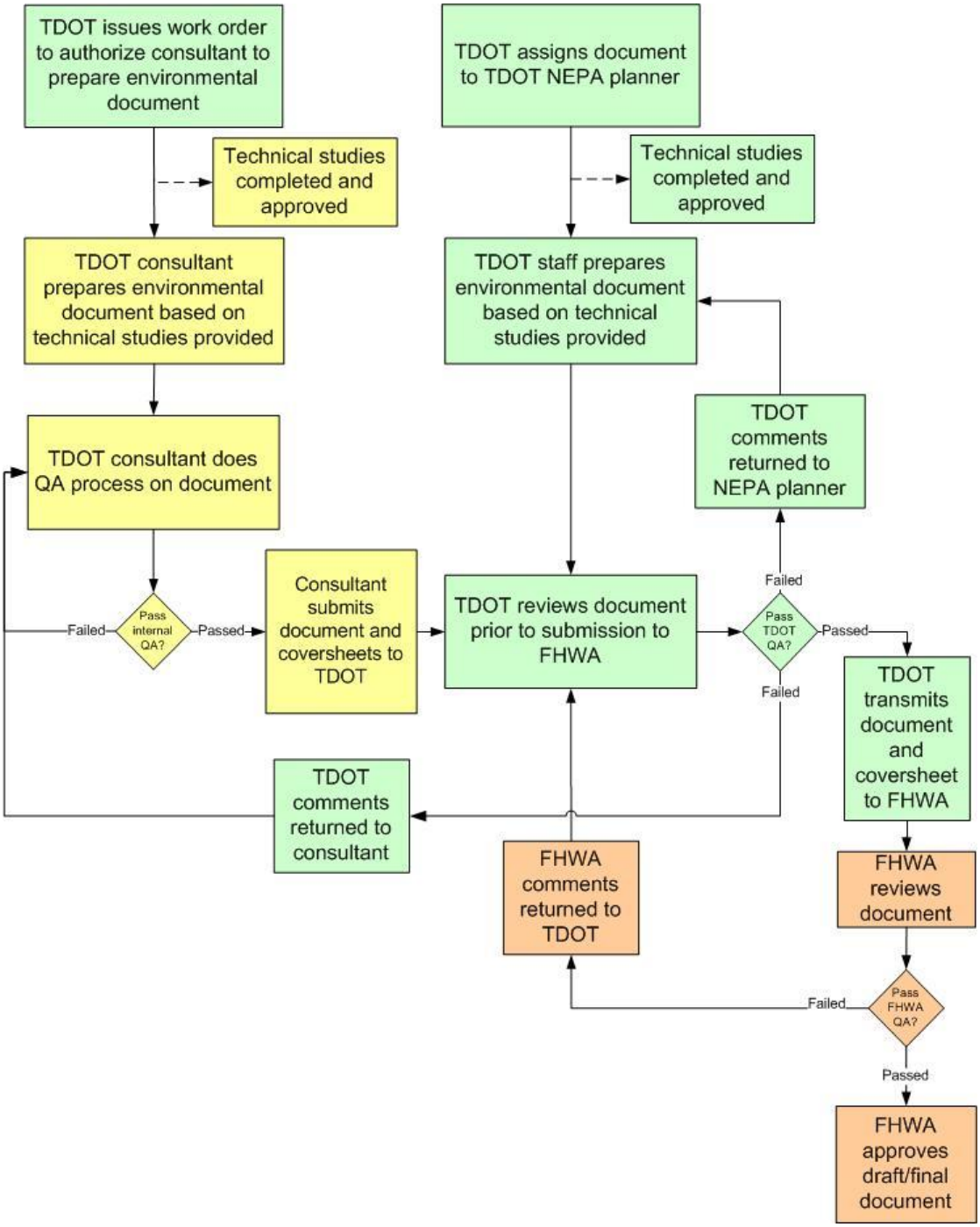


Figure 6-4. TDOT Internal QA Coversheet.

TDOT INTERNAL QA COVERSHEET

To be performed by TDOT before document goes for FHWA review

Document Creator: ☐ TDOT ☐ CONSULTANT

TDOT PM/Consultant: _____

Project Name: _____

Project Termini: _____

PIN: _____

Document Title: _____

Document Type: ☐ EIS Draft ☐ EIS Final ☐ EA ☐ CE ☐ FONSI ☐ TEER

	Print Name	Signature	Date
High Level Review	_____	_____	_____

- ☐ Project information: name, termini, PIN, etc.
- ☐ Project content: project description, purpose and need, project alternatives, etc.
- ☐ Attachments and required documentation
- ☐ Required document signatures

Technical Review	_____	_____	_____

- ☐ Spelling, grammar, and syntax
- ☐ Acronyms and abbreviations
- ☐ Style, format, and graphics

FINAL DOCUMENT APPROVAL Sign: _____ Date: _____

This project manager signature guarantees that this document has been reviewed and is ready to send to FHWA.

The consultant's quality assurance plan should specify the steps and procedures the consultant will utilize to ensure both the technical completeness and integrity and the editorial quality of the document. This plan should also define how the quality of work being performed by any sub-consultants is being assured, both in terms of prime consultant review and the subcontractor's own internal processes. This quality assurance plan must be approved by the TDOT Point of Accountability for a given project, the Lead TDOT NEPA Planner for the project, the TDOT Environmental Division Regional Manager and the TDOT Environmental Division Quality Coordinator prior to the authorization being given to the consultant to start work.

After work has been authorized, required technical studies are conducted, completed, and approved. The TDOT consultant then uses the technical studies to prepare the environmental document according to the findings in the studies.

Once the document has been written, the consultant has the responsibility to execute its own internal quality assurance process on the document following the approved quality assurance plan. If the document does not meet the firm's internal quality standards, the document should stay within the firm until such time as the appropriate personnel can verify that the document meets the required standards of accuracy and completeness. When the document passes the consulting firm's internal quality assurance check, the consultant then submits the document and the quality checklists and the QA coversheet to TDOT indicating that the document has been checked and includes sign-offs from the appropriate personnel in the firm verifying that a quality assurance review has been conducted consistent with the approved quality assurance plan for the project. The QA Coversheet to be submitted by the consultant is shown in Figure 6-5.

TDOT then reviews the document prior to submission to FHWA and/or other resource agencies and conducts its own quality assurance review on it. This quality assurance review will be conducted by the TDOT Point of Accountability, the Lead NEPA Planner, the appropriate TDOT Environmental Division Regional Manager and the TDOT Environmental Division Quality Coordinator.

Each of these individuals must sign-off on the accuracy and completeness of a document prior to the document being submitted to FHWA and/or other resource agencies. If the document is determined to not meet quality standards and/or has other content specific or technical issues, TDOT returns the document with comments back to the consultant and the process begins over again within the consulting firm. Figure 6-6 contains the master coversheet that TDOT must execute to certify that the consultant's work has been reviewed.

FHWA Review and Approval of Draft and Final Environmental Document

Regardless of whether a TDOT NEPA planner or a consultant creates the environmental document, once it passes the TDOT quality assurance check, the document is then transmitted to FHWA. FHWA independently reviews the document for accuracy and completeness. If the document fails FHWA's review, it is returned with comments to TDOT, who passes along the comments to the originating consultant or TDOT NEPA planner for adjustments to the document. Once edits

have been made to the document TDOT will once again execute its quality assurance process to ensure that FHWA's comments have been addressed and no new correctable errors are found. Once the document has passed TDOT's quality assurance review, the document is resubmitted to FHWA for another review. This process will continue until FHWA approval is obtained.

Figure 6-5. QA Sub-Coversheet, Submitted by Consultant.

QA SUB-COVERSHEET

High-Level Review Checklist

To be performed by Consultant before document goes for TDOT review

Consulting Firm: _____

Project Name: _____

Project Termini: _____

PIN: _____

Document Title: _____

Document Number: _____

Document Type: ☐ EIS Draft ☐ EIS Final ☐ EA ☐ CE ☐ FONSI ☐ TEER

☐ **Project Information**

Make sure job title, project termini, document number, PIN, etc. are correct

☐ **Project Content**

Make sure purpose and need, project alternatives, etc. are complete and accurate

☐ **Attachments and Documentation**

Making sure all required documentation and attachments are included and accurate

☐ **Spelling**

☐ **Grammar**

☐ **Acronyms** A review to check the use of acronyms

☐ **Final Review** _____ _____

Signature Date

Figure 6-6. QA Master Coversheet.

QA MASTER COVERSHEET

To be performed by TDOT before document goes for FHWA review

Consulting Firm: _____

Project Name: _____

Project Termini: _____

PIN: _____

Document Title: _____

Document Number: _____

Document Type:

- ☐ EIS Draft
- ☐ EIS Final
- ☐ EA
- ☐ CE
- ☐ FONSI
- ☐ TEER

FINAL DOCUMENT APPROVAL Sign: _____ Date: _____

Required project manager signature approving document to be sent for TDOT review

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7.0 PUBLIC INVOLVEMENT PROCESS

Since the early 1990s, one of the most dramatic changes in the planning of transportation projects has been the increased focus on effective public involvement, i.e., engaging the public in the transportation decision-making process in a meaningful way. Many state DOTs are discovering that a successful transportation development process includes early and continuous public involvement.

A May-June 2002 article in the Transportation Research Board's *TR News* opined that:

- "Public involvement is difficult to do well—but good public involvement usually always pays off, and bad public involvement invariably backfires.
- Public involvement is not more difficult than it use to be—but the goals have been raised."

This chapter provides a brief overview of public involvement for TDOT's transportation projects, which is conducted by TDOT both to meet the intent of federal requirements and to facilitate the development of projects that are accepted by and benefit the project area community. It discusses the regulatory provisions for public involvement and the methodology adopted by FHWA and TDOT to fulfill the requirements set forth in a number of regulations.

7.1 Background

FHWA, the federal agency that funds most TDOT projects, considers public involvement to be a chief element of their project development process and actively supports proactive public involvement at all stages of project planning and development. Public involvement is also a key component of the CSS process.

Public involvement is more than just a meeting or hearing. For it to be effective, a meaningful open exchange of information and ideas between the public and transportation decision makers must occur.

FHWA suggests six key elements in the planning for and success of public involvement for transportation projects:

1) Clearly-defined purpose and objectives for initiating a public dialog on transportation projects;
2) Identification of the affected public and other stakeholder groups;
3) Identification of techniques for engaging the public in the process;
4) Notification procedures that effectively target affected groups;

5) Education and assistance techniques that result in an accurate and full public understanding of the transportation problem, potential solutions and obstacles and opportunities within various solutions to the problem; and
6) Follow through by public agencies demonstrating that decision makers seriously considered public input.

7.2 Federal Public Involvement Requirements

7.2.1 NEPA Requirements

The requirements of NEPA in regard to public involvement are outlined in 40 CFR 1506.6. Those regulations require agencies to:

- Make diligent efforts to involve the public in preparing and implementing their NEPA procedures;
- Provide public notice of NEPA-related hearings, public meetings and the availability of NEPA documents;
- Hold or sponsor public hearings or meetings in accordance with the agency's statutory requirements (see Section 7.2.2 below); and
- Solicit public comment.

7.2.2 FHWA Requirements

As required, FHWA has its own regulations for implementing NEPA. Those for public involvement are outlined in 23 U.S.C. 128 and 23 CFR 771. Section 128 of the U.S. Code requires that, for federal-aid highway projects (and Interstate highways), state transportation departments must certify to the USDOT Secretary that it has held public hearings, or has afforded the opportunity for such hearings, and has considered the economic and social effects of such a project, its impact on the environment, and its consistency with area plans.

Part 771.105 (23 CFR 771) states that it is the policy of the FHWA that "public involvement and a systematic interdisciplinary approach be essential parts of the development process for proposed actions." Part 771.111 outlines the FHWA requirements for public involvement. Each state DOT that participates in the Federal-Aid Highway Program must have public involvement procedures approved by FHWA to carry out a public involvement/public hearing program, and the program must:

- Coordinate public involvement activities and the public hearing with the entire NEPA process;
- Provide early and continuing opportunities during project development for the public to be involved in the identification of impacts;

- Include the holding of one or more public hearings or the opportunity for such hearing at a convenient time and place when a federal-aid project will require significant amounts of right-of-way or substantially changes to the layout or functions of connecting roads or the facility to be improved, has a substantial adverse impact on abutting property, otherwise has a significant social, economic, environmental or other effect, or for which FHWA determines that holding a public hearing is in the public interest;
- Provide reasonable notice to the public of a hearing or opportunity for a hearing and the availability of explanatory information;
- Ensure that the hearing includes an explanation of the project's purpose and need, its consistency with local plans, and its impacts. An explanation of the relocation assistance program and right-of-way acquisition process is also required; and
- Identify the DOT's procedures for receiving both oral and written statements from the public.

7.2.3 Other Related Federal Regulations

A number of other regulations that include public involvement provisions are pertinent to federally-funded TDOT projects. These regulations include, but are not limited, to:

- The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and its successor, the 1998 Transportation Equity Act for the 21st Century (TEA-21). Both Acts emphasize the importance of public participation in the transportation planning process;
- Executive Order 12898 on Environmental Justice requires that procedures be established or expanded to provide meaningful opportunities for public involvement by members of minority and low-income populations during the planning and development of programs, policies and activities;
- The Americans with Disabilities Act (ADA) of 1990 requires that persons with disabilities be accommodated for all public involvement activities, including those relating to transportation; and
- SAFETEA-LU (2005) specifies that the public must be provided opportunities to provide early input into the development of the purpose and need of a project, the identification of alternatives prior to a final decision on purpose and need, and the range of alternatives to be carried forward in the environmental evaluation, respectively.

7.3 TDOT's Public Involvement Plan

7.3.1 Overview of the Plan

TDOT's Community Relations Division has primary responsibility for coordinating the Department's outreach program, and ensuring that the public outreach process used in a specific project meets the Department's standards. The Division consists of community relations staff in the headquarters office as well as Community Relations Officers in each of TDOT's four regional offices. The Regional Community Relations Officer works closely with the headquarters staff to coordinate the public involvement process used for each project in their respective region.

TDOT's 2007 Public Involvement Plan update outlines public involvement considerations and procedures to be used by TDOT staff on all federal aid projects. A similar process will be followed for all state-funded projects. The Plan, which meets the federal requirements, identifies TDOT's public involvement philosophy and objectives, describes the five levels of public involvement activities, and identifies a series of performance measures that are used to evaluate the public involvement activities of projects under each level. The appendices of the Plan provide useful information on public notice requirements and procedures, meeting and hearing definitions, checklists for meetings and hearings, media strategies and procedures, as well as sample documents, a list of environmental justice resources, and a example public comment disposition form.

7.3.2 Levels of Public Involvement

TDOT's public involvement process has five levels of public involvement, which are used to establish minimum levels of public involvement for projects. The discussion in the Plan describes the type of projects that fit into each classification and the public involvement activities that are required (at a minimum) for that level of project. The Plan also offers suggestions for enhanced public involvement activities and describes the timing for the public involvement activities outlined in the Plan.

The level of public involvement varies by project type and public interest or controversy. The five levels of public involvement activity as defined in the Plan are:

- **Level One** - These projects pose minimal or no impact to the surrounding community, require minimal or no right-of-way acquisition, will be of short duration and pose no disturbance to local communities during construction (e.g., median removal, signalization and intersection realignment). Also included in this category are those unfunded projects for which a planning study, such as a TPR, is being prepared. (An unfunded planning study is considered to be a preliminary report to determine whether a project will proceed. If/when it does move forward, it will be reassigned to Level Two, Three, Four or Five, as appropriate.)
- **Level Two** – These projects include those defined as Categorical Exclusions (CE) by the FHWA, or classified as corridor feasibility or other general planning projects.

- **Level Three** – Projects in this category constitute those that require completion of an Environmental Assessment (EA), or other environmental documentation (e.g., Part 150 documents related to aviation facilities). Generally speaking, these projects would have some impact, but not significant, and would be of moderate size, requiring less time for planning, design and construction than a project classified as Level 4 or 5.
- **Level Four** – These projects are those that would require an Environmental Impact Statement (EIS) to be completed, or are large-scale efforts in terms of both design and construction. Generally speaking, these projects would substantially impact local communities, require substantial acquisition of right-of-way, and require more time for planning, design and construction.
- **Level Five** – This category involves statewide or systems-level efforts undertaken by the Department, including the Statewide Long Range Transportation Plan, the Statewide Transportation Improvement Plan (STIP), the Statewide Rail Plan, Statewide Aviation Plan and Statewide Transit Plan.

TDOT staff will determine the level of public involvement needed for a project on a case-by-case basis. In keeping with the Department's commitment to CSS, an appropriate level of public involvement will be implemented for all projects. The CSS approach implies the development of an appropriately scaled public involvement plan for all projects and TDOT's 2007 Public Involvement Plan suggests that a public involvement plan/strategy be developed by an interdisciplinary team for projects that have the potential for adverse socioeconomic or environmental impacts. An interdisciplinary team would include representatives from TDOT divisions, as appropriate (e.g., Planning, Environmental, Design, Right-of-Way, Construction, Maintenance, Community Relations, Title VI, and Project Management), as well as FHWA. For large and/or complex/controversial projects, the public involvement plan should also be developed with input from the public and other affected stakeholders.

Environmental Division staff and consultants should obtain a copy of the plan, either on-line at http://www.tdot.state.tn.us/documents/pip0107.pdf, or from the Community Relations Division, and familiarize themselves with the process.

7.3.3 When and to What Level Should the Public be Involved

As discussed in Chapter 4, early coordination with the public, as well as with federal, state, and local agencies, is an essential ingredient in the project development process. Early coordination helps in determining the appropriate level of documentation, developing the project's purpose and need discussion, determining alternatives, identifying issues of concern, the scope of the environmental resources that would be affected by the project, permit requirements, possible mitigation measures, and opportunities for environmental enhancements. SAFETEA-LU (Section 6002.139) requires that as early as possible in the environmental review process, the public be provided with opportunities for involvement in defining the

purpose and need and the range of alternatives to be considered, before final decisions on purpose and need and alternatives are made. The level of public involvement is project specific and dependent on a number of variables, including class of action; complexity of the project; and public interest or concern about the project.

7.3.4 Who is the "Public"?

FHWA defines the public broadly as "all individuals or groups who are potentially affected by transportation decisions." This includes anyone who resides in, has interest in, or does business in a given area which may be affected by transportation decisions. ISTEA specifically identified various segments of the public and the transportation industry that must be given the opportunity to participate in planning for transportation projects. Public and private transportation providers (e.g., school bus, special services vans, or bus), as well as persons traditionally underserved by existing transportation systems, should be encouraged to participate in the public involvement process.

The Community Relations Division staff and, as applicable, an interdisciplinary team, will review the project scope and preliminarily assess project impacts on the community and property owners and make recommendations regarding who comprises the "public" on a specific project (e.g., property owners, special interest groups, businesses, schools or road users). Mapping data using GIS can assist in determining if possible language barriers or environmental justice issues may need to be addressed. The Project Manager or his/her designee should consult with the local government to seek advice on community issues and concerns, as well as suggestions of parties known to have an interest in the project, that may otherwise have been overlooked by TDOT. The Community Relations Division, Project Manager or lead Environmental planner (or consultant) should maintain a list of the names and mailing addresses, as well as email addresses, of the interested public, which can be updated as needed throughout the project. The responsibility for maintaining this list should be clearly identified at the beginning of the project.

7.3.5 Pre-NEPA Public Involvement

Public involvement occurs prior to the commencement of NEPA, such as during the development of long range transportation plans or during the TPR phase. TDOT's Public Involvement Plan outlines the process for public involvement during these early stages. The Environmental Division is invited and division staff often attend TPR field reviews, particularly for larger projects.

7.3.6 NEPA Public Involvement

Public involvement should begin early and continue throughout NEPA and the project development process.

7.3.6.1 Initial Coordination

When a commitment is made by TDOT to proceed with a project into the NEPA process, often one of the first actions taken is called "initial (or early) coordination."

This task is discussed in Chapter 4, *Early Coordination*. The Environmental Division maintains a list of local, state and federal offices and agencies to which the initial coordination package must be sent. Other entities, such as special interest groups are also included on the Division's initial coordination list. Local contacts may identify other parties that should be sent an initial coordination package. The cover letter of the initial coordination package itself may also request that the recipient provide names of other parties that may have an interest in the project. The package will include a description of the project and potential issues, as well as a project map. The Initial Coordination process is not discussed specifically in TDOT's Public Involvement Plan.

7.3.6.2 Public Involvement or Coordination Plan

Under TDOT's 2007 Public Involvement Plan, the development of a project-specific public involvement plan is required for projects falling into Level Three (EAs) and Level Four (EISs). As mentioned earlier, the CSS approach implies the development of an appropriately scaled public involvement plan for all projects. The minimum requirements for public involvement plans for Level Three and Level Four projects are specified in the 2007 Public Involvement Plan.

SAFETEA-LU requires the establishment of a plan for coordinating public and agency participation and comment during the environmental review process. The term, "coordination plan," replaces the term "public involvement plan" for EISs for which a Notice of Intent was issued after August 10, 2005. The coordination plan is developed early in the environmental review process, and identifies opportunities for input from the public and participating agencies. See Section 4.1.4, *Coordination Plan,* for more details on the purpose and components of the required coordination plan.

7.3.7 NEPA Meetings and Hearings

During the NEPA phase, meetings or hearings or both are conducted. The timing, number, and need for NEPA meetings and hearings will be decided by the Project Manager, Community Relations Division staff, and/or multidisciplinary team. Environmental Division staff will participate in the multi-disciplinary team during development of a public involvement strategy or plan for a project that will be developed pursuant to NEPA.

How do public meetings and hearings differ? The major difference is that hearings must be held to fulfill regulatory requirements, while public meetings are optional events that can be tailored to specific agency and community needs.

<u>Public Meetings</u> are held to present information to the public and obtain public input. Public meetings can be held at any time during the process, they are used to disseminate information, provide a setting for public discussion, and get feedback from the community. They can be tailored to specific community needs and can be either formal or informal (e.g., a meeting could be held with a small group of neighbors or a special interest group, or a project could warrant a community-wide meeting).

Public Hearings are held to meet federal requirements, which include the holding of one or more public hearings or the opportunity for such hearing at a convenient time and place when:

- A project will require significant amounts of right-of-way or substantially changes the layout or functions of connecting roads or the facility to be improved;
- A project has a substantial adverse impact on abutting property, otherwise has a significant social, economic, environmental or other effect; or
- If FHWA determines that holding a public hearing is in the public interest.

23 CFR 771.111 requires that public hearings be held for the DEIS document once it has been circulated for public comment. An opportunity to request a public hearing must be provided for an EA once the document has been circulated. The purpose of the hearing is to gather community comments and positions from all interested parties for inclusion in the public record. Public input, along with the findings of the NEPA document, is then used by TDOT to select a project alternative, whether it be a build or no-build alternative. Public notices must be placed in a general circulation newspaper citing the time, date, and location of the hearing. TDOT must submit a transcript of each public hearing and a certification that a required hearing was held or evidence that a hearing opportunity was offered. The transcript will include transcription of all oral comments received at the hearing and all written comments received either at the hearing or within the official comment period.

Meetings and hearings have these basic features:

- Anyone may attend, including individuals or representatives of interest groups;
- Meetings are held as needed or desired, while hearings are held after the approval of the NEPA document and prior to making a decision;
- Hearings require an official hearing officer (court reporter) and official public record, while meetings do not;
- Hearings have a specific time period in which comments received will be eligible for inclusion in the official public record, meetings may or may not generate an official record. As a rule, community-wide meetings are likely to generate an official public record. Small meetings with public officials or special interest groups are often summarized in the environmental document; and
- Community comments are recorded in written form (either by the commenter or the court reporter if one is available) as input to an agency.

7.3.8 Notification of Meetings and Hearings

Notices for NEPA related public meetings and hearings will be in the form of either a legal notice in the classified section of project-area newspapers or as a newspaper display advertisement. The Environmental Division planner, Project Manager, or his/her designee will prepare the materials needed for the notice:

- General project location map; and
- Text for the notice that explains the purpose of the meeting/hearing and its location(s) and time.

The draft notice and map must be submitted to the Regional Community Relations Officer, with a copy to the Regional Survey and Design and Right-of-Way offices. A cover memo should request the review and approval of the notice and that it be forwarded to the Legal Office, which will arrange for placing the advertisement in local papers.

Other optional means of notifying the public of an impending meeting include:

- Flyers posted in local businesses—the flyer would be developed by the planner and provided to the Project Manager or other appropriate staff in the regional office (e.g., public involvement coordinator). A sample flyer is in Appendix E as Figure E-18;
- "Smart signs" posted in highway right-of-way along the project corridor—the message or sign would be developed by the planner and provided to the Project Manager or other appropriate staff in the regional office; and
- News release for community newspapers/local radio stations—the planner, project manager or designee would work with the Public Information Officer in the Community Relations Division.

For an EA for which TDOT is not planning to hold a public hearing, a notice of opportunity must be published in local newspapers and posted on TDOT's website in order to offer the public the opportunity to request a hearing. If no requests are received, TDOT will place a notice in a local newspaper advising the public that although no public hearing will be held, the NEPA document is available locally for review and comment.

It is important to identify persons or groups in the project area that likely have an interest in the project and that may miss a meeting notice due to language barriers or other reasons. Should such populations be identified, notification materials should be developed in a second language, and/or other types of outreach to such populations should be undertaken (e.g., posting notices at community centers or local businesses, and arranging for announcements to be made at churches, etc.).

7.3.9 Public Hearing Handout

The Environmental Division planner will prepare a draft meeting handout for review by the Project Manager, the Community Relations Officer, and/or the multidisciplinary team. The handout will contain a project summary, list of potential impacts, project map and description of TDOT's relocation procedures. Once approved, the planner will finalize the summary and make the appropriate number of copies needed for the meeting. A sample handout is in Appendix E as Figure E-19.

7.4 Other Public Involvement Tools

Besides meetings and hearings, numerous other methods are available to ensure that the public is informed and involved in the project development process. These are referred to as "Enhanced Public Involvement Activities" in the Plan. The Project Manager, Community Relations staff, and other pertinent staff (e.g., Environmental Division) will work together to identify projects that warrant enhanced public participation and determine which techniques should be used for involvement beyond initial coordination, meetings, and hearings.

Enhanced techniques for public involvement include establishment of a project web page, email groups, flyers, and newsletters. Throughout the country, planners are continuously developing new and supplemental ways to involve the public, particularly on high-profile or controversial projects. The charrette process may be warranted for certain projects. Some states have staffed a booth in a mall or at public events at a location in the project area to answer project questions or solicit project concerns. Additional enhanced techniques are described in TDOT's Public Involvement Plan.

7.5 Public Involvement Wrap-up

An effective public involvement program will take time, money and patience. Reviewing the past successes and failures, as well as the programs of other DOTs, may improve the success of TDOT's project-related public involvement program. In developing and implementing a successful public involvement program, the following should be considered:

- No request for a meeting is denied;
- Graphics are sensitive to neighborhood and community issues;
- Newsletter and resource materials are multi-lingual, as needed;
- Newsletter items are related to neighborhood concerns and cultural resources;
- Paid advertising is used to publicize events and meetings;
- Small-group neighborhood meetings or meetings with special interest groups increase one-on-one interaction and buy-in;
- Press briefings result in media coverage and accurate reporting; and

- Websites offer an opportunity to disseminate information and to receive public input.

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8.0 ENVIRONMENTAL PERMITS

The purpose of environmental permits is to meet federal and/or state requirements intended to protect the environment and to meet TDOT's goal of providing transportation infrastructure with full consideration given to environmental issues. The TDOT Environmental Division participates in permitting at two phases: 1) during the NEPA process and; 2) near the end of the design phase, after the final NEPA document is approved and prior to construction.

During the NEPA phase, a permit must be obtained to conduct archaeological studies on federally- and state-owned or managed lands. NEPA documents prepared by the Natural Resources Office, Environmental Permits Section staff also must include a section that describes the permits needed. To obtain the information needed for the NEPA document, the NEPA Documentation Office staff will need to coordinate with the Permits Section staff.

After the final NEPA document is approved, many TDOT projects require that permits be secured from federal and state regulatory agencies. This effort is led by the Permits Section, with support from the NEPA Documentation Office, Natural Resources Office and the Social and Cultural Resources Office.

This chapter describes the two levels of permitting described above (during NEPA and post-NEPA) and explains how permitting fits into the project development process, the parties responsible for securing permits, and the types of permits that may be required. For additional information, consult the Permits Section staff or their manual. The updateable manual, entitled *Permits Section Training Manual* outlines the types of permits and the permitting process. This manual can be reviewed in the office of the Environmental Permits Section Manager.

8.1 Responsibilities

8.1.1 Parties Responsible for NEPA Phase Permits

During the NEPA phase, permits are required for archaeological field work. The Archaeology Section staff or its archaeological subcontractors desiring to conduct archaeological work on federally-owned or managed land must also get a permit pursuant to the Archaeological Resources Protection Act of 1979 (ARPA), as amended. The federal land manager will issue the ARPA permit for excavation or removal of any archeological resources on federal lands, including Indian lands, and to carry out activities associated with such excavation or removal.

The Archaeology Section staff or its archaeological consultants desiring to conduct archaeological work on state-owned or state-managed lands must obtain a State Archaeological Permit from the TDEC Division of Archaeology. The permit gives the applicant the right to proceed with the activities outlined in the approved permit. The State Archaeologist and his/her staff have the right to inspect the project at any time, and to revoke, suspend, or deny the issuance of a permit to anyone who violates the state statutes or departmental regulations.

8.1.2 Parties Responsible for Post-NEPA Phase Permits

At TDOT, the Environmental Division's Natural Resources, Environmental Permits Section is responsible for securing most of the required pre-construction phase permits. The Permits Section staff shall:

1. Assess permit needs for each project and identify other approvals needed;
2. Review each project's plans and ecology reports and advise the Design Division on any plan revisions, permit sketches, and any additional information needed to minimize environmental harm to a level that will allow TDOT to obtain regulatory approval. This information is requested in the permit assessment sent to the TDOT Roadway Design Division. The TDOT roadway guidelines assist the roadway designers in providing this information initially with the project plans for permit acquisition;
3. Coordinate with permitting agencies, such as federal agencies (i.e., US Army Corps of Engineers (USACE), US Coast Guard (USCG), Tennessee Valley Authority (TVA)); and state agencies (i.e., TDEC and the Tennessee Wildlife Resources Agency (TWRA));
4. Apply for and obtain project permits from corresponding agencies[1]; and
5. Distribute final permit application and permits to TDOT staff involved in project design, project construction, project tracking and scheduling, and others, as needed.

8.2 Permitting in the Project Development Process

8.2.1 NEPA Phase Permits in Project Development Process

Prior to beginning archaeological field work on federally- or state-owned or managed lands, the Archaeology Section staff or its archaeological consultant must apply for and secure a State Archaeological Permit or federal ARPA permit. At the expiration of the state permit, the applicant must surrender to the Division of Archaeology all artifactual materials and all project records. Federal regulations govern the disposition of all archaeological resources removed or excavated.

8.2.2 Post NEPA Phase Permits in Project Development Process

Once the Ecology Report has been completed and incorporated into the NEPA document, the Design Division coordinates with the Environmental Division's Natural Resources Office, Ecology Section and the Environmental Design Group to prepare the mitigation plan. This coordination includes Erosion Prevention and Sediment

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[1] The exceptions to this process are US Coast Guard Bridge Permits, which the Hydraulic Design Section in the TDOT Structures Division obtains, and non-contract maintenance project permits, which are obtained by the TDOT Region Offices. The non-contract maintenance projects are not subject to NEPA.

Control (EPSC) measures and Storm Water Pollution Prevention Plans (SWPPP) for the project, as well as any specific project-related mitigation. The Ecology Section ensures that stream and wetland information transfers from the Ecological Boundaries and Mitigation Memorandum to the design plans through the Interdisciplinary Project Planning Team (IPPT) coordination and the Program, Project, and Resource Management (PPRM) tracking system.

The Permits Section staff begins permit applications after the mitigation design, EPSC plan, and SWPPP have been prepared. The process commonly begins after the final NEPA document is approved and within six or seven months of the scheduled letting with plans to the level required for permit review by regulatory agencies. First, the Permits Section assesses the permit needs, which includes obtaining completed technical studies, agency letters, and copies of the project plans. If the permit sketches are insufficient for the permit application to be made, or if the sketches would present problems in securing a permit, then they are sent back to the Design Office for revision. Once the permit sketches are sufficient, the staff prepares an application for the needed permits. Permits should be applied for six to seven months before contract letting. The goal of the Permits Section is to obtain the permits required for TDOT projects before the advertisement of construction contracts. This ensures that the permit requirements are included in the contract book and construction plans and specifications, which are maintained by the contractor at the project site once construction has commenced.

The Permits office also submits and application to TDEC for a Storm Water Notice of Coverage (NOC). The NOC is not a permit, but an approved coverage under the NPDES Construction General Permit (CGP). The NOC application review and approval process generally takes about 30 days and does not follow the same schedule as the water quality permit application.

Generally, the permitting tasks fit into the time frame of a project as follows:

- <u>12 to 24 months before contract letting</u>
  This time period generally applies only to larger projects with an assigned TDOT Project Manager. At this phase, the Permits Section staff prepares a Permit Assessment, and (if necessary), a memorandum to the roadway designer and/or the applicable Environmental Division technical studies staff to obtain any additional information or corrections to enable the preparation of a complete and accurate permit application at the appropriate time.
- <u>8 to 12 months before contract letting</u>
  During this time period, the Permits Section staff prepares a permits assessment for non-project management projects, and (if necessary), prepares a memo to the roadway designer and/or the applicable Environmental Division technical studies staff to obtain any additional information or corrections needed.
- <u>Up to 7 months before contract letting</u>
  If a Permit Assessment is still necessary, the same process as above is used. If all appropriate information is received, the Permits Section staff submits the permit application to regulatory agencies. This ensures that all

required permits are acquired by TDOT in order to start construction immediately after the construction letting.

Documentation needed for the permit application from the NEPA Documentation, Social and Cultural Resources, and Natural Resources Offices, as well as the Design Division includes, but is not limited to:

1. Environmental Boundaries and Mitigation Memorandum with information and impacts to waters of the US and State in the project area and federally- or state-listed threatened and endangered species within a specific distance from the project area;
2. Mitigation design from the Environmental Design Group, if applicable;
3. US Fish and Wildlife Service (FWS) Letter and Biological Assessment (BA), if required;
4. State Historic Preservation Office (SHPO) letter; and
5. If the project is federally funded, the CE letter, or EA/Finding of No Significant Impact or Final Environmental Impact Statement (See Section 404 or 26a permits described below).

A copy of the ARAP permit application, once completed by Permits Section, is forwarded to the Design Division for incorporation into the design plans.

The status of the permit process is regularly updated in the Permits Section database, which is available to all TDOT Project Managers and design and construction staff. Once the needed permits have been obtained, the Permits Section notifies, by letter or other method of distribution, the following TDOT staff:

- Director of Construction Division;
- Regional Construction Supervisor and Environmental Coordinator;
- Scheduling Supervisor;
- SWPPP developer (in-house or consultant); and
- Regional Storm Water Coordinator (if NPDES coverage is required).

8.3 Typical Permits

This section describes typical permits that may be required for TDOT projects.

8.3.1 Section 404 Permit

This permit is obtained from the USACE for projects that have the potential to discharge dredged or fill materials into waters of the United States, including wetlands. The legal reference is Section 404 of the Water Pollution Control Act of 1972, as amended by the Clean Water Act (1977 and 1987). The purpose of the regulation is to restore and maintain the chemical, physical and biological integrity of

the nation's waters through prevention, reduction, and elimination of pollution. The permit application allows the USACE to review the project plans and potential impacts to waters of the United States and to ensure that the project is designed to prevent or reduce harm to project-area waterways.

The two types of Section 404 permits are:

1. Nationwide Permit (NWP) — for temporary/minor/moderate impacts. Nationwide permits are a type of general permit issued on a pre-discharge basis for minor activities with minimal impacts. There are several types of nationwide permits and the particular activity must meet all terms and conditions of the specific nationwide permit. (TDEC must issue a blanket Section 401 Water Quality Certification to validate this permit.)
2. Individual Permit — for more severe impacts, typically one-half acre or more of impacts to waters of the U.S. If jurisdictional waters do not fall within the NWP program, an individual permit is required. (TDEC must issue a Section 401 Permit/Water Quality Certification before this permit is issued.) This permit requires a 30-day public notice period.

If the project is in the USACE Nashville District, then the appropriate permit application form is the Department of the Army (DA)/Tennessee Valley Authority (TVA) form. If the project is in the Memphis District, the DA form is required.

8.3.2 Navigable Waterways Permit

The Section 9 permit is required by the U.S. Coast Guard for construction, modification, replacement, or removal of any bridge or causeway over a navigable waterway. The legal reference is Section 9 of the Rivers and Harbors Act of 1899, as amended. Its purpose is to ensure that a project will not interfere with navigation on the U.S.'s navigable waterways. As previously stated, this permit is generally secured by the Hydraulic Design Section in the TDOT Structures Division, instead of the Permits Section.

The Section 10 permit is required by the USACE under the Rivers and Harbors Act of 1899, as amended. Its purpose is to ensure that projects do not degrade the water quality of the navigable waterways of the U.S., as defined by the USACE.

8.3.3 TVA Section 26a Permit

Section 26a of the TVA Act of 1933 as amended (49 Stat. 1079, 16 U. S. C. sec. 831y1) prohibits the construction, operation or maintenance of any structure affecting navigation, flood control on public lands or reservations across, along or in the Tennessee River or any of its tributaries until plans for such activities have been reviewed and approved by TVA. This permit is obtained from TVA for construction of projects that are in or along the Tennessee River and its tributaries, i.e., the Tennessee River watershed. (See http://www.tva.gov/river/26apermits/howto.htm)

The 26a Permit shares an application form with DA Permits applied for under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act, as described above.

8.3.4 Section 401 Water Quality Certification

Pursuant to Section 401 of the Clean Water Act, a certification must be obtained from the state before any activity that may result in a pollution discharge into waters of the U.S. can be permitted by a federal agency. This certification is issued by TDEC, Division of Water Pollution Control, and states that the discharge will comply with the applicable effluent limitations and water quality standards. For Nationwide Section 404 Permits, TDEC provides a blanket approval. For Individual Section 404 Permits, an application must be completed by the permit applicant and submitted to TDEC for review. If the project is acceptable, TDEC will issue the Section 401 Water Quality Certification that states that the discharge complies with the aquatic protection requirements of the State.

8.3.5 Aquatic Resource Alteration Permit (ARAP)

Projects that alter state waters or wetlands and that do not require an individual Section 404 permit must obtain an Aquatic Resource Alteration Permit (ARAP) from TDEC. The permit application identifies a project's potential impacts to water quality and ensures compliance with the aquatic protection requirements of the state. Similar to the Section 404 Permit, the ARAP has two types:

1. General Permit (GARAP) — for activities that can be accomplished under the conditions of the general permit. Usually requires TDEC notification or permit application.
2. Individual Permit (IARAP) — for any activities that cannot be accomplished under the general permit. Requires a permit application to TDEC and a 30-day public notice period.

8.3.6 National Pollutant Discharge Elimination System (NPDES) Permit

The responsibility for issuing permits under the National Pollutant Discharge Elimination System (NPDES) has been delegated by the U.S. Environmental Protection Agency (EPA) to TDEC. The legal reference of the NPDES is Section 402 of the Federal Water Pollution Control Act of 1972, as amended by the Clean Water Act (1977 and 1987). The NPDES storm water permitting program is intended to improve the quality of the nation's rivers, lakes and streams by reducing pollution from non-point sources.

All TDOT construction activities disturbing one acre or more of land are required to obtain an NPDES permit. These permits establish pollution control and monitoring requirements. General permits for construction activities require development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) to help control erosion, sedimentation, and other project-generated waste.

This permitting program is overseen by TDEC's Permit Section of the Division of Water Pollution Control. This division is responsible for the permitting process and also for administration of the Tennessee Water Quality Control Act of 1977.

8.3.7 Underground Injection Control Permit

This permit is required for any project that discharges industrial/commercial wastes into a subsurface system (other than city sewers) or stormwater into a sinkhole or cave. The permit is issued by TDEC, Division of Water Supply, Ground Water Management Section.

8.3.8 Reelfoot Lake Watershed Permit

The Tennessee Wildlife Resources Agency (TWRA) Reelfoot Lake Watershed Management permit program (T.C.A. section 70-5-1) requires that TDOT secure a permit from TWRA for any TDOT projects proposed within the watershed of Reelfoot Lake. The permit is required so that the TWRA can regulate any alterations to steams or wetlands in the Reelfoot Lake watershed and to regulate any projects that have the potential to divert surface or subsurface water from the lake or to drain or remove water from the lake. Information on this permit program can be found at http://state.tn.us/twra/.

For more information on permits required by TDEC, please check the TDEC Environmental Permitting Handbook at http://www.state.tn.us/environment/permits/#wpc.

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9.0 ENVIRONMENTAL COMMITMENTS AND COORDINATION WITH DESIGN AND CONSTRUCTION ACTIVITIES

Project commitments are identified and made throughout the project development process. Commitments can be related to design (e.g. storm water detention basins or sidewalks) or environmental (e.g., stream mitigation or realignment, wetland mitigation, or cemetery protection measures) concerns, or be in response to issues/opportunities raised during the public involvement process. Each commitment should be reviewed by the Interdisciplinary Project Planning Team (IPPT) to evaluate its impact on other planning, design, and/or construction functions and tracked through TDOT's Commitments Tracking Database.

During the NEPA process, environmental commitments are often made to avoid, minimize, or mitigate project impacts. Commitments result from public comment or through the requirements of, or agreements with, resource agencies and it is important that these commitments be reviewed by the IPPT, tracked, and carried forward through the project design, construction, and maintenance and operation phases. This chapter identifies the process by which environmental commitments are carried forward from the NEPA process into project design, construction, maintenance and operation. The three basic types of commitments (avoidance, minimization, and mitigation) are identified, as are the responsibilities for relating the commitments to other TDOT divisions. The chapter also explains some of the types of commitments made for impacts to cultural and ecological resources, noise impacts, and hazardous materials.

All environmental commitments must be listed on green paper just after the summary at the front of the environmental document, where they are clearly visible to all readers.

9.1 Types of Commitments

When adverse or negative impacts are identified in project planning, numerous methods are available to address them. Three basic types of environmental commitments are made in the NEPA and permitting processes:

- Avoidance;
- Minimization; and
- Mitigation.

These types of commitments, described in more detail below, can respond to a variety of impacts to natural or manmade resources.

9.1.1 Avoidance

During project planning, potential impacts to sensitive resources are identified. Where feasible, alternatives can be changed during the planning or design phase to avoid impact to these areas. Avoidance can involve alignment shifts (or selection of an entirely new alignment) as well as grade changes to go over or under a sensitive area. Examples include:

- In the planning stages, a family cemetery is located adjacent to the proposed alignment. Planners are unsure of whether it will be affected by the project. They inform project designers who determine that the cemetery does fall within a cut area. The alignment can be shifted slightly in this area to avoid the cemetery.
- A significant archaeological site is identified that warrants preservation in place. During project design, it is determined that the site can be completely bridged, thus avoiding impacts to the site and preserving it in place.

9.1.2 Minimization

Minimization involves the creation and implementation of measures to reduce the potential impact to a resource. Minimization measures can include:

- Shifting alignment(s);
- Committing to off-season construction in order to avoid the habitat of an endangered species during the breeding season;
- Incorporating drainage structures into the highway to prevent or control release of storm water into protected water resources;
- Constructing noise walls or depressing a section of road to reduce noise impacts;
- Including landscaping to serve as a visual screen; or
- Limiting the number of interchanges on a full access control facility to minimize incompatible development.

9.1.3 Mitigation

Mitigation includes compensation and enhancement. Compensation makes an effort to offset damages to or displacements of the affected features. Examples of compensation include:

- Adding land and/or amenities to a public park and recreation area to replace lost facilities; and
- Providing off-site compensation for loss of wetlands.

Enhancements add desirable features to the project to allow it to blend more harmoniously with the surrounding environment. Enhancements can occur when a project's impacts cannot be avoided or minimized. Examples include:

- Developing bicycle trails or paths adjacent to roadways;
- Creating a landscaped gateway into a community;
- Including public art on an overpass that requires widening;
- Providing signage to recognize specific cultural or historical resources; and
- Creating wildlife passageways.

9.2 NEPA Document Commitments

The Environmental Division planner has the responsibility to ensure that all commitments made in the NEPA document are carried forward to the design and construction phases. The planner is assisted in this task by staff of the Natural Resources Office and the Social and Cultural Resources Office, who assume the responsibility for the commitments made in their respective permit or technical area. The PPRM process tracks project commitments throughout the project planning and development process. The goals of the commitment tracking through PPRM are to carry all project commitments through the lifecycle of the project development and to inform other divisions of commitments made for a project. Throughout the development of the NEPA document, the planner works with the Project Manager and other staff to ensure that a description of all commitments are documenting in the Commitments Tracking Database. Some types of standard commitments, such as common measures for erosion control or use of best management practices, are not included in the database because it is TDOT's policy to include these on all projects. In addition, mitigation commitments that have not been developed through NEPA and that will be developed through the permitting process are documented by the Project Manager or Permits Office staff later in the process. Commitments in technical areas, such as mitigation for cultural resource impacts or noise abatement, should be input into the database by the planner, as necessary.

Also included in the database are commitments that are not the responsibility of the Natural Resources Office or the Social and Cultural Resources Office, but that need to be carried forward into the design and construction process. Examples of the types of commitments that may need to be carried forward include:

- Aesthetic treatment, including wall surface treatment and landscaping;
- Development of a site-specific plan to handle pyritic (acid-producing) rock; and
- Installation of signage.

The database is a part of the Department's PPRM system and all TDOT Divisions (e.g., Design, Structures, Right-Of-Way, Construction, Maintenance, and all

applicable regional staff) should have access to review the commitments on an individual an project at any time. The Environmental Division planner or Project Manager should ensure that any commitments entered into the database are reviewed and considered by the appropriate staff and (if necessary) are included in the project contract book or construction plans.

9.3 Commitments for Technical Areas

The technical studies conducted for NEPA and the permit applications that follow the NEPA phase often include commitments that must be carried out by the Natural Resources Office or the Social and Cultural Resources Office. This section discusses some of the types of commitments for cultural and ecological resource impacts, noise impacts, and hazardous materials.

9.3.1 Cultural Resources

In the area of cultural resources (i.e., historic/architectural resources and archaeological resources) commitments may be made when it is found that a resource listed in or eligible for the National Register of Historic Places (NRHP) will be affected by a proposed project. Federal laws, such as Section 106 of the National Historic Preservation Act and Section 4(f) of the Department of Transportation Act, require agencies that are proposing federally funded or permitted projects to explore alternatives to avoid or reduce harm to historic properties.

For TDOT projects, once an adverse effect has been identified, TDOT will work with the State Historic Preservation Office (SHPO), the FHWA, the Advisory Council on Historic Preservation (if they choose to participate), Tribal representatives (as applicable) and the public (including Section 106 Consulting Parties) to develop methods to avoid, minimize, or mitigate impacts. Agreed upon minimization and/or mitigation measures will be funded through the project and are often included in a legally binding document, called a Memorandum of Agreement, or MOA. This agreement is signed by FHWA and the SHPO, and is concurred with by TDOT. In addition, sometimes other parties that have obligations under the MOA will also sign the agreement. Sometimes, commitments are made in a Section 106 Effects Assessment and are considered in a “Finding of No Adverse Effect” by the SHPO. TDOT and FHWA will ensure that all commitments made in the MOA or in the Section 106 Effects Assessment are carried out.

Examples of such commitments include:

- Preparing documentation for the Historic American Building Survey (HABS) or Historic American Engineering Record (HAER);
- Relocating a historic structure such as a building or bridge;
- Landscaping to serve as a visual screen;
- Special surface treatment on retaining walls; and
- Recovery of Significant Information (RSI/Phase III archaeology).

FHWA will not authorize right-of-way funding until the final NEPA document is approved and the necessary MOA is fully executed.

9.3.1.1 Implementing Architectural/Historical Commitments

Once commitments have been made either in an MOA or in a Section 106 Effects Assessment, the Historic Preservation Program Manager leads the effort for carrying forward commitments made. When an MOA is fully executed, the Historic Preservation Program Manager sends a copy of the agreement to the Director of the applicable TDOT Divisions accompanied by a letter that outlines the actions that must be taken. When there is no MOA, any commitments made are outlined in a letter, which is also sent to the Division Directors. Any commitments are also entered into the Commitments Tracking Database in the Department's PPRM system.

The preparation of HABS/HAER documentation is undertaken by historic preservation staff, with assistance from the TDOT photographer. The supervisor ensures that the documentation is completed prior to contract letting. For a landscape plan, the Historic Preservation Program Manager requests in-house (TDOT) or consultant assistance. The landscape plan is sent to TDOT staff responsible for the project plans with a request to include the landscape plan commitment on the plans and in the construction contract book.

The Historic Preservation Program Manager is on the distribution list for right-of-way plans. Once received, the plans are reviewed to ensure that the design measures included in the MOA are included on the plans and plan specifications. The Historic Preservation Program Manager then sends a letter to the Design Division commenting on the plans and reiterating design commitments. This letter will often also request notes be added to plans delineating historic properties and requesting that such areas not be used for construction staging or right-of-way easements.

Normally, the construction plans are not reviewed, but if there are items of concern that the Historic Preservation Program Manager wants to track, a request will be made that the supervisor be sent construction plans and be notified of the pre-construction meeting.

9.3.1.2 Implementing Archaeological Commitments

All Phase I and Phase II archaeological work is undertaken during the NEPA process and is completed by the time the final NEPA document is approved. During this process, TDOT attempts to avoid impacts to archaeological sites. If NRHP listed or eligible sites are found within the project's Area of Potential Effects, the Archaeology Program Manager coordinates with the TDOT design staff to find ways to avoid the sites.

When avoidance is not feasible, TDOT will implement design modifications to minimize project effects and may enter into an MOA that will include a commitment to conduct Recovery of Significant Information (RSI/Phase III Data Recovery). If there are mitigation commitments for architectural/historical resources, the

archaeological commitments are included in the same MOA. If not, an MOA will be executed just for the archaeological work.

If an MOA that stipulates RSI is executed, the fieldwork generally begins as soon as possible following approval of the final NEPA document and acquisition of the property. If a landowner is cooperative, fieldwork sometimes begins before property acquisition. Generally, TDOT contracts the RSI work to the archaeological contractor that completed the Phase I and II tasks. Once the field work for the data recovery task is completed, TDOT notifies the SHPO and provides them with an opportunity to inspect the site. The Archaeology Program Manager notifies the NEPA Documentation Office planner responsible for the project when the RSI work has been completed and the planner then enters the task completion into the PPRM commitments tracking database. The fieldwork work must be completed before FHWA authorizes funding for the construction phase. Under certain circumstances the Archaeology Program Manager will have notes placed on the plans to advise construction contractors of their responsibilities and specific requirements to fulfill stipulations in an MOA.

Whether or not an MOA is executed, the Archaeology Program Manager should request that the Design or Construction Divisions place a note on the plans/specifications that informs the contractor of what actions to take if archaeological resources are unexpectedly discovered during construction. This does not happen frequently, but when it does, the contractor or TDOT Construction Office should notify the State Archaeologist (615/741-1588) either directly or through the Archaeology Program Manager. If construction contractors unexpectedly encounter archaeological deposits, state law requires them to immediately stop work in the area of the find and contact the State Archaeologist.

9.3.2 Ecological Commitments

Ecological commitments fall under the Environmental Division's Natural Resources Office, within either the Ecology Section or the Environmental Permits Section.

9.3.2.1 Environmental Permits Section

The Environmental Permits Section ensures that commitments to avoid or minimize impacts to waterways, sinkholes and caves are included in the permit documents. In addition to commitments provided by the Ecology Section, the Permits Section receives a water pollution abatement plan from the Design Division, which is then reviewed typically by a consultant and included in a Storm Water Pollution Prevention Plan (SWPPP), also typically prepared by a consultant. The Permits Section outlines commitments in the permit application and performs a final check of the accompanying set of plans. The approved permit application(s) and plans are sent by the Permits Section Manager to the responsible TDOT staff to be included in the contract specifications book prior to contract advertisement. If a permit is received after the contract book is completed, then the Permits Section sends the permit commitments to the Construction Division for inclusion in the plans.

Consultants managed by the Permits Section inspect erosion and sediment controls on selected projects during construction. The Comprehensive Inspections Office performs Quality Control/Quality Assurance inspections.

9.3.2.2 Ecology Section

Biologists in the Ecology Section coordinate with Structures, Design, and Construction engineers during project location, planning, and design phases to develop preliminary impact avoidance, minimization, and mitigation commitments for streams, wetlands, endangered species, and water quality impacts that were identified earlier in the project development process. Types of commitments include notes to avoid spawning or roosting seasons of protected species, notes to restrict construction activities from wetlands or endangered species locations, detailed plans to replace stream channels or tree canopy, or arrangements to replace or bank wetland impacts. During the project design phase, the Ecology Section provides final mitigation and commitment implementation information to the Design Division and to the Permits Section for inclusion in project plans and permit applications.

The Ecology Section staff or ecological consultants monitor the implementation of stream, wetland, and threatened and endangered species mitigation and supervise adjustments needed during, or following, construction. The Ecology Section also deals with construction changes or necessary remediation affecting natural resources.

The Environmental Division biologists coordinate the effort throughout project development to ensure that commitments made to avoid or minimize impacts to threatened and endangered species are honored. Biologists work with the Design and Construction Division staffs to get all commitments into construction plans and the contract book. Typical plan notes require that Environmental Division biologists are notified of the pre-construction conference and that the construction staff notifies them in advance of certain construction milestones. Other notes may restrict construction activities. Environmental Division biologists arrange for, perform, or participate in, and monitor any required species relocations. A person holding an FWS license for the particular species is required to be present when species are being handled. Seasonal and other restrictions are also monitored by Environmental Division biologists.

9.3.2.3 Statewide Storm Water Management Plan

TDOT, in partnership with TDEC, has developed a Statewide Storm Water Management Plan (SSWMP) to increase protection of water quality. Development of the SSWMP grew out of the Consent Order entered into by TDOT and TDEC to ensure that storm water management is incorporated throughout TDOT's operations, and that storm water and water quality are considered in successive stages of transportation project development, including planning, environmental, design, right-of-way acquisition, construction and maintenance. Information on the SSWMP can be found at http://www.tdot.state.tn.us/sswmp/.

The SSWMP became effective in November 2007. The requirements of SSWMP have been incorporated into the latest version of this procedures manual.

The commitments continue into the field through oversight by the Storm Water Coordinators. For each project, the Storm Water Coordinator holds an environmental pre-construction meeting with the Construction Office and contractor to go through project commitment identify permit boundaries or sensitive features, review permit requirements, review SWPPP requirements, practical staging of construction affecting Erosion Prevention and Sediment Control (EPSC) measures, any changes in traffic control affecting EPSC measures, and any construction measures in question.

9.3.3 Noise Commitments

Two types of commitments are made regarding noise impacts:

- Abatement measures for impacted receivers; and
- Construction noise reduction measures.

Noise studies conducted during the NEPA process may reveal that the project, when built, will have a noise impact on adjacent properties. The noise study may identify that construction of a noise barrier may be feasible to reduce the noise levels at impacted receivers. The commitment to study the feasibility and location of noise barriers is made in the final NEPA document. After the final NEPA document is approved, TDOT will generally work with a consultant to identify wall locations that meet FHWA noise abatement requirements and to identify the length and height of the walls. The Noise staff (within the Air and Noise Section under the Social and Cultural Resources Office) will send a memo to the Structures Division, along with a copy of the consultant's noise analysis. The Structures Division will then prepare a preliminary design of the walls, working with the consultant, as needed to ensure the effectiveness of the wall design and placement. TDOT will hold a noise meeting with affected residents to get their input into the noise abatement proposal(s). Then, the Structures Division will prepare the final design of the walls after comments are addressed.

9.3.4 Hazardous Materials Commitments

A Phase 1 Preliminary Site Assessment (ESA) and a Phase II Preliminary Investigation for hazardous materials are conducted for TDOT projects. TDOT subcontracts out all of its hazardous materials studies. As discussed in Section 5.3.6.2, *Study Process for Hazardous Materials*, differing levels of studies are conducted at differing times during the project planning process to identify potential hazardous materials issues that must be considered in project planning. For example:

1. If there is a known hazardous materials concern, an ESA and/or Phase II preliminary investigation may be conducted as early as the TPR stage. The Hazardous Materials Coordinator should review TPRs in the pre-

NEPA phase and inform the TDOT Project Planning Division staff if any hazardous materials studies are required during this phase;

2. For a project with more than one alternative, an ESA is conducted during the NEPA phase. This information is then used in the alternatives evaluation. If the NEPA consultant performs the ESA, the Hazardous Materials Coordinator will review the report; and
3. For a project where only one alternative is being evaluated in a NEPA document, often no hazardous materials studies are conducted in the NEPA phase. During preliminary design when the project's location is determined, either a modified Phase I/ESA study or Phase II investigation is conducted.

Under either scenario #1 or #2 above, a commitment may be made in the NEPA document to undertake initial or supplemental hazardous materials studies during the preliminary plan stage. The Design Division sends a copy of all preliminary plans to the Hazardous Materials Coordinator. The coordinator reviews the plans and contracts out a modified Phase I study or a Phase II investigation. If hazardous material sites may be affected, the Hazardous Materials Coordinator works with the Design staff in an attempt to modify the design to avoid the sites. If sites are identified adjacent to the right-of-way, notes should be placed on the plans regarding how to manage the site if it cannot be avoided. The Hazardous Materials Coordinator will contract for and oversee the remediation after right-of-way has been purchased and before construction. Under scenario #3, the NEPA document will include a commitment to undertake studies and remediation, as warranted, during the post-NEPA phase.

Another commitment relates to asbestos. The Hazardous Materials Coordinator requests the Design Division place notes on the project plans stating that the contractor is required to properly address asbestos encountered during project construction.

9.4 SMART Delivery Management System

TDOT is currently developing a SMART Delivery Management System (SDMS) to facilitate the tracking of project related activities and project commitments made throughout all phases of project development. Once SDMS is fully developed and operational, the Environmental Division planner will have the responsibility for entering project information, dates, and any commitments into SDMS once the NEPA or TEER decision document has been approved.

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10.0 ENVIRONMENTAL EVALUATION OF STATE-FUNDED PROJECTS

The previous chapters of this Environmental Procedures Manual have focused primarily on transportation projects that are funded in part or in whole through federal programs, and therefore fall under the requirements of the National Environmental Policy Act (NEPA). Transportation projects that do not involve federal-aid funding and do not otherwise constitute a major federal action are exempt from the provisions of NEPA. Federal court law, however, has established that under some circumstances, NEPA may apply to a non-federal project. In a 2001 Tennessee case (Southwest Williamson County Community Association v. Slater, et al.), the Sixth Circuit Court of Appeals defined two alternative tests for determining whether a non-federal project might actually constitute a major federal action to the extent that the requirements of NEPA would apply.[1] The two tests identified in this case are:

1. When the non-federal project restricts or limits the statutorily prescribed federal decision-makers' choice of reasonable alternatives; or
2. When the federal-decision makers have authority to exercise sufficient control or responsibility over the non-federal project so as to influence the outcome of the project.

Future court decisions may refine these tests or impose other tests or criteria that would affect the process that is used to evaluate the potential environmental impacts of a non-federally-funded transportation project in Tennessee.

This chapter describes TDOT's policy on the environmental evaluation and documentation of state-funded projects that do not constitute a major federal action, as defined above. The chapter identifies types of projects that are covered by this policy and describes the documentation to be prepared. It also describes the agency coordination and public involvement to be conducted as a part of the environmental evaluation. References are made to earlier chapters and sections in this Environmental Procedures Manual to indicate when previously identified procedures may or may not be applicable to the environmental evaluation of state-funded transportation projects.

[1] In the case in question (regarding State Route 840 South), the federal decision makers were the FHWA (with authority over interchanges to Interstate highways), the U.S. Army Corps of Engineers (for streams and wetland permits) and the U.S. Department of the Interior (for a crossing of the Natchez Trace Parkway). The court concluded that neither of the two tests was met, and the highway corridor did not constitute a major federal action for NEPA purposes.

10.1 TDOT Policy on State-Funded Projects

TDOT is committed to an approach to project development that provides for early and ongoing consideration of the environmental effects of state-funded projects. The TDOT approach includes early identification and evaluation of potential environmental consequences, consultation with affected agencies and the public, and the development of measures to avoid, minimize and/or mitigate the adverse effects of state-funded projects on the natural and human environments of Tennessee. State-funded transportation projects that require the acquisition of right-of-way and/or the construction of new roadways and other transportation facilities must undergo a rigorous environmental review. The environmental review is documented in a Tennessee Environmental Evaluation Report (referred to as a TEER) that will be made available for public review.

A TEER is prepared for a state-funded transportation project that meets both of the following criteria:

- Is a transportation route (including a bridge project); and
- Requires acquisition or disturbance of at least one acre of new or additional right-of-way, unless there are special circumstances that would necessitate the preparation of a TEER for a project with less than one acre of property acquisition.

Special circumstances that would result in the need to prepare a TEER under the second criterion listed above include, but are not limited to, the following:

1. Displacement of any commercial or residential occupants;
2. The use of land from a property or district that is listed on or eligible for listing on the National Register of Historic Places or a National Historic Landmark, which would cause an adverse effect to that resource;
3. The use of land from a public park or recreation area, designated forest, or wildlife management area;
4. Work that requires a U.S. Coast Guard construction permit, or an individual U.S. Army Corps of Engineers Section 404 Permit;
5. Construction in, across, or adjacent to a river designated as a component of the National System of Wild and Scenic Rivers or high quality streams, including streams designated as Outstanding National Resource Waters (ONRW), as designated by Tennessee's water quality standard;
6. Work encroaching on a regulatory floodway or work affecting the base floodplain (100-year flood) elevation of a water course or lake;
7. Work in wetlands;

8. Change in access control;

9. A known hazardous materials site within the proposed right-of-way;

10. An adverse effect to federal or state designated threatened or endangered species or their critical habitat; or

11. A formal request for the preparation of a TEER is received from a local citizen, group or organization, and the request is based on identified environmental concerns.

This policy is effective for all new state-funded transportation projects for which no funds have been authorized or obligated by TDOT as of March 2007, the original adoption date of this Environmental Procedures Manual.

Since 2007, TDOT has determined the need to have two levels of TEER documents. The TEER document, also referred to as a Major TEER, is prepared when the project would have required an Environmental Assessment (EA) had it been federally funded. A Minor TEER will be prepared for a state-funded transportation project that would have only minor potential for environmental impacts, similar to those federally funded projects for which a Categorical Exclusion (CE) applies.

10.2 Types of State-Funded Projects

Categories of state-funded transportation projects for which a TEER may be needed include the following:

- State Industrial Access (SIA) roads;
- Local Interstate Connectors (LIC);
- Safety improvements;
- State Aid Program (listed in State Transportation Improvement Plan (STIP) as STA) – including some new two lane and four lane roadway sections, and highway widening;
- Bridge grant program; and
- Other new or expanded state-funded roads.

Each of these categories is discussed briefly below.

10.2.1 State Industrial Access Roads

The Tennessee Industrial Highways Act of 1959 (TCA 54-5-403) authorizes TDOT to contract with cities and counties to develop industrial highways to provide access to industrial sites and parks and to facilitate the development and expansion of industry. The typical section of a state industrial access (SIA) road is two 12-foot lanes with

four foot shoulders, but additional lanes or other features may be requested by the local government using non-participating funds. After construction, the industrial highway does not become a part of the state route highway system; instead, the local government assumes full responsibility for its maintenance.

Local government officials must make an application to TDOT's Project Management Office to have their project considered under this program. Upon receipt of an application, the Project Management Office coordinates with the Environmental Division on field reviews, environmental evaluations, agency coordination and permits.

The information and application package for the SIA program can be obtained from the TDOT website at http://www.tdot.state.tn.us/projectmgmt/sia.asp. This package contains a set of environmental guidelines for the development of proposed SIA roads.

10.2.2 Local Interstate Connectors

Tennessee's Local Interstate Connecting Route Act of 1965, as amended, allows TDOT to work with cities and counties to establish and construct a system of connector routes to provide adequate access to the Interstate highway system from existing road and street networks along the Interstate system. The local government and the state share equally in the costs of these connectors, but the local government assumes full responsibility for maintenance of the local Interstate connectors (LIC) following construction.

Local government officials must make a formal application to TDOT through the Office of Local Programs, under the Program Development Division. Upon receipt of an application, TDOT's Local Programs Office notifies the Environmental Division and the Project Planning Division of the proposal. These two divisions then conduct a preliminary study of the proposed project to determine its feasibility, the most advantageous locations, any adverse environmental impacts, the estimated cost of the project, and any other pertinent data.

Guidelines for preparing an application for construction and/or reconstruction of a local Interstate connector are found on the TDOT website at http://www.tdot.state.tn.us/local/docs/LICBOOK.doc.

10.2.3 Safety Improvements

State-funded safety improvements include, but may not be limited to, such activities as installation or replacement of guardrail, signing, signalization, intersection improvements, flashing signs, roadside obstacle removal, shoulder improvement or provision, and sidewalks. Information on the types of projects that can be funded by the Safety Program can be found at http://www.tdot.state.tn.us/local/prog.htm. The program is available through the Office of Local Programs. Federal monies may also be available for these safety projects, but in some instances, the projects may be entirely state-funded.

Most of these projects would fall under the programmatic categorical exclusions under NEPA, as discussed in Chapter 3, Section 3.5.3, *Programmatic CEs*, and require a minimum level of environmental studies and documentation if they were federally funded. In these instances, a state-funded safety improvement project would be documented with a Minor TEER. If the project would have required an EA had it been federally funded, then it requires preparation of a Major TEER as a state-funded project. The project contract prepared by the Operational Safety Coordinator initiates the need for an environmental evaluation, if necessary. The Office of Local Programs informs the Environmental Division, which is responsible for the preparation of any necessary environmental documentation.

10.2.4 State Aid Projects

The State Aid Program provides state funding assistance to county governments for the improvement or rehabilitation of roads on the state highway system. The types of qualifying work include planning, engineering, right-of-way acquisition, grading, drainage, bridge construction, and pavement upgrades or rehabilitation. The State Aid System may comprise no more than 20 percent of the total road miles in a county. Two criteria of the program are that the roadways receiving state aid: 1) serve all communities within the county; and 2) function as connector routes linking the important traffic generators within the county. The majority of State Aid projects are roadway widenings and pavement upgrades.

The State Aid Office informs the Environmental Division, which is responsible for the preparation of any required documentation. The program is managed through the State Aid Office in the Maintenance Division. Some of the State Aid Program projects would require a Minor TEER due to their minor potential for environmental impacts. Other, more complicated projects may require the acquisition of right-of-way, and thus require the preparation of a Major TEER to document the environmental review process, provided they meet the requirements listed in Section 10.1.

10.2.5 Bridge Grant Program

This program, managed through TDOT's Maintenance Division, funds the replacement of deficient bridges on the local highway system through a state grant program. Many of these bridge projects would require a Minor TEER, due to their minor potential for environmental impacts. Other projects are more complicated and require the acquisition of right-of-way. For these more complicated projects, the environmental consequences and mitigation measures must be documented in a Major TEER. The local government recipient is responsible for preparing the environmental documentation, and must follow the guidelines for the TEER documents as defined in this Chapter. The TEER must be submitted to the Environmental Division for review and approval prior to construction of the project.

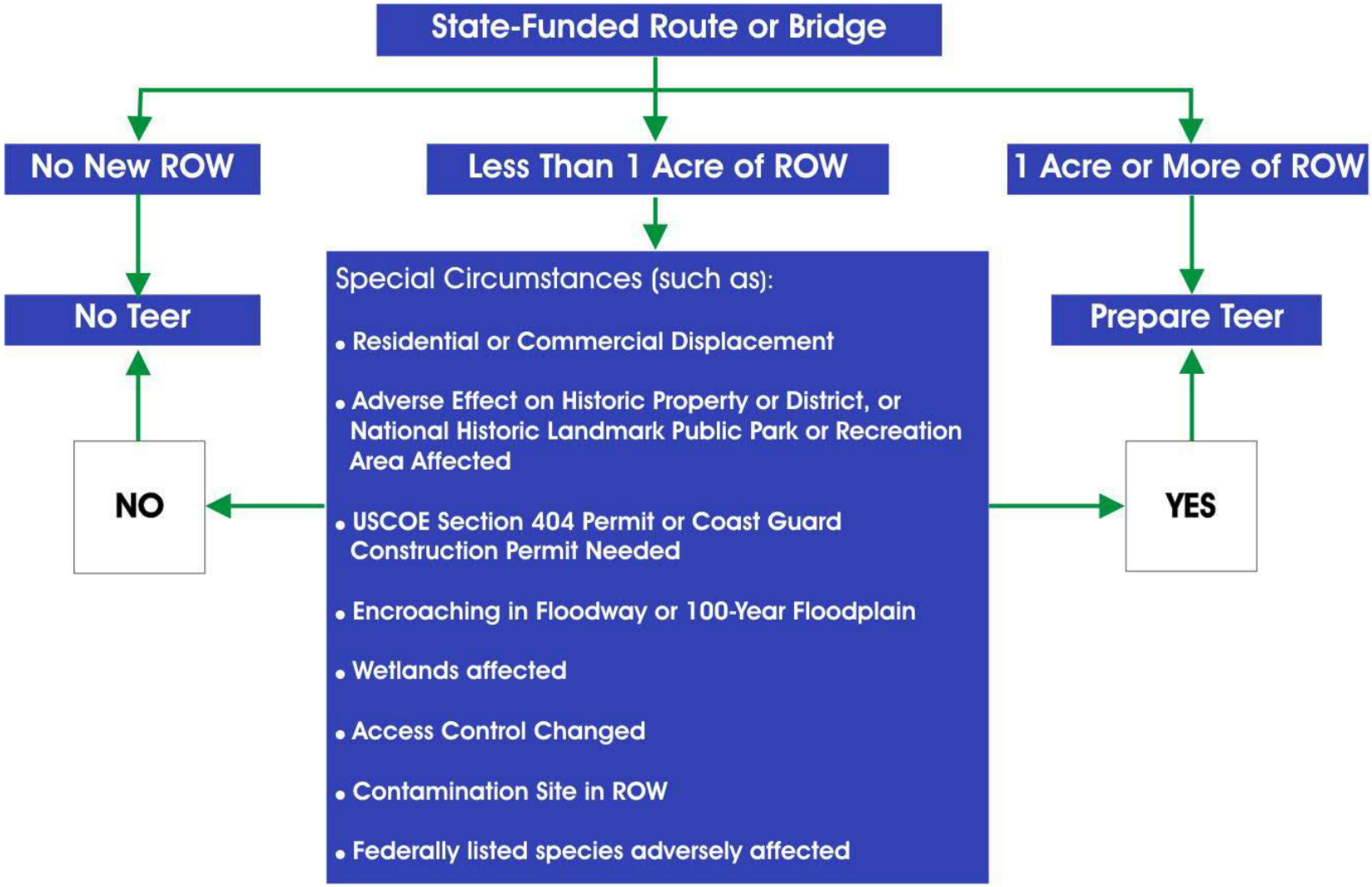
10.2.6 Other New or Expanded State Roads

This category includes any other new or expanded state-funded roads or highways that may not be included in the five programs described above. An example of a project that falls in this category is State Route 840 South in Middle Tennessee.

10.3 Determination of Need for a TEER

The Environmental Division is responsible for determining the need to prepare a TEER (Major or Minor) for a state-funded project on a case-by-case basis. The determination is based on the criteria listed above in Section 10.1. Figure 10.1 illustrates the series of decision points that are made to determine whether a TEER is prepared.

Figure 10.1 Determination of Need for TEER Documentation



The state-funded transportation project may be identified either by a local agency or by TDOT. The earliest steps in the evaluation of the project are:

- Identify the purpose and transportation need of the project; and
- Identify and screen preliminary alternatives.

This information may be documented in a Transportation Planning Report (TPR), outlining the project history, study area, community characteristics, existing transportation conditions, preliminary purpose and need, and options or preliminary alternatives for consideration. The approach to these steps is discussed in greater detail in Chapter 2, *Project Identification and Development*.

To assist in the determination, the Environmental Division staff may conduct a field visit with local officials or other TDOT Division staff as necessary, and/or participate in a coordination meeting with local officials and other TDOT Division staff. The Environmental Division staff reviews available maps, plans, and other material to determine whether special circumstances (such as those listed above in Section 10.1) may exist. In addition, the determination review process considers the applicability of the two alternative tests (listed on Page 10-1) for determining whether the project might constitute a major federal action to the extent that the requirements of NEPA apply.

The determination of whether a TEER is necessary (and why or why not necessary) is documented in a memorandum that is placed in the project file.

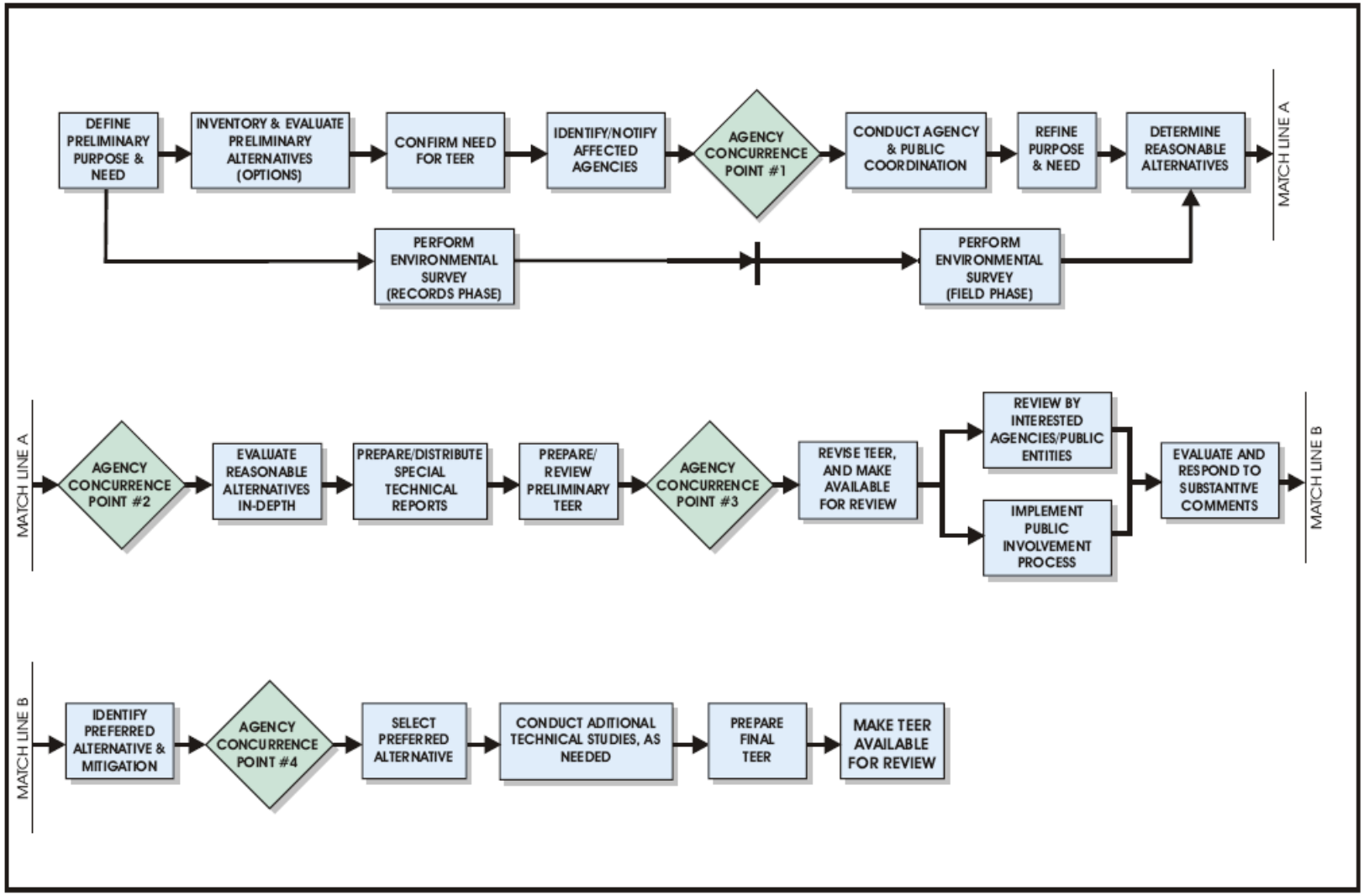
10.4 Environmental Evaluation of State-Funded Projects

Once it is determined that a TEER is necessary, there are a series of steps that are required to conduct the evaluation. Figure 10.2 illustrates the general flow of activities that should occur during the TEER process, particularly for a Major TEER. Not all of these activities are conducted sequentially; some occur simultaneously, or may be repeated as necessary. The length of time and the number of steps required to conduct the environmental review process are dictated by the size or complexity of the project, the level of controversy and the amount of coordination necessary.

10.4.1 Early Coordination

Early coordination with other federal, state and local agencies and with the public is an essential ingredient in the project development process for transportation projects, whether they are federally- or state-funded. Early coordination is helpful in developing the project's purpose and need, determining alternatives, and identifying issues of concern, the scope of the environmental resources that would be affected by the project, permit requirements, possible mitigation measures, and opportunities for environmental enhancements.

Figure 10.2 Process to Conduct a Major TEER



For major TEER projects, TDOT incorporates the process outlined in the Tennessee Environmental Streamlining Agreement (TESA). This includes the development and implementation of a Project Coordination Plan, as discussed in Section 4.1, *Environmental Review Process*. The coordination plan outlines lead agency responsibilities and the process for providing the public and other agencies opportunities for input. A major TEER project conducted following the TESA process also includes agency concurrence points 1 through 4 as discussed in Section 4.5, *Tennessee Environmental Streamlining Agreement,* and shown in Figure 10.2.

10.4.1.1 Agency Coordination

Agency coordination for state-funded projects is conducted as part of the gathering and assessing of data and information for the preparation of the environmental documentation. Such coordination is important for identifying issues of concern so that they can be resolved early in the project development process. Additional coordination with resource agencies may be necessary to develop mitigation commitments and to obtain necessary permits.

At a minimum, a TEER requires consultation with and notification of a core group of agencies that includes:

- U.S. Army Corps of Engineers (Nashville and/or Memphis District as appropriate);
- Tennessee Valley Authority (if the project is within the Tennessee Valley Watershed and would affect TVA property and waters);
- U.S. Environmental Protection Agency, Region 4
- U.S. Department of Agriculture (USDA) Forest Service (if a national forest would be directly affected);
- U.S. Fish and Wildlife Service;
- Tennessee Department of Environment and Conservation,
- Tennessee State Historic Preservation Office;
- Tennessee Wildlife Resources Agency;
- Tennessee Department of Economic and Community Development (Local Planning Assistance Office);
- Local Development District Office;
- Metropolitan Planning Organization (MPO) if the project area is within MPO jurisdiction, or Regional Planning Organization (RPO); and
- Local planners and elected officials.

Other agencies may need to be consulted depending upon the specifics of the project.

For major TEER projects, the TESA agency concurrence point #1 occurs once the need for the TEER has been identified and agencies have been notified of the preliminary purpose and need and options/alternatives. Concurrence point #2 occurs once reasonable alternatives have been identified.

10.4.1.2 Early Coordination Package

The Environmental Division conducts early coordination with the resource agencies, organizations, and the public by preparing and distributing an early coordination package for the TEER project. This coordination package is similar in format and content to the NEPA coordination package described in Section 4.3, *Initial Coordination Packages.*

The components of the TEER early coordination package are:

- Project Data Summary Sheet (see Section 4.3.1 for suggested format and content);
- Project Location Map (see Section 4.3.2 for suggested format); and
- Transmittal Letter (see Section 4.3.3 for suggested format).

The early coordination package is sent to a project-specific list of recipients, which includes federal, state, and other agencies and local governments, which TDOT will coordinate with for the project. The list also includes private organizations and individuals who have requested to be included in early coordination. The starting point for developing the project specific list of recipients is the Environmental Division's existing database (described in Section 4.3.5), from which the TDOT Environmental Division planner creates the project-specific list.[2]

10.4.1.3 Public Involvement

Public involvement in the project should be initiated at the beginning of the project, and should continue until a decision is made with the issuance of the Final TEER.

The public involvement components for the TEER are similar to those for a NEPA level environmental evaluation, as described in Section 7.3.6, *NEPA Public Involvement*. Section 10.7 of this chapter discusses the public involvement components of the TEER process. As with the projects evaluated under NEPA, the public must be provided an opportunity to provide early input on purpose and need and alternatives to be considered.

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[2] Section 4.3.5, *Initial Coordination List*, indicates that a package of information on the coordination package is sent to FHWA. Since the TEER applies only to projects that have no federal action, FHWA is not provided with a package of information.

10.4.2 Identify and Analyze Impacts

To conduct a TEER for a state-funded project, the Environmental Division staff collects data, reviews existing records, and conducts technical studies and impact analyses. Much of the information that needs to be gathered and analyzed for a state-funded transportation project and to complete the TEER documentation is similar to the information needed to complete a NEPA document. Chapter 5, *Impact Analysis*, of this manual, serves as a guide for gathering information and assessing impacts.

It is important to note, however, that not all of the laws and regulations listed in Appendix C of this manual apply to the non-federally-funded transportation projects. For example, only federal agencies are required to follow Section 106 of the National Historic Preservation Act; and Section 4(f) of the Department of Transportation Act only applies to federally-funded transportation projects. In addition, there are several Tennessee laws that apply to the state-funded transportation projects, such as the Tennessee Water Quality Act and Public Law 699, which relate to reviews of state projects.

10.4.2.1 Records Check

A records check is conducted early in project planning, to provide a sound basis for developing or refining alternatives. The records check also provides background material needed to undertake field surveys and assess project impacts. Section 5.2, *Records Check in Early Project Planning Phase*, provides information on data sources and techniques for record checks for environmental screening that are also applicable to state-funded transportation projects. The use of a Geographic Information System (GIS) will facilitate the identification of problems and opportunities early in the project development process.

10.4.2.2 Technical Studies

Section 5.3, *Technical Studies and Other Impact Analyses,* describes the technical studies that are needed for the NEPA analysis of a federally-funded project. A variety of federal laws have been enacted and Executive Branch orders have been issued to mandate consideration of areas of concern and issues by federal agencies when they are proposing a federally-funded project. When a transportation project has no federal funds involved, the requirements of some of those federal rules and Executive Orders identified in Section 5.3 are not applicable. This section indicates when federal regulations discussed in Section 5.3 do not apply to state-funded projects.

The Environmental Division technical staff determines the issues of concern to be investigated during environmental evaluations of state-funded projects by reviewing the results of the records check and environmental screening, and by considering the issues raised by agencies and citizens in early coordination.

The types of technical studies that need to be prepared for state-funded projects include:

- Cultural Resources (historic architecture and archaeological);
- Natural Resources (threatened and endangered species, wetlands, water quality, terrestrial and aquatic resources);
- Noise;
- Air Quality;
- Hazardous Materials;
- Displacement and Relocation; and
- Soils and Geology.

Cultural Resources

State-funded transportation projects must comply with TCA 4-11-111, Historical Review of State Projects (also known as Public Law 699). Under this law, all state agencies must consult with the Tennessee Historic Commission (THC) before demolishing, altering or transferring historically, architecturally or culturally significant state-owned property. The standard of review is the U.S. Secretary of the Interior's Standards. By law, the Commissioner of Transportation must consider the comments of the THC prior to demolishing, altering or transferring state property of historic, architectural or cultural significance.

Section 106 of the National Historic Preservation Act does not apply to state-funded projects unless a federal permit or action is required for the project. Section 4(f) does not apply to a state-funded project since no U.S. Department of Transportation action is involved.

For a state-funded project, TDOT identifies the National Register listed and/or eligible historic and archaeological resources that are found in the project area and assesses the project's effects on those resources. The approaches for identifying architectural/historical and archaeological resources are discussed below.

Architectural/Historical Resources. For architectural and historical resources, the Environmental Division's historic staff identifies the resources and prepares a report that is submitted to the THC for comment [3]. The study process for architectural/historical resources is described in Section 5.3.2.3, *Study Process for Architectural/Historical Resources*.

A Survey Report, containing the results of the records search, literature review and research, historic context, and field survey, is prepared by the historic preservation technical staff (or its consultants). The Survey Report is submitted to the THC for

[3] The Tennessee Historical Commission serves as the designated State Historic Preservation Office (SHPO) for Tennessee under Section 106 of the Historic Preservation Act. The same agency and staff members review state-funded projects under Public Law 699 and federally-funded projects under Section 106.

comment. The Survey Report may be combined with an assessment of effects or a separate assessment of effects reports may be prepared. Coordination with the THC is required for both the survey findings and the effects assessment. If adverse effects are found, TDOT investigates ways to avoid, minimize or mitigate the project effects, and coordinates such measures with the THC. All measures agreed to by the THC and TDOT may be included in a Memorandum of Agreement (MOA), which becomes a legal document and is appended to the TEER.

Archaeological Resources. TDOT follows the study process for archaeological resources, described in Section 5.3.2.4, *Study Process for Archaeological Resources,* of this manual. The records search and field work are conducted, site forms are completed, and the collected data and material are analyzed. The results of this work and an evaluation of whether additional investigation is warranted are presented in the Phase I Archaeological Survey report. The Survey Report is submitted to the Tennessee Division of Archaeology (TDOA) for comment in accordance with TCA 11-6-113, which calls for TDOT/TDOA cooperation.

If Phase II testing, as defined in Section 5.3.2.4 is required, Environmental Division archaeological staff or consultants conduct the testing and prepare the report for submittal to the TDOA, prior to the approval of a Final TEER. Any agreed upon mitigation work must be completed prior to the start of construction.

Natural Resources

There are several pieces of federal legislation and Executive Orders governing use of or impacts to natural resources by federal actions. The Endangered Species Act, Executive Order (EO) 11988 on Floodplain Protection and EO 11990 on Protection of Wetlands all apply specifically to federally-funded actions. The Clean Water Act (CWA), however, applies to federal, state, local and private actions.

For state-funded projects, TDOT evaluates the potential effects of a project on the natural environment by conducting ecological evaluations of streams, wetlands, and endangered species, as described in Section 5.3.3, *Natural Resources*. The provisions of the Tennessee Water Quality Act are applicable.

As part of the evaluation, TDOT requests information on federally threatened and endangered species from the U.S. Fish and Wildlife Service (FWS), and information on state species from TDEC's Natural Heritage Inventory Program. Formal consultation as required under the Endangered Species Act is not required for a state-funded project. However, TDOT contacts the FWS on state-funded projects to request information on federally threatened and endangered species to ensure that there are no species of concern that may be adversely affected. If federally protected species are in the project impact area, TDOT conducts a Biological Assessment (BA) to determine whether the project would have an effect on each listed species, and if there is an effect, its likelihood to adversely affect that species. The BA is forwarded directly to the FWS with a cover letter stating that the project is state-funded; this letter does not mention Section 7 of the Endangered Species Act

as a reason for submittal. TDOT also checks the TDEC Natural Heritage Inventory Program database for threatened and endangered species.

The Environmental Division's *Scope of Work for Ecological Studies* provides detailed guidance for the performance of ecology-related work. The results of the technical investigations must be summarized in an Ecology Summary, the format of which is prescribed in Scope A of the *Scope of Work for Ecological Studies*. The Ecology Summary is incorporated into the TEER.

Noise

For state-funded projects on which noise is expected to be a concern, TDOT follows the approach described in Section 5.3.4, *Noise*, for the manual. TDOT's policies on highway noise and procedures for conducting noise studies are presented in the *TDOT Noise Policy*, which is available in the Environmental Division's Social and Cultural Resources Office, Air and Noise Section, and on the TDOT website at http://www.tdot.state.tn.us/environment/airnoise/. The results of the noise study are presented in the TEER.

Air Quality

Section 5.3.5, *Air Quality*, explains the applicability of the federal Clean Air Act (CAA) and subsequent amendments. The act requires states and local MPOs to develop transportation plans and transportation improvement programs that conform to their allowable emission levels (emission budget), in order to reduce the severity and number of violations of the National Ambient Air Quality Standards (NAAQS). The CAA allows for the withholding of federal funding for transportation projects if a region is found to be in violation of the conformity standards. Local transportation plans and Transportation Improvement Programs (TIPs) include all federally-funded projects, as well as those state and locally funded projects of "regional significance[4]." Verifications of project conformity for currently approved TIPs for both MPO and non-MPO projects are on file at TDOT's Long Range Planning Division.

If a state or locally funded project in a non-attainment or maintenance area for air quality has been determined to be regionally significant, the project must be approved for conformity through the appropriate planning process. If it is not regionally significant, then a regional conformity analysis is not required.

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[4] According to FHWA's *Transportation Conformity Reference Guide* (May 2000), a "regionally significant project means a transportation project (other than an exempt project) that is on a facility which serves regional transportation needs (such as access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves) and would normally be included in the modeling of a metropolitan area's transportation network, including, at a minimum, all principal arterial highways and all fixed guideway transit facilities that offer an alternative to regional highway travel."

In addition to a statement about the overall conformity of the project with adopted plans, a project specific analysis of carbon monoxide impacts may be needed for a state-funded project that is evaluated in a TEER. A localized area of concern such as an intersection, referred to as a "hot spot," may need to be evaluated if:

- The project worsens an intersection level of service from Level of Service (LOS) C or D, and
- The intersection is LOS D or worse and the project substantially increases the intersection delay.

If a hot spot analysis is conducted for a state-funded project, the study process outlined in Section 5.3.5.2 is followed.

The Environmental Division has drafted a PM2.5 Hot Spot Determination Process and Procedures document for use in completing PM2.5 hot spot determinations for transportation projects in non-attainment areas. This process applies to those counties that are in non-attainment for PM2.5 as identified in Table 5-3 in Chapter 5. While the EPA's PM2.5 hot spot determination requirements apply only to nonexempt projects that use federal funds, TDOT has determined that it will also evaluate the potential environmental impact of projects that do not use federal funds but that are still located in a non-attainment or maintenance area. If TDOT determines these state-funded projects have the potential to cause localized air quality problems, the process in Section 5.3.5.2 will be followed.

Hazardous Materials

As stated in Section 5.3.6, *Hazardous Materials*, NEPA does not mandate the completion of hazmat studies, but other laws do. For state-funded projects, hazardous materials investigations are conducted as described in Section 5.3.6.2.

Displacement and Relocation

For all property acquisitions and relocations, TDOT adheres to provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act, as stated on the website:
http://www.tdot.state.tn.us/Chief_Engineer/assistant_engineer_design/row/appraisal.htm.

Soils and Geology

As explained in Section 5.3.8, *Soils and Geology*, the analysis of soils and geology is necessary to assist with locating the project and to identify the potential of the project to cause harm. The analysis is conducted as described in Section 5.3.8.2.

Section 6(f) of the Land and Water Conservation Fund Act

Section 6(f) applies to state-funded projects if the project would affect resources that have received grants from the Land and Water Conservation Fund. During the environmental evaluation of a state-funded project, the Environmental Division

conducts the study process for Section 6(f) resources as described in Section 5.3.9.2, *Section 6(f) of the Land and Water Conservation Fund*.

Other Impact Analyses

Section 5.3.10 identifies several other technical analyses that are conducted during the preparation of a NEPA document. The types of analyses that may need to be considered as part of a TEER evaluation include:

- Social and Community Impacts
- Environmental Justice and Non-Discrimination
- Economic and Business Impacts
- Land Use Planning and Land Use Impacts
- Farmland Impacts
- Visual Quality Impacts
- Traffic and Accident Impacts (if applicable)
- Construction Impacts
- Wild and Scenic Rivers Impacts
- Floodplain Impacts
- Pedestrian and Bicycle Considerations (if applicable)

The process for evaluating the effects of a state-funded project for each of these issues is similar to the process described in the subsections under Section 5.3.10, *Other Impact Analyses.* One exception relates to farmland impacts for state-funded projects, which do not require coordination with the Natural Resources Conservation Service as described in Section 5.3.10.5, *Farmland Impacts*, although TDOT may pursue farmland coordination for a TEER project.

While Title VI of the Civil Rights Act and Executive Order 12898 on Environmental Justice relate to programs and projects of federal agencies and their impacts on low-income and minority communities, TDOT endeavors to follow the intent of those acts in the evaluation of state-funded projects.

As appropriate for each technical issue addressed in the TEER, the analysis will include an assessment of indirect impacts and cumulative effects that may result from the proposed project alternatives, other reasonably foreseeable future government actions and private actions that would occur with or without the proposed action. Indirect and cumulative effects are discussed in Section 5.1.1.2.

In addition to the types of analyses listed above, the TEER should address park and recreation area impacts if such resources are presented in the study area and would be affected by the project.[5] The evaluation includes:

- Identification and description of public parks and recreation areas in the project area that would be affected by the project alternatives (i.e., type, size, ownership, activities and facilities in the park, level of use, etc);
- Identification of the type and level of impact of the project on the resources (i.e., land taken, facilities affected, noise impacts, visual impacts, etc.);
- Evidence of coordination with agencies that have jurisdiction over such resources; and
- Measures to avoid, minimize, and mitigate adverse impacts.

10.5 Preparation of a Minor TEER

A Minor TEER is prepared for those projects for which impacts would be minor in nature, similar to the 12 examples listed in Chapter 3, Section 3.5.2 of this manual for federally-funded projects. Other actions with similar scopes of work may also qualify for a Minor TEER. These include such actions as resurfacing, installation of highway ramps, bridge rehabilitation, and construction of weigh stations or rest areas.

Some documentation must be provided for an action to determine if the Minor TEER classification is appropriate. The level of information is dependent upon the action's potential level of impact, controversy, or inconsistency with other agencies' environmental requirements.

Where adverse environmental impacts are likely to occur as a result of the project, the level of analysis should be sufficient to define the extent of the impact, identify appropriate mitigation measures and address known and foreseeable agency and public concerns.

At a minimum, the Minor TEER documentation would include the following:

- Description of the proposed action, including the immediate surrounding area;

[5] Section 4(f) of the Department of Transportation Act applies only to projects funded through the U.S. Department of Transportation. TDOT is not obligated to conduct a Section 4(f) evaluation of a state-funded project that could affect a public parkland or recreational resource, wildlife refuge, or historic site. TDOT, however, is committed to investigating ways to avoid, minimize and/or mitigate impacts to public parklands and recreational resources, wildlife refuges, and historic properties when developing a project.

- Discussion of any specific areas of concern, such as wetlands, relocations or Section 4(f);
- A list of other state or federal actions required for the proposal; and
- Any concurrence letters from the State Historic Preservation Office (archaeological and/or historic architectural resources) and U.S. Fish and Wildlife Service (endangered species).

The documentation should also address unusual circumstances associated with the project, if any. Where there are unusual circumstances, TDOT should undertake sufficient early coordination with agencies, public involvement and environmental studies to determine whether there is the potential for significant impacts.

If it is determined that the project is not likely to have significant impacts, the results of the environmental studies, coordination and public involvement should adequately support that conclusion and should be included in the Minor TEER documentation. TDOT has developed an electronic template for Minor TEERs.

A link to the electronic template for a Minor TEER is provided below.

10.6 Preparation of a Major TEER

This section describes the two stages of preparation for a Major TEER (draft and final), the content and format of a Major TEER, and the review and approval process.

10.6.1 Two Stages of a Major TEER

The Major TEER documentation is prepared in two stages: a draft and a final document. The draft Major TEER is developed, reviewed and approved, and circulated to the public and agencies for comment, much like a NEPA EA or DEIS. The final TEER is prepared following the comment period for the draft Major TEER and once TDOT has selected the alternative to be implemented. The final Major TEER records TDOT's decisions regarding the selected alternative and represents TDOT's commitment to implement the agreed-upon mitigation strategies for the project.

10.6.2 Draft Major TEER

10.6.2.1 Content and Format

The Major TEER is intended to be a concise document that summarizes the results of the technical studies. It should not include detailed or lengthy descriptions of information that has been gathered for the analyses. Technical studies that form the basis of the conclusions presented in the Major TEER should be referenced in the document and copies of those studies should be maintained in the project files at the Environmental Division. Once the draft Major TEER is approved and ready for circulation, the technical studies, with the exception of precise locations of archaeological resources, should be made available to the public or agencies that ask to review them.

The size and complexity of a Draft Major TEER should be directly related to the size of the project and its expected impacts. For a simple project with few impacts, the Major TEER may be only a few pages in length; for a more complex project, the document will likely be substantially longer. The Major TEER should contain only the information that is applicable to the specific project. There is no need to recite standard methodologies for issues for which there are no anticipated impacts.

The suggested format for the Draft Major TEER is as follows:

- Cover Sheet. The cover page provides the name and location of the project, a line for the TDOT approval signature and date, and the due date for comments. It also identifies the name, address and telephone number of the TDOT contact person(s) for the document.
- Summary: A brief (one to two pages) summary is placed after the signature page. This summarizes the project, the alternatives, and the primary benefits and adverse impacts. Also included is a list of the environmental commitments that have been identified in the Major TEER, which will be printed on green paper.
- Purpose and Need. This section includes a description of the proposed transportation project, the length and termini of the project, the project background, its consistency with existing plans, and the transportation or other needs that the project is intended to satisfy.
- Alternatives. This section discusses the alternative(s) that are under consideration. This section also identifies and briefly describes those alternatives that were considered and found not to be reasonable or feasible, and thus were dropped from further consideration.
- Impacts. This section describes the social, economic and environmental impacts and consequences of the proposed project. The level of analysis described should be sufficient to adequately address the impacts and appropriate mitigation measures, and address known and foreseeable public and agency concerns. The discussion should focus on the technical areas that are described in Section 10.4.2.2, *Technical Studies*.
- Comments and Coordination. This section describes the public involvement and agency coordination activities, summarizes key issues/concerns and pertinent information received from the public and agencies, and lists those agencies and persons that were consulted.
- Appendices. There may be one or more appendices, depending upon the size and complexity of the project. Coordination letters received from agencies, organizations and the public as a result of initial and ongoing coordination are included in a coordination appendix. Other appendices may include analytical information that substantiates an analysis that is important to the document, such as the noise impact analysis.

10.6.2.2 Quality Assurance Process

Section 6.7.2, TDOT's Environmental Document Quality Assurance Process, described the procedures by which the Draft and Final Major TEERs, and related TESA documentation, must be reviewed to ensure both the technical completeness and integrity and the editorial quality of the document. The process illustrated in Figure 6.1 applies to Major TEER level documents, with the exception of the orange boxes indicating FHWA review. Reviews of Major TEER documentation are conducted within TDOT.

10.6.2.3 Approval of Draft Major TEER

Once the Draft Major TEER has been completed, including reviews by Environmental Division staff, the Environmental Division Director elevates the document to the next higher level of TDOT management (currently the Bureau Chief for Environment and Planning) for approval and signature. The Environment and Planning Bureau Chief signs the cover, and the Draft Major TEER is printed and made available for public and agency review.

For Major TEER-level projects, the TESA concurrence point 3 (refer to Section 4.5, *Tennessee Environmental Streamlining Agreement*) occurs when the Draft Major TEER has been prepared, and prior to its approval and circulation.

10.6.2.4 Public and Agency Review and Comment

The Draft Major TEER is made available for public inspection at the TDOT Environmental Division office, at the TDOT Region Office, at the public library in the county (or counties) where the project is to be implemented, and at other locations as necessary. A notice of availability is placed in the local newspapers announcing:

- The availability of the Draft Major TEER;
- Locations where the document can be reviewed;
- Dates, times and locations of any public meeting or hearing on the Draft Major TEER;
- Due date and addresses for written comments; and
- A contact name, address and telephone number for more information.

TDOT may place an electronic version of the Draft Major TEER on the TDOT website.

While a public hearing is not required, TDOT will hold a public hearing if there is substantial public interest. When a hearing has been requested and it is unclear whether the request represents substantial public interest, TDOT will hold the hearing. Whether or not a hearing is held, comments on the Draft Major TEER and the project are accepted during the 60-day period following the date that the Draft Major TEER is made available. In addition, TDOT accepts written comments during the 21-day period following a public hearing on a Major TEER. At a minimum, at least 60 calendar days must be provided for comments to be received.

Following the comment period for the Draft Major TEER, the Environmental Division staff reviews the comments received and coordinates with staff in other TDOT divisions as necessary to determine how the comments will be addressed. The Environmental Division staff prepares a brief memo summarizing the public and agency comments and the responses to those comments; the memo may include a recommendation from the Environmental Division staff on how TDOT should proceed. The memo is reviewed by the Environmental Division Director and sent to the Chief of Environment and Planning.

10.6.2.5 Selection of the Preferred Alternative

The agency and public comments are used by TDOT to help determine the alternative to be implemented. TDOT first makes the decision whether to build or not build the project as described in the Draft Major TEER. If the decision is made to proceed with the project, TDOT then determines which of the build alternatives (if there is more than one) is the preferred alternative. The selection of the preferred alternative is documented in the Final Major TEER.

For Major TEER projects, TESA concurrence point 4 (refer to Section 4.5, *Tennessee Environmental Streamlining Agreement*) occurs once the preferred alternative and mitigation strategies have been identified.

10.6.3 Final Major TEER

10.6.3.1 Format of Final Major TEER

The Final Major TEER is prepared to document the decision on the selected alternative for the project. Two choices are available for the Final Major TEER format, a revision of the Draft Major TEER or preparation of an abbreviated Final Major TEER document.

The first format is to revise the Draft Major TEER to serve as the Final Major TEER. The entire document is revised to identify the selected alternative, with the most substantial changes occurring in the Alternatives and Coordination Chapters. Throughout the document the name of the alternative chosen is changed to "Selected Alternative" and graphics are revised to show the selected alternative. The coordination chapter is also revised to include a summary of the public hearing and agency comments.

The second format for the Final Major TEER involves much less work, but serves the same purpose. In this scenario, an abbreviated Final Major TEER document is prepared that identifies the selected alternative and any changes that have occurred to the alternative as a result of public, agency, or public hearing comments. The comments are summarized and the Draft Major TEER is appended to the Final Major TEER.

Regardless of the Final Major TEER format, the following items must be incorporated:

- Identification of the selected alternative and an explanation of its selection over other alternatives that were evaluated in the Draft Major TEER;
- Description of changes in the proposed project and mitigation measures resulting from the comments received, and any impact of the changes;
- Confirmation of the final mitigation measures for the project;
- Other commitments made in the Major TEER; and
- Discussion of the public and agency comments received and appropriate responses to those comments.

10.6.3.2 Approval and Distribution

Following reviews by the Environmental Division Director and the Chief of Environment and Planning, the Final Major TEER is forwarded to the Commissioner of Transportation for signature.

Copies of the signed Final Major TEER are distributed to TDOT's Design Division and other divisions as appropriate, the applicable TDOT Region Office, and the local government official(s) with jurisdiction over the project area. A notice of the availability of the Final Major TEER, in the form of a letter, is sent to the federal, state and local agencies that have expressed an interest in the action. TDOT also publishes a legal notice in the local newspaper in the project area to advertise the availability of the Final Major TEER at a local public library nearest the project area, the TDOT Region office, and on the TDOT website.

10.6.4 Continuous Activities and Reevaluations

TDOT may need to revisit the TEER documentation if there is a substantial lag time between the environmental approval and construction letting, or if there have been substantial changes in the project or the project area between the environmental approval and the construction of the project.

10.6.4.1 Environmental Reevaluations

If more than a year has passed between the signing of the TEER and the construction letting, the Environmental Division conducts a reevaluation of the project. As a matter of course, TDOT conducts two reevaluations for each project: the first at right-of-way acquisition, and the second prior to construction. The purpose of the reevaluation is two-fold:

- To ensure that the project design is being developed in a way that is consistent with the commitments contained in the TEER; and
- To address changes in the design, planned mitigation measures, and the project area, as well as to address the unanticipated late discovery of sensitive environmental resources.

When there has been continuous activity on a project and there are no substantial changes in design, land use, or impact, a note to the project file is sufficient. When

there are substantial changes in design, land use, or impact, or where there has been a substantial lag (greater than one year) in the project, a memorandum documenting the reevaluation may be necessary.

The reevaluation should focus on changes in the project, its surroundings and impacts, and any new issues identified since the last environmental documentation. To accomplish the reevaluation, it may be necessary to conduct field reviews, additional studies and agency coordination. The results of these reviews, studies, and written coordination are included in the reevaluation documentation, which is in the form of a memorandum or letter.

The written reevaluation is prepared by the Environmental Division staff, and reviewed and signed by the Environmental Division Director. The signed reevaluation is placed in the project file.

10.6.4.2 Supplemental Evaluations

A Supplemental TEER may be necessary when major changes, new information or further developments occur in the project that were not identified or discussed in the original TEER. The need for a Supplemental TEER may be revealed through the reevaluation process, discussed above in Section 10.6.4.1.

A Supplemental TEER may be prepared in the following cases:

- Changes are made in the design or scope of the project after the TEER is approved, and these changes would result in substantial adverse environmental impacts not evaluated in the TEER;
- New information or circumstances relevant to the environment would result in substantial adverse environmental impacts not evaluated in the TEER; or
- New species or critical habitats are identified within the project area.

The supplement is developed using the same format and process as the TEER. If a Draft TEER has been circulated, and the circumstances described above occur prior to the Final TEER, the supplement documentation is included in the Final TEER. If the Final TEER for a project has been approved, and the above described circumstances occur, the supplement is prepared in the form of a Final TEER.

The Supplemental TEER should provide sufficient information to describe the proposed project, the reasons that a supplement is being prepared, and the status of the previous TEER. Unchanged information should be briefly summarized and referenced, rather than being repeated. Any new environmental requirements enacted since the last approval of the TEER should be addressed. The supplement should also summarize the results of any reevaluation that was performed. The Supplement TEER thus represents an up-to-date consideration of the project and its environmental effects.

The Supplemental TEER is reviewed, approved and distributed in the same manner as the Final TEER.

10.7 TEER Public Involvement Requirements

TDOT's latest *Public Involvement Plan* provides the foundation for the public involvement process and public notice requirements and procedures to be followed for preparing a TEER (see Section 7.3 of this Manual). The plan is on the TDOT website at http://www.tdot.state.tn.us/documents/pip0107.pdf.

The public involvement components for the TEER are similar to those for a NEPA level environmental evaluation, as described in Section 7.3.5, *NEPA Public Involvement*. Public involvement elements for a TEER include:

- Early coordination;
- Public meetings and public hearings;
- Notifications for meetings and hearings;
- Meeting and hearing handouts; and
- Opportunities for public comments.

These elements are discussed briefly below.

10.7.1 Early Coordination

When TDOT determines the need to prepare a TEER for a state-funded project, one of the first actions is early coordination. This task and its elements are discussed in Chapter 4, *Early Coordination*.

10.7.2 Public Meetings and Hearings

During the preparation of a TEER, meetings and/or hearings may be held. The timing, number, and need for project meetings and hearings are decided by the Project Manager, Community Relations Division staff, and/or a multidisciplinary team. Environmental Division staff participates in the multidisciplinary team during development of a public involvement strategy or plan for a project that requires a TEER.

A public meeting is held to provide information to the public and obtain public input. They can be held at any time during the process, and they are used to disseminate information, provide a setting for public discussion, and get feedback from the community. They can be tailored to specific community needs and can be either formal or informal. For example, a meeting could be held with a small group of neighbors or a special interest group, or a project could warrant a community-wide meeting.

A public hearing is a formal meeting, documented by a court reporter and often held to meet legal requirements. TDOT holds a public hearing when:

- A project requires substantial amounts of right-of-way or substantially changes the layout or functions of connecting roads or the facility to be improved;
- A project has a substantial adverse impact on abutting property, otherwise has a significant social, economic, environmental or other effect; or
- If TDOT determines that holding a public hearing is in the public interest.

TDOT may elect to hold a public hearing or to offer the opportunity to request a public hearing for a Draft TEER once it has been circulated for public comment. TDOT must submit a transcript of each public hearing and a certification that a required hearing was held or evidence that a hearing opportunity was offered. The transcript includes a transcription of all oral comments received at the hearing and all written comments received either at the hearing or during the official comment period.

Public notices for meetings and hearings must be placed in a general circulation newspaper citing the time, date, and location of the hearing.

10.7.3 Notification of Meetings and Hearings

Notices for TEER-related public meetings and hearings take the form of either a legal notice in the classified section of project-area newspapers or as a newspaper display advertisement. The Environmental Division planner, the Project Manager, or his/her designee prepares the materials needed for the notice:

- General project location map; and
- Text for the notice that explains the purpose of the meeting/hearing and its location(s) and time.

The draft notice and map must be submitted to the Regional Community Relations Officer, with a copy to the Regional Survey and Design and Right-of-Way offices. The approved notice is then forwarded to the Legal Office, which will arrange for placing the advertisement in local papers.

Other optional means of notifying the public of an impending meeting may be:

- Flyers posted in local businesses; the flyer would be developed by the planner and provided to the project manager or other appropriate staff in the TDOT Region Office (e.g., public involvement coordinator). A sample flyer is included as Figure E-18 in Appendix E;
- “Smart signs” posted in highway right-of-way along the project corridor; sign would be developed by planner and provided to project manager or other appropriate staff in the Region Office; and/or

- News release for community newspapers, local radio stations; planner, project manager or designee would work with the Public Information Officer in the Community Relations Division.

When TDOT chooses not to hold a public hearing for a Draft TEER, a notice of opportunity must be published in local newspapers and posted on TDOT's website, to offer the public the opportunity to request a hearing. If no requests are received, TDOT places a notice in a local newspaper advising the public that although no public hearing will be held, the TEER document is available locally for review and comment.

10.7.4 Meeting and Hearing Handouts

The Environmental Division planner prepares a draft meeting handout for review by the Project Manager and/or multidisciplinary team. The handout should include a project summary, list of potential impacts, project map, and description of TDOT's relocation procedures. Once approved, the planner finalizes the summary and makes copies for the meeting. A sample handout is located in Appendix E, Figure E-19.

10.7.5 Opportunities for Public Comments

TDOT accepts written comments at public hearings as well as within the 21-day period following a public hearing. In addition, regardless of whether a hearing is held, the public and agencies are given at least 30 days from the date that the Draft TEER is made available to provide written comments on the project and the documentation. Public notices regarding the availability of the Draft TEER must include a contact name, address, and telephone number for persons who have questions, and specify the location for written comments to be sent.

10.8 Permits

State-funded projects may require one or more of the same permits that are required for federally-funded projects. Chapter 8, *Environmental Permits*, describes agency responsibilities for permits, permits required in the project development process, and the typical permits that may be required for TDOT projects.

10.9 Environmental Commitments and Coordination with Design and Construction Activities

During the environmental clearance process for state-funded projects, commitments may be made to avoid, minimize, or mitigate project impacts. It is important that these commitments be communicated through project design, construction, maintenance, and operation. The information on commitments that is presented in Chapter 9, *Environmental Commitments and Coordination with Design and Construction Activities*, also applies to state-funded projects.

Appendix A
ACRONYMS

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A.0 ACRONYMS A-1

A.0 ACRONYMS

ACHP	Advisory Council on Historic Preservation
ADT	Average Daily Traffic
ANSI	American National Standards Institute
APE	Area of Potential Effect
APR	Advanced Planning Report
AR	Administrative Record
ARAP	Aquatic Resource Alteration Permit
ARPA	Archaeological Resource Protection Act
ARC	Appalachian Regional Commission
BA	Biological Assessment
BMP	Best Management Practices
CE	Categorical Exclusion
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CAA	Clear Air Act of 1970
CAAA	Clean Air Act Amendments (1977 & 1990)
CFR	Code of Federal Regulations
CGP	Construction General Permit.
CO	Carbon Monoxide
CSS	Context Sensitive Solutions
dB	Decibels
dBA	A-Weighted Decibel
DEIS	Draft Environmental Impact Statement

DLG	Digital Line Graph
DOA	US Department of the Army
DOD	US Department of Defense
DOI	US Department of the Interior
DOT	Department(s) of Transportation
EA	Environmental Assessment
EAR	Environmental Action Report
EIS	Environmental Impact Statement
E.O.	Executive Order
EPA	Environmental Protection Agency
EPSC	Erosion Prevention and Sediment Control.
ESA	Environmental Site Assessment
ESF	Exceptionally Significant Feature
FAPG	Federal Aid Program Guide
FEMA	Federal Emergency Management Agency
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
FHPM	Federal-Aid Highway Program Manual
FIRM	Flood Insurance Rate Maps
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act of 1981
FSR	Final Scoping Report
FTA	Federal Transit Administration
FWPCA	Federal Water Pollution Control Act
FWS	US Fish and Wildlife Service
GIS	Geographic Information System

HABS	Historic American Building Survey
HAER	Historic American Engineering Record
HUD	US Housing and Urban Development
IPPT	Interdisciplinary Project Planning Team.
ISTEA	Intermodal Surface Transportation Act of 1991
LESA	Land Evaluation and Site Assessment
Leq	Equivalent Continuous Noise Level
LOS	Level of Service
LRTP	Long Range Transportation Plan
L&WCF	Land and Water Conservation Fund
MOA	Memorandum of Agreement
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act of 1969
NFIP	National Flood Insurance Program
NMFS	National Marine Fisheries Service
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOI	Notice of Intent
NOC	Notice of Coverage
NPDES	National Pollution Discharge Elimination System
NPS	National Park Service
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWP	Nationwide Permit

PA	Programmatic Agreement
P.L.	Public Law
PPRM	Program, Project and Resource Management (Plan)
RCRA	Resource Conservation and Recovery Act
ROD	Record of Decision
RSI	Recovery of Significant (archaeological) Information
RTPO	Rural Transportation Planning Organization
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SARA	Superfund Amendments and Reauthorization Act
SDMS	SMART Delivery Management System
SEIS	Supplemental Environmental Impact Statement
SEMS	Statewide Environmental Management System (See SDMS)
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
STIP	State Transportation Improvement Program
SOL	Statute of Limitations on Claims
STRAHNET	Strategic Highway Network
STP	Surface Transportation Program
SWPPP	Stormwater Pollution Prevention Plan
TCM	Transportation Control Measures
T&E	Threatened and endangered
TDEC	Tennessee Department of Environment and Conservation
TDOA	Tennessee Division of Archaeology
TDOT	Tennessee Department of Transportation
TEA-21	Transportation Equity Act for the 21st Century (1998)
TEER	Tennessee Environmental Evaluation Report

TESA	Tennessee Environmental Streamlining Agreement for the Environmental and Regulatory Coordination of Major Transportation Projects
THC	Tennessee Historical Commission
TIP	Transportation Improvement Program
TMDL	Total Maximum Daily Load
TPO	Transportation Planning Organization
TPR	Transportation Planning Report
TVA	Tennessee Valley Authority
TWRA	Tennessee Wildlife Resources Agency
USACE	US Army Corps of Engineers
USC	United States Code
USCG	US Coast Guard
USDA	US Department of Agriculture
USDOT	US Department of Transportation
USFS	US Forest Service
USGS	US Geological Survey

Appendix B
NEPA, CEQ, FHWA, SAFETEA-LU AND SECTION 4(F) REGULATIONS

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National Environmental Policy Act 43 USC Parts 4321-4335

Sec. 4321. - Congressional declaration of purpose

The purposes of this chapter are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

Sec. 4331. - Congressional declaration of national environmental policy

(a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

(b) In order to carry out the policy set forth in this chapter, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may -

> **(1)** fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
>
> **(2)** assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
>
> **(3)** attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
>
> **(4)** preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;
>
> **(5)** achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
>
> **(6)** enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment

Sec. 4332. - Cooperation of agencies; reports; availability of information; recommendations; international and national coordination of efforts

The Congress authorizes and directs that, to the fullest extent possible:

(1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter, and

(2) all agencies of the Federal Government shall -

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by subchapter II of this chapter, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on -

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of title 5, and shall accompany the proposal through the existing agency review processes;

(D) Any detailed statement required under subparagraph (C) after January 1, 1970, for any major Federal action funded under a program of grants to States shall not be deemed to be legally insufficient solely by reason of having been prepared by a State agency or official, if:

(i) the State agency or official has statewide jurisdiction and has the responsibility for such action,

(ii) the responsible Federal official furnishes guidance and participates in such preparation,

(iii) the responsible Federal official independently evaluates such statement prior to its approval and adoption, and

(iv) after January 1, 1976, the responsible Federal official provides early notification to, and solicits the views of, any other State or any Federal land management entity of any action or any alternative thereto which may have significant impacts upon such State or affected Federal land management entity and, if there is any disagreement on such impacts, prepares a written assessment of such impacts and views for incorporation into such detailed statement.

The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this chapter; and further, this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdiction. [1]

(E) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(F) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(G) make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(H) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(I) assist the Council on Environmental Quality established by subchapter II of this chapter

Sec. 4333. - Conformity of administrative procedures to national environmental policy

All agencies of the Federal Government shall review their present statutory authority, administrative regulations, and current policies and procedures for the purpose of determining whether there are any deficiencies or inconsistencies therein which prohibit full compliance with the purposes and provisions of this chapter and shall propose to the President not later than July 1, 1971, such measures as may be necessary to bring their authority and policies into conformity with the intent, purposes, and procedures set forth in this chapter

Sec. 4334. - Other statutory obligations of agencies

Nothing in section 4332 or 4333 of this title shall in any way affect the specific statutory obligations of any Federal agency

(1) to comply with criteria or standards of environmental quality,

(2) to coordinate or consult with any other Federal or State agency, or

(3) to act, or refrain from acting contingent upon the recommendations or certification of any other Federal or State agency

Sec. 4335. - Efforts supplemental to existing authorizations

The policies and goals set forth in this chapter are supplementary to those set forth in existing authorizations of Federal agencies

23 Code of Federal Regulations Part 771

23 CFR

Highways

CHAPTER I

FEDERAL HIGHWAY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION

SUBCHAPTER H -- RIGHT-OF-WAY AND ENVIRONMENT

PART 771 -- ENVIRONMENTAL IMPACT AND RELATED PROCEDURES

Sec.

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Authority: 42 U.S.C. 4321 *et seq.*; 23 U.S.C. 109, 110, 128, 138 and 315; 49 U.S.C. 303(c), 5301(e), 5323, and 5324; 40 CFR part 1500 *et seq.*; 49 CFR 1.48(b) and 1.51.

Source: 52 FR 32660, Aug. 28, 1987, unless otherwise noted.

§771.101 Purpose.

This regulation prescribes the policies and procedures of the Federal Highway Administration (FHWA) and the Urban Mass Transportation Administration* (UMTA) for implementing the National Environmental Policy Act of 1969 as amended (NEPA), and the regulation of the Council on Environmental Quality (CEQ), 40 CFR parts 1500 through 1508. This regulation sets forth all FHWA, UMTA, and Department of Transportation (DOT) requirements under NEPA for the processing of highway and urban mass transportation projects. This regulation also sets forth procedures to comply with 23 U.S.C. 109(h), 128, 138, and 49 U.S.C. 303, 1602(d), 1604(h), 1604(i), 1607a, 1607a-1 and 1610.

§771.103 [Reserved]

§771.105 Policy.

It is the policy of the Administration that:

a. To the fullest extent possible, all environmental investigations, reviews, and consultations be coordinated as a single process, and compliance with all applicable environmental requirements be reflected in the environmental document required by this regulation. [1]

[1]FHWA and UMTA have supplementary guidance on the format and content of NEPA documents for their programs. This includes a list of various environmental laws, regulations, and Executive orders which may be applicable to projects. The FHWA Technical Advisory T6640.8A, October 30, 1987, and the UMTA supplementary guidance are available from the respective FHWA and UMTA headquarters and field offices as prescribed in 49 CFR part 7, Appendices D and G.

b. Alternative courses of action be evaluated and decisions be made in the best overall public interest based upon a balanced consideration of the need for safe and efficient transportation; of the social, economic, and environmental impacts of the proposed transportation improvement; and of national, State, and local environmental protection goals.
c. Public involvement and a systematic interdisciplinary approach be essential parts of the development process for proposed actions.
d. Measures necessary to mitigate adverse impacts be incorporated into the action. Measures necessary to mitigate adverse impacts are eligible for Federal funding when the Administration determines that:
    1. The impacts for which the mitigation is proposed actually result from the Administration action; and
    2. The proposed mitigation represents a reasonable public expenditure after considering the impacts of the action and the benefits of the proposed mitigation measures. In making this determination, the Administration will consider, among other factors, the extent to which the proposed measures would assist in complying with a Federal statute, Executive Order, or Administration regulation or policy.
e. Costs incurred by the applicant for the preparation of environmental documents requested by the Administration be eligible for Federal assistance.
f. No person, because of handicap, age, race, color, sex, or national origin, be excluded from participating in, or denied benefits of, or be subject to discrimination under any Administration program or procedural activity required by or developed pursuant to this regulation.

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* The Urban Mass Transit Administration (UMTA) is now the Federal Transit Administration (FTA).

[52 FR 32660, Aug. 28, 1987; 53 FR 11065, Apr. 5, 1988]

§771.107 Definitions.

The definitions contained in the CEQ regulation and in Titles 23 and 49 of the United States Code are applicable. In addition, the following definitions apply.

a. *Environmental studies*. The investigations of potential environmental impacts to determine the environmental process to be followed and to assist in the preparation of the environmental document.
b. *Action*. A highway or transit project proposed for FHWA or UMTA funding. It also includes activities such as joint and multiple use permits, changes in access control, etc., which may or may not involve a commitment of Federal funds.
c. *Administration action*. The approval by FHWA or UMTA of the applicant's request for Federal funds for construction. It also includes approval of activities such as joint and multiple use permits, changes in access control, etc., which may or may not involve a commitment of Federal funds.
d. *Administration*. FHWA or UMTA, whichever is the designated lead agency for the proposed action.
e. *Section 4(f).* Refers to 49 U.S.C. 303 and 23 U.S.C. 138. [2]

[2]Section 4(f), which protected certain public lands and all historic sites, technically was repealed in 1983 when it was codified, without substantive change, as 49 U.S.C. 303. This regulation continues to refer to section 4(f) because it would create needless confusion to do otherwise; the policies section 4(f) engendered are widely referred to as "section 4(f)" matters. A provision with the same meaning is found at 23 U.S.C. 138 and applies only to FHWA actions.

§771.109 Applicability and responsibilities.

a.
    1. The provisions of this regulation and the CEQ regulation apply to actions where the Administration exercises sufficient control to condition the permit or project approval. Actions taken by the applicant which do not require Federal approvals, such as preparation of a regional transportation plan are not subject to this regulation.
    2. This regulation does not apply to, or alter approvals by the Administration made prior to the effective date of this regulation.
    3. Environmental documents accepted or prepared by the Administration after the effective date of this regulation shall be developed in accordance with this regulation.
b. It shall be the responsibility of the applicant, in cooperation with the Administration to implement those mitigation measures stated as commitments in the environmental documents prepared pursuant to this regulation. The FHWA will assure that this is accomplished as a part of its program management responsibilities that include reviews of designs, plans, specifications, and estimates (PS&E), and construction inspections. The UMTA will assure implementation of committed mitigation measures through incorporation by reference in the grant agreement, followed by reviews of designs and construction inspections.
c. The Administration, in cooperation with the applicant, has the responsibility to manage the preparation of the appropriate environmental document. The role of the applicant will be determined by the Administration accordance with the CEQ regulation:
    1. *Statewide agency.* If the applicant is a public agency that has statewide jurisdiction (for example, a State highway agency or a State department of transportation) or is a local unit of government acting through a statewide agency, and meets the requirements of section 102(2)(D) of NEPA, the applicant may prepare the environmental impact statement (EIS) and other environmental documents with the Administration furnishing

guidance, participating in the preparation, and independently evaluating the document. All FHWA applicants qualify under this paragraph.

2. *Joint lead agency.* If the applicant is a public agency and is subject to State or local requirements comparable to NEPA, then the Administration and the applicant may prepare the EIS and other environmental documents as joint lead agencies. The applicant shall initially develop substantive portions of the environmental document, although the Administration will be responsible for its scope and content.
3. *Cooperating agency.* Local public agencies with special expertise in the proposed action may be cooperating agencies in the preparation of an environmental document. An applicant for capital assistance under the Urban Mass Transportation Act of 1964, as amended (UMT Act), is presumed to be a cooperating agency if the conditions in paragraph (c) (1) or (2) of this section do not apply. During the environmental process, the Administration will determine the scope and content of the environmental document and will direct the applicant, acting as a cooperating agency, to develop information and prepare those portions of the document concerning which it has special expertise.
4. *Other.* In all other cases, the role of the applicant is limited to providing environmental studies and commenting on environmental documents. All private institutions or firms are limited to this role.

d. When entering into Federal-aid project agreements pursuant to 23 U.S.C. 110, it shall be the responsibility of the State highway agency to ensure that the project is constructed in accordance with and incorporates all committed environmental impact mitigation measures listed in approved environmental documents unless the State requests and receives written Federal Highway Administration approval to modify or delete such mitigation features.

[52 FR 32660, Aug. 28, 1987; 53 FR 11065, Apr. 5, 1988, as amended at 62 FR 6873, Feb. 14, 1997]

§771.111 Early coordination, public involvement, and project development.

a. Early coordination with appropriate agencies and the public aids in determining the type of environmental document an action requires, the scope of the document, the level of analysis, and related environmental requirements. This involves the exchange of information from the inception of a proposal for action to preparation of the environmental document. Applicants intending to apply for funds should notify the Administration at the time that a project concept is identified. When requested, the Administration will advise the applicant, insofar as possible, of the probable class of action and related environmental laws and requirements and of the need for specific studies and findings which would normally be developed concurrently with the environmental document.
b. The Administration will identify the probable class of action as soon as sufficient information is available to identify the probable impacts of the action. For UMTA, this is normally no later than the review of the transportation improvement program (TIP) and for FHWA, the approval of the 105 program (23 U.S.C. 105).
c. When FHWA and UMTA are involved in the development of joint projects, or when FHWA or UMTA acts as a joint lead agency with another Federal agency, a mutually acceptable process will be established on a case-by-case basis.
d. During the early coordination process, the Administration, in cooperation with the applicant, may request other agencies having special interest or expertise to become cooperating agencies. Agencies with jurisdiction by law must be requested to become cooperating agencies.
e. Other States, and Federal land management entities, that may be significantly affected by the action or by any of the alternatives shall be notified early and their views solicited by the applicant in cooperation with the Administration. The Administration will prepare a written evaluation of any significant unresolved issues and furnish it to the applicant for incorporation into the environmental assessment (EA) or draft EIS.

f. In order to ensure meaningful evaluation of alternatives and to avoid commitments to transportation improvements before they are fully evaluated, the action evaluated in each EIS or finding of no significant impact (FONSI) shall:
    1. Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
    2. Have independent utility or independent significance, i.e., be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made; and
    3. Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

g. For major transportation actions, the tiering of EISs as discussed in the CEQ regulation (40 CFR 1502.20) may be appropriate. The first tier EIS would focus on broad issues such as general location, mode choice, and areawide air quality and land use implications of the major alternatives. The second tier would address site-specific details on project impacts, costs, and mitigation measures.

h. For the Federal-aid highway program:
    1. Each State must have procedures approved by the FHWA to carry out a public involvement/public hearing program pursuant to 23 U.S.C. 128 and 40 CFR parts 1500 through 1508.
    2. State public involvement/public hearing procedures must provide for:
        i. Coordination of public involvement activities and public hearings with the entire NEPA process.
        ii. Early and continuing opportunities during project development for the public to be involved in the identification of social, economic, and environmental impacts, as well as impacts associated with relocation of individuals, groups, or institutions.
        iii. One or more public hearings or the opportunity for hearing(s) to be held by the State highway agency at a convenient time and place for any Federal-aid project which requires significant amounts of right-of-way, substantially changes the layout or functions of connecting roadways or of the facility being improved, has a substantial adverse impact on abutting property, otherwise has a significant social, economic, environmental or other effect, or for which the FHWA determines that a public hearing is in the public interest.
        iv. Reasonable notice to the public of either a public hearing or the opportunity for a public hearing. Such notice will indicate the availability of explanatory information. The notice shall also provide information required to comply with public involvement requirements of other laws, Executive orders, and regulations.
        v. Explanation at the public hearing of the following information, as appropriate:
            A. The project's purpose, need, and consistency with the goals and objectives of any local urban planning,
            B. The project's alternatives, and major design features,
            C. The social, economic, environmental, and other impacts of the project,
            D. The relocation assistance program and the right-of-way acquisition process.
            E. The State highway agency's procedures for receiving both oral and written statements from the public.
        vi. Submission to the FHWA of a transcript of each public hearing and a certification that a required hearing or hearing opportunity was offered. The transcript will be accompanied by copies of all written statements from the public, both submitted at the public hearing or during an announced period after the public hearing.
    3. Based on the reevaluation of project environmental documents required by §771.129, the FHWA and the State highway agency will determine whether changes in the project or new information warrant additional public involvement.
    4. Approvals or acceptances of public involvement/public hearing procedures prior to the publication date of this regulation remain valid.

i. Applicants for capital assistance in the UMTA program achieve public participation on proposed projects by holding public hearings and seeking input from the public through the scoping process for environmental documents. For projects requiring EISs, a public hearing will be held during the circulation period of the draft EIS. For all other projects, an opportunity for public hearings will be afforded with adequate prior notice pursuant to 49 U.S.C. 1602(d), 1604(i), 1607a(f) and 1607a-1(d), and such hearings will be held when anyone with a significant social, economic, or environmental interest in the matter requests it. Any hearing on the action must be coordinated with the NEPA process to the fullest extent possible.

j. Information on the UMTA environmental process may be obtained from: Director, Office of Planning Assistance, Urban Mass Transportation Administration, Washington, DC 20590. Information on the FHWA environmental process may be obtained from: Director, Office of Environmental Policy, Federal Highway Administration, Washington, DC 20590.

§771.113 Timing of Administration activities.

a. The Administration in cooperation with the applicant will perform the work necessary to complete a FONSI or an EIS and comply with other related environmental laws and regulations to the maximum extent possible during the NEPA process. This work includes environmental studies, related engineering studies, agency coordination and public involvement. However, final design activities, property acquisition (with the exception of hardship and protective buying, as defined in §771.117(d)), purchase of construction materials or rolling stock, or project construction shall not proceed until the following have been completed:
    1.
        i. The action has been classified as a categorical exclusion (CE), or
        ii. A FONSI has been approved, or
        iii. A final EIS has been approved and available for the prescribed period of time and a record of decision has been signed;
    2. For actions proposed for FHWA funding, the FHWA Division Administrator has received and accepted the certifications and any required public hearing transcripts required by 23 U.S.C. 128;
    3. For activities proposed for FHWA funding, the programming requirements of 23 CFR part 450, subpart B, and 23 CFR part 630, subpart A, have been met.

b. For FHWA, the completion of the requirements set forth in paragraphs (a)(1) and (2) of this section is considered acceptance of the general project location and concepts described in the environmental document unless otherwise specified by the approving official. However, such approval does not commit the Administration to approve any future grant request to fund the preferred alternative.

c. Letters of Intent issued under the authority of section 3(a)(4) of the UMT Act are used by UMTA to indicate an intention to obligate future funds for multi-year capital transit projects. Letters of Intent will not be issued by UMTA until the NEPA process is completed.

[52 FR 32660, Aug. 28, 1987; 53 FR 11066, Apr. 5, 1988]

§771.115 Classes of actions.

There are three classes of actions which prescribe the level of documentation required in the NEPA process.

a. *Class I (EISs).* Actions that significantly affect the environment require an EIS (40 CFR 1508.27). The following are examples of actions that normally required an EIS:
    1. A new controlled access freeway.
    2. A highway project of four or more lanes on a new location.

3. New construction or extension of fixed rail transit facilities (e.g., rapid rail, light rail, commuter rail, automated guideway transit).
4. New construction or extension of a separate roadway for buses or high occupancy vehicles not located within an existing highway facility.

b. *Class II (CEs).* Actions that do not individually or cumulative have a significant environmental effect are excluded from the requirement to prepare an EA or EIS. A specific list of CEs normally not requiring NEPA documentation is set forth in §771.117(c). When appropriately documented, additional projects may also qualify as CEs pursuant to §771.117(d).

c. *Class III (EAs)*. Actions in which the significance of the environmental impact is not clearly established. All actions that are not Class I or II are Class III. All actions in this class require the preparation of an EA to determine the appropriate environmental document required.

§771.117 Categorical exclusions.

a. Categorical exclusions (CEs) are actions which meet the definition contained in 40 CFR 1508.4, and, based on past experience with similar actions, do not involve significant environmental impacts. They are actions which: do not induce significant impacts to planned growth or land use for the area; do not require the relocation of significant numbers of people; do not have a significant impact on any natural, cultural, recreational, historic or other resource; do not involve significant air, noise, or water quality impacts; do not have significant impacts on travel patterns; or do not otherwise, either individually or cumulatively, have any significant environmental impacts.

b. Any action which normally would be classified as a CE but could involve unusual circumstances will require the Administration, in cooperation with the applicant, to conduct appropriate environmental studies to determine if the CE classification is proper. Such unusual circumstances include:
    1. Significant environmental impacts;
    2. Substantial controversy on environmental grounds;
    3. Significant impact on properties protected by section 4(f) of the DOT Act or section 106 of the National Historic Preservation Act; or
    4. Inconsistencies with any Federal, State, or local law, requirement or administrative determination relating to the environmental aspects of the action.

c. The following actions meet the criteria for CEs in the CEQ regulation (section 1508.4) and §771.117(a) of this regulation and normally do not require any further NEPA approvals by the Administration:
    1. Activities which do not involve or lead directly to construction, such as planning and technical studies; grants for training and research programs; research activities as defined in 23 U.S.C. 307; approval of a unified work program and any findings required in the planning process pursuant to 23 U.S.C. 134; approval of statewide programs under 23 CFR part 630; approval of project concepts under 23 CFR part 476; engineering to define the elements of a proposed action or alternatives so that social, economic, and environmental effects can be assessed; and Federal-aid system revisions which establish classes of highways on the Federal-aid highway system.
    2. Approval of utility installations along or across a transportation facility.
    3. Construction of bicycle and pedestrian lanes, paths, and facilities.
    4. Activities included in the State's *highway safety plan* under 23 U.S.C. 402.
    5. Transfer of Federal lands pursuant to 23 U.S.C. 317 when the subsequent action is not an FHWA action.
    6. The installation of noise barriers or alterations to existing publicly owned buildings to provide for noise reduction.
    7. Landscaping.

8. Installation of fencing, signs, pavement markings, small passenger shelters, traffic signals, and railroad warning devices where no substantial land acquisition or traffic disruption will occur.
9. Emergency repairs under 23 U.S.C. 125.
10. Acquisition of scenic easements.
11. Determination of payback under 23 CFR part 480 for property previously acquired with Federal-aid participation.
12. Improvements to existing rest areas and truck weigh stations.
13. Ridesharing activities.
14. Bus and rail car rehabilitation.
15. Alterations to facilities or vehicles in order to make them accessible for elderly and handicapped persons.
16. Program administration, technical assistance activities, and operating assistance to transit authorities to continue existing service or increase service to meet routine changes in demand.
17. The purchase of vehicles by the applicant where the use of these vehicles can be accommodated by existing facilities or by new facilities which themselves are within a CE.
18. Track and railbed maintenance and improvements when carried out within the existing right-of-way.
19. Purchase and installation of operating or maintenance equipment to be located within the transit facility and with no significant impacts off the site.
20. Promulgation of rules, regulations, and directives.

d. Additional actions which meet the criteria for a CE in the CEQ regulations (40 CFR 1508.4) and paragraph (a) of this section may be designated as CEs only after Administration approval. The applicant shall submit documentation which demonstrates that the specific conditions or criteria for these CEs are satisfied and that significant environmental effects will not result. Examples of such actions include but are not limited to:

1. Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (e.g., parking, weaving, turning, climbing).
2. Highway safety or traffic operations improvement projects including the installation of ramp metering control devices and lighting.
3. Bridge rehabilitation, reconstruction or replacement or the construction of grade separation to replace existing at-grade railroad crossings.
4. Transportation corridor fringe parking facilities.
5. Construction of new truck weigh stations or rest areas.
6. Approvals for disposal of excess right-of-way or for joint or limited use of right-of-way, where the proposed use does not have significant adverse impacts.
7. Approvals for changes in access control.
8. Construction of new bus storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and located on or near a street with adequate capacity to handle anticipated bus and support vehicle traffic.
9. Rehabilitation or reconstruction of existing rail and bus buildings and ancillary facilities where only minor amounts of additional land are required and there is not a substantial increase in the number of users.
10. Construction of bus transfer facilities (an open area consisting of passenger shelters, boarding areas, kiosks and related street improvements) when located in a commercial area or other high activity center in which there is adequate street capacity for projected bus traffic.
11. Construction of rail storage and maintenance facilities in areas used predominantly for industrial or transportation purposes where such construction is not inconsistent with existing zoning and where there is no significant noise impact on the surrounding community.

12. Acquisition of land for hardship or protective purposes; advance land acquisition loans under section 3(b) of the UMT Act. [3] Hardship and protective buying will be permitted only for a particular parcel or a limited number of parcels. These types of land acquisition quality for a CE only where the acquisition will not limit the evaluation of alternatives, including shifts in alignment for planned construction projects, which may be required in the NEPA process. No project development on such land may proceed until the NEPA process has been completed.

[3]Hardship acquisition is early acquisition of property by the applicant at the property owner's request to alleviate particular hardship to the owner, in contrast to others, because of an inability to sell his property. This is justified when the property owner can document on the basis of health, safety or financial reasons that remaining in the property poses an undue hardship compared to others.

Protective acquisition is done to prevent imminent development of a parcel which is needed for a proposed transportation corridor or site. Documentation must clearly demonstrate that development of the land would preclude future transportation use and that such development is imminent. Advance acquisition is not permitted for the sole purpose of reducing the cost of property for a proposed project.

e. Where a pattern emerges of granting CE status for a particular type of action, the Administration will initiate rulemaking proposing to add this type of action to the list of categorical exclusions in paragraph (c) or (d) of this section, as appropriate.

[52 FR 32660, Aug. 28, 1987; 53 FR 11066, Apr. 5, 1988]

§771.119 Environmental assessments.

a. An EA shall be prepared by the applicant in consultation with the Administration for each action that is not a CE and does not clearly require the preparation of an EIS, or where the Administration believes an EA would assist in determining the need for an EIS.
b. For actions that require an EA, the applicant, in consultation with the Administration, shall, at the earliest appropriate time, begin consultation with interested agencies and others to advise them of the scope of the project and to achieve the following objectives: determine which aspects of the proposed action have potential for social, economic, or environmental impact; identify alternatives and measures which might mitigate adverse environmental impacts; and identify other environmental review and consultation requirements which should be performed concurrently with the EA. The applicant shall accomplish this through an early coordination process (i.e., procedures under §771.111) or through a scoping process. Public involvement shall be summarized and the results of agency coordination shall be included in the EA.
c. The EA is subject to Administration approval before it is made available to the public as an Administration document. The UMTA applicants may circulate the EA prior to Administration approval provided that the document is clearly labeled as the applicant's document.
d. The EA need not be circulated for comment but the document must be made available for public inspection at the applicant's office and at the appropriate Administration field offices in accordance with paragraphs (e) and (f) of this section. Notice of availability of the EA, briefly describing the action and its impacts, shall be sent by the applicant to the affected units of Federal, State and local government. Notice shall also be sent to the State intergovernmental review contacts established under Executive Order 12372.
e. When a public hearing is held as part of the application for Federal funds, the EA shall be available at the public hearing and for a minimum of 15 days in advance of the public hearing. The notice of the public hearing in local newspapers shall announce the availability of the EA and where it may be obtained or reviewed. Comments shall be submitted in writing to the applicant or the Administration within 30 days of the availability of the EA unless the Administration

determines, for good cause, that a different period is warranted. Public hearing requirements are as described in §771.111.

f. When a public hearing is not held, the applicant shall place a notice in a newspaper(s) similar to a public hearing notice and at a similar stage of development of the action, advising the public of the availability of the EA and where information concerning the action may be obtained. The notice shall invite comments from all interested parties. Comments shall be submitted in writing to the applicant or the Administration within 30 days of the publication of the notice unless the Administration determines, for good cause, that a different period is warranted.

g. If no significant impacts are identified, the applicant shall furnish the administration a copy of the revised EA, as appropriate; the public hearing transcript, where applicable; copies of any comments received and responses thereto; and recommend a FONSI. The EA should also document compliance, to the extent possible, with all applicable environmental laws and Executive orders, or provide reasonable assurance that their requirements can be met.

h. When the Administration expects to issue a FONSI for an action described in §771.115(a), copies of the EA shall be made available for public review (including the affected units of government) for a minimum of 30 days before the Administration makes its final decision (See 40 CFR 1501.4(e)(2).) This public availability shall be announced by a notice similar to a public hearing notice.

i. If, at any point in the EA process, the Administration determines that the action is likely to have a significant impact on the environment, the preparation of an EIS will be required.

§771.121 Findings of no significant impact.

a. The Administration will review the EA and any public hearing comments and other comments received regarding the EA. If the Administration agrees with the applicant's recommendations pursuant to §771.119(g), it will make a separate written FONSI incorporating by reference the EA and any other appropriate environmental documents.

b. After a FONSI has been made by the Administration, a notice of availability of the FONSI shall be sent by the applicant to the affected units of Federal, State and local government and the document shall be available from the applicant and the Administration upon request by the public. Notice shall also be sent to the State intergovernmental review contacts established under Executive Order 12372.

c. If another Federal agency has issued a FONSI on an action which includes an element proposed for Administration funding, the Administration will evaluate the other agency's FONSI. If the Administration determines that this element of the project and its environmental impacts have been adequately identified and assessed, and concurs in the decision to issue a FONSI, the Administration will issue its own FONSI incorporating the other agency's FONSI. If environmental issues have not been adequately identified and assessed, the Administration will require appropriate environmental studies.

§771.123 Draft environmental impact statements.

a. A draft EIS shall be prepared when the Administration determines that the action is likely to cause significant impacts on the environment. When the decision has been made by the Administration to prepare an EIS, the Administration will issue a Notice of Intent (40 CFR 1508.22) for publication in the FEDERAL REGISTER. Applicants are encouraged to announce the intent to prepare an EIS by appropriate means at the local level.

b. After publication of the Notice of Intent, the Administration, in cooperation with the applicant, will begin a scoping process. The scoping process will be used to identify the range of alternatives and impacts and the significant issues to be addressed in the EIS and to achieve the other objectives of 40 CFR 1501.7. For FHWA, scoping is normally achieved through public and agency involvement procedures required by §771.111. For UMTA, scoping is achieved by

soliciting agency and public responses to the action by letter or by holding scoping meetings. If a scoping meeting is to be held, it should be announced in the Administration's Notice of Intent and by appropriate means at the local level.

c. The draft EIS shall be prepared by the Administration in cooperation with the applicant or, where permitted by law, by the applicant with appropriate guidance and participation by the Administration. The draft EIS shall evaluate all reasonable alternatives to the action and discuss the reasons why other alternatives, which may have been considered, were eliminated from detailed study. The draft EIS shall also summarize the studies, reviews, consultations, and coordination required by environmental laws or Executive orders to the extent appropriate at this stage in the environmental process.

d. An applicant which is a *statewide agency* may select a consultant to assist in the preparation of an EIS in accordance with applicable contracting procedures. Where the applicant is a *joint lead* or *cooperating* agency, the applicant may select a consultant, after coordination with the Administration to assure compliance with 40 CFR 1506.5(c). The Administration will select any such consultant for *other* applicants. (See §771.109(c) for definitions of these terms.)

e. The Administration, when satisfied that the draft EIS complies with NEPA requirements, will approve the draft EIS for circulation by signing and dating the cover sheet.

f. A lead, joint lead, or a cooperating agency shall be responsible for printing the EIS. The initial printing of the draft EIS shall be in sufficient quantity to meet requirements for copies which can reasonably be expected from agencies, organizations, and individuals. Normally, copies will be furnished free of charge. However, with Administration concurrence, the party requesting the draft EIS may be charged a fee which is not more than the actual cost of reproducing the copy or may be directed to the nearest location where the statement may be reviewed.

g. The draft EIS shall be circulated for comment by the applicant on behalf of the Administration. The draft EIS shall be made available to the public and transmitted to agencies for comment no later than the time the document is filed with the Environmental Protection Agency in accordance with 40 CFR 1506.9. The draft EIS shall be transmitted to:
    1. Public officials, interest groups, and members of the public known to have an interest in the proposed action or the draft EIS;
    2. Federal, State and local government agencies expected to have jurisdiction or responsibility over, or interest or expertise in, the action. Copies shall be provided directly to appropriate State and local agencies, and to the State intergovernmental review contacts established under Executive Order 12372; and
    3. States and Federal land management entities which may be significantly affected by the proposed action or any of the alternatives. These copies shall be accompanied by a request that such State or entity advise the Administration in writing of any disagreement with the evaluation of impacts in the statement. The Administration will furnish the comments received to the applicant along with a written assessment of any disagreements for incorporation into the final EIS.

h. The UMTA requires a public hearing during the circulation period of all draft EISs. FHWA public hearing requirements are as described in §771.111(h). Whenever a public hearing is held, the draft EIS shall be available at the public hearing and for a minimum of 15 days in advance of the public hearing. The availability of the draft EIS shall be mentioned, and public comments requested, in any public hearing notice and at any public hearing presentation. If a public hearing on an action proposed for FHWA funding is not held, a notice shall be placed in a newspaper similar to a public hearing notice advising where the draft EIS is available for review, how copies may be obtained, and where the comments should be sent.

i. The FEDERAL REGISTER public availability notice (40 CFR 1506.10) shall establish a period of not less than 45 days for the return of comments on the draft EIS. The notice and the draft EIS transmittal letter shall identify where comments are to be sent.

j. For UMTA funded major urban mass transportation investments, the applicant shall prepare a report identifying a locally preferred alternative at the conclusion of the Draft EIS circulation period. Approval may be given to begin preliminary engineering on the principal alternative(s) under consideration. During the course of such preliminary engineering, the applicant will refine

project costs, effectiveness, and impact information with particular attention to alternative designs, operations, detailed location decisions and appropriate mitigation measures. These studies will be used to prepare the final EIS or, where appropriate, a supplemental draft EIS.

§771.125 Final environmental impact statements.

a.
    1. After circulation of a draft EIS and consideration of comments received, a final EIS shall be prepared by the Administration in cooperation with the applicant or, where permitted by law, by the applicant with appropriate guidance and participation by the Administration. The final EIS shall identify the preferred alternative and evaluate all reasonable alternatives considered. It shall also discuss substantive comments received on the draft EIS and responses thereto, summarize public involvement, and describe the mitigation measures that are to be incorporated into the proposed action. Mitigation measures presented as commitments in the final EIS will be incorporated into the project as specified in §771.109(b). The final EIS should also document compliance, to the extent possible, with all applicable environmental laws and Executive orders, or provide reasonable assurance that their requirements can be met.
    2. Every reasonable effort shall be made to resolve interagency disagreements on actions before processing the final EIS. If significant issues remain unresolved, the final EIS shall identify those issues and the consultations and other efforts made to resolve them.

b. The final EIS will be reviewed for legal sufficiency prior to Administration approval.

c. The Administration will indicate approval of the EIS for an action by signing and dating the cover page. Final EISs prepared for actions in the following categories will be submitted to the Administration's Headquarters for prior concurrence:
    1. Any action for which the Administration determines that the final EIS should be reviewed at the Headquarters office. This would typically occur when the Headquarters office determines that (i) additional coordination with other Federal, State or local governmental agencies is needed; (ii) the social, economic, or environmental impacts of the action may need to be more fully explored; (iii) the impacts of the proposed action are unusually great; (iv) major issues remain unresolved; or (v) the action involves national policy issues.
    2. Any action to which a Federal, State or local government agency has indicated opposition on environmental grounds (which has not been resolved to the written satisfaction of the objecting agency).
    3. Major urban mass transportation investments as defined by UMTA's policy on major investments (49 FR 21284; May 18, 1984).

d. The signature of the UMTA approving official on the cover sheet also indicates compliance with section 14 of the UMT Act and fulfillment of the grant application requirements of sections 3(d)(1) and (2), 5(h), and 5(i) of the UMT Act.

e. Approval of the final EIS is not an Administration Action (as defined in §771.107(c)) and does not commit the Administration to approve any future grant request to fund the preferred alternative.

f. The initial printing of the final EIS shall be in sufficient quantity to meet the request for copies which can be reasonably expected from agencies, organizations, and individuals. Normally, copies will be furnished free of charge. However, with Administration concurrence, the party requesting the final EIS may be charged a fee which is not more than the actual cost of reproducing the copy or may be directed to the nearest location where the statement may be reviewed.

g. The final EIS shall be transmitted to any persons, organizations, or agencies that made substantive comments on the draft EIS or requested a copy, no later than the time the document is filed with EPA. In the case of lengthy documents, the agency may provide alternative circulation processes in accordance with 40 CFR 1502.19. The applicant shall also publish a notice of availability in local newspapers and make the final EIS available through the mechanism

established pursuant to DOT Order 4600.13 which implements Executive Order 12372. When filed with EPA, the final EIS shall be available for public review at the applicant's offices and at appropriate Administration offices. A copy should also be made available for public review at institutions such as local government offices, libraries, and schools, as appropriate.

§771.127 Record of decision.

a. The Administration will complete and sign a record of decision (ROD) no sooner than 30 days after publication of the final EIS notice in the FEDERAL REGISTER or 90 days after publication of a notice for the draft EIS, whichever is later. The ROD will present the basis for the decision as specified in 40 CFR 1505.2, summarize any mitigation measures that will be incorporated in the project and document any required section 4(f) approval in accordance with §771.135(l). Until any required ROD has been signed, no further approvals may be given except for administrative activities taken to secure further project funding and other activities consistent with 40 CFR 1506.1.
b. If the Administration subsequently wishes to approve an alternative which was not identified as the preferred alternative but was fully evaluated in the final EIS, or proposes to make substantial changes to the mitigation measures or findings discussed in the ROD, a revised ROD shall be subject to review by those Administration offices which reviewed the final EIS under §771.125(c). To the extent practicable the approved revised ROD shall be provided to all persons, organizations, and agencies that received a copy of the final EIS pursuant to §771.125(g).

§771.129 Re-evaluations.

a. A written evaluation of the draft EIS shall be prepared by the applicant in cooperation with the Administration if an acceptable final EIS is not submitted to the Administration within 3 years from the date of the draft EIS circulation. The purpose of this evaluation is to determine whether or not a supplement to the draft EIS or a new draft EIS is needed.
b. A written evaluation of the final EIS will be required before further approvals may be granted if major steps to advance the action (e.g., authority to undertake final design, authority to acquire a significant portion of the right-of-way, or approval of the plans, specifications and estimates) have not occurred within three years after the approval of the final EIS, final EIS supplement, or the last major Administration approval or grant.
c. After approval of the EIS, FONSI, or CE designation, the applicant shall consult with the Administration prior to requesting any major approvals or grants to establish whether or not the approved environmental document or CE designation remains valid for the requested Administration action. These consultations will be documented when determined necessary by the Administration.

[52 FR 32660, Aug. 28, 1987; 53 FR 11066, Apr. 5, 1988]

§771.130 Supplemental environmental impact statements.

a. A draft EIS, final EIS, or supplemental EIS may be supplemented at any time. An EIS shall be supplemented whenever the Administration determines that:
    1. Changes to the proposed action would result in significant environmental impacts that were not evaluated in the EIS; or
    2. New information or circumstances relevant to environmental concerns and bearings on the proposed action or its impacts would result in significant environmental impacts not evaluated in the EIS.
b. However, a supplemental EIS will not be necessary where:

1. The changes to the proposed action, new information, or new circumstances result in a lessening of adverse environmental impacts evaluated in the EIS without causing other environmental impacts that are significant and were not evaluated in the EIS; or
2. The Administration decides to approve an alternative fully evaluated in an approved final EIS but not identified as the preferred alternative. In such a case, a revised ROD shall be prepared and circulated in accordance with §771.127(b).

c. Where the Administration is uncertain of the significance of the new impacts, the applicant will develop appropriate environmental studies or, if the Administration deems appropriate, an EA to assess the impacts of the changes, new information, or new circumstances. If, based upon the studies, the Administration determines that a supplemental EIS is not necessary, the Administration shall so indicate in the project file.

d. A supplement is to be developed using the same process and format (i.e., draft EIS, final EIS, and ROD) as an original EIS, except that scoping is not required.

e. A supplemental draft EIS may be necessary for UMTA major urban mass transportation investments if there is a substantial change in the level of detail on project impacts during project planning and development. The supplement will address site-specific impacts and refined cost estimates that have been developed since the original draft EIS.

f. In some cases, a supplemental EIS may be required to address issues of limited scope, such as the extent of proposed mitigation or the evaluation of location or design variations for a limited portion of the overall project. Where this is the case, the preparation of a supplemental EIS shall not necessarily:
    1. Prevent the granting of new approvals;
    2. Require the withdrawal of previous approvals; or
    3. Require the suspension of project activities; for any activity not directly affected by the supplement. If the changes in question are of such magnitude to require a reassessment of the entire action, or more than a limited portion of the overall action, the Administration shall suspend any activities which would have an adverse environmental impact or limit the choice of reasonable alternatives, until the supplemental EIS is completed.

§771.131 Emergency action procedures.

Requests for deviations from the procedures in this regulation because of emergency circumstances (40 CFR 1506.11) shall be referred to the Administration's headquarters for evaluation and decision after consultation with CEQ.

§771.133 Compliance with other requirements.

The final EIS or FONSI should document compliance with requirements of all applicable environmental laws, Executive orders, and other related requirements. If full compliance is not possible by the time the final EIS or FONSI is prepared, the final EIS or FONSI should reflect consultation with the appropriate agencies and provide reasonable assurance that the requirements will be met. Approval of the environmental document constitutes adoption of any Administration findings and determinations that are contained therein. The FHWA approval of the appropriate NEPA document will constitute its finding of compliance with the report requirements of 23 U.S.C. 128.

§771.135 Section 4(f) (49 U.S.C. 303).

a.
    1. The Administration may not approve the use of land from a significant publicly owned public park, recreation area, or wildlife and waterfowl refuge, or any significant historic site unless a determination is made that:

i. There is no feasible and prudent alternative to the use of land from the property; and
ii. The action includes all possible planning to minimize harm to the property resulting from such use.

2. Supporting information must demonstrate that there are unique problems or unusual factors involved in the use of alternatives that avoid these properties or that the cost, social, economic, and environmental impacts, or community disruption resulting from such alternatives reach extraordinary magnitudes.

b. The Administration will determine the application of section 4(f). Any use of lands from a section 4(f) property shall be evaluated early in the development of the action when alternatives to the proposed action are under study.

c. Consideration under section 4(f) is not required when the Federal, State, or local officials having jurisdiction over a park, recreation area or refuge determine that the entire site is not significant. In the absence of such a determination, the section 4(f) land will be presumed to be significant. The Administration will review the significance determination to assure its reasonableness.

d. Where Federal lands or other public land holdings (e.g., State forests) are administered under statutes permitting management for multiple uses, and, in fact, are managed for multiple uses, section 4(f) applies only to those portions of such lands which function for, or are designated in the plans of the administering agency as being for, significant park, recreation, or wildlife and waterfowl purposes. The determination as to which lands so function or are so designated, and the significance of those lands, shall be made by the officials having jurisdiction over the lands. The Administration will review this determination to assure its reasonableness. The determination of significance shall apply to the entire area of such park, recreation, or wildlife and waterfowl refuge sites.

e. In determining the application of section 4(f) to historic sites, the Administration, in cooperation with the applicant, will consult with the State Historic Preservation Officer (SHPO) and appropriate local officials to identify all properties on or eligible for the National Register of Historic Places (National Register). The section 4(f) requirements apply only to sites on or eligible for the National Register unless the Administration determines that the application of section 4(f) is otherwise appropriate.

f. The Administration may determine that section 4(f) requirements do not apply to restoration, rehabilitation, or maintenance of transportation facilities that are on or eligible for the National Register when:

1. Such work will not adversely affect the historic qualities of the facility that caused it to be on or eligible for the National Register, and
2. The SHPO and the Advisory Council on Historic Preservation (ACHP) have been consulted and have not objected to the Administration finding in paragraph (f)(1) of this section.

g.

1. Section 4(f) applies to all archeological sites on or eligible for inclusion on the National Register, including those discovered during construction except as set forth in paragraph (g)(2) of this section. Where section 4(f) applies to archeological sites discovered during construction, the section 4(f) process will be expedited. In such cases, the evaluation of feasible and prudent alternatives will take account of the level of investment already made. The review process, including the consultation with other agencies, will be shortened as appropriate.
2. Section 4(f) does not apply to archeological sites where the Administration, after consultation with the SHPO and the ACHP, determines that the archeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. This exception applies both to situations where data recovery is undertaken or where the Administration decides, with agreement of the SHPO and, where applicable, the ACHP not to recover the resource.

h. Designations of park and recreation lands, wildlife and waterfowl refuges, and historic sites are sometimes made and determinations of significance changed late in the development of a

proposed action. With the exception of the treatment of archeological resources in paragraph (g) of this section, the Administration may permit a project to proceed without consideration under section 4(f) if the property interest in the section 4(f) lands was acquired for transportation purposes prior to the designation or change in the determination of significance and if an adequate effort was made to identify properties protected by section 4(f) prior to acquisition.

i. The evaluations of alternatives to avoid the use of section 4(f) land and of possible measures to minimize harm to such lands shall be developed by the applicant in cooperation with the Administration. This information should be presented in the draft EIS, EA, or, for a project classified as a CE in a separate document. The section 4(f) evaluation shall be provided for coordination and comment to the officials having jurisdiction over the section 4(f) property and to the Department of the Interior, and as appropriate to the Department of Agriculture and the Department of Housing and Urban Development. A minimum of 45 days shall be established by the Administration for receipt of comments. Uses of section 4(f) land covered by a programmatic section 4(f) evaluation shall be documented and coordinated as specified in the programmatic section 4(f) evaluation.

j. When adequate support exists for a section 4(f) determination, the discussion in the final EIS, FONSI, or separate section 4(f) evaluation shall specifically address:
    1. The reasons why the alternatives to avoid a section 4(f) property are not feasible and prudent; and
    2. All measures which will be taken to minimize harm to the section 4(f) property.

k. The final Section 4(f) evaluation will be reviewed for legal sufficiency.

l. For actions processed with EISs, the Administration will make the section 4(f) approval either in its approval of the final EIS or in the ROD. Where the section 4(f) approval is documented in the final EIS, the Administration will summarize the basis for its section 4(f) approval in the ROD. Actions requiring the use of section 4(f) property, and proposed to be processed with a FONSI or classified as a CE, shall not proceed until notified by the Administration of section 4(f) approval. For these actions, any required section 4(f) approval will be documented separately.

m. Circulation of a separate section 4(f) evaluation will be required when:
    1. A proposed modification of the alignment or design would require the use of section 4(f) property after the CE, FONSI, draft EIS, or final EIS has been processed;
    2. The Administration determines, after processing the CE, FONSI, draft EIS, or final EIS that section 4(f) applies to a property;
    3. A proposed modification of the alignment, design, or measures to minimize harm (after the original section 4(f) approval) would result in a substantial increase in the amount of section 4(f) land used, a substantial increase in the adverse impacts to section 4(f) land, or a substantial reduction in mitigation measures; or
    4. Another agency is the lead agency for the NEPA process, unless another DOT element is preparing the section 4(f) evaluation.

n. If the Administration determines under §771.135(m) or otherwise, that section 4(f) is applicable after the CE, FONSI, or final EIS has been processed, the decision to prepare and circulate a section 4(f) evaluation will not necessarily require the preparation of a new or supplemental environmental document. Where a separately circulated section 4(f) evaluation is prepared, such evaluation does not necessarily:
    1. Prevent the granting of new approvals;
    2. Require the withdrawal of previous approvals; or
    3. Require the suspension of project activities; for any activity not affected by the section 4(f) evaluation.

o. An analysis required by section 4(f) may involve different levels of detail where the section 4(f) involvement is addressed in a tiered EIS.
    1. When the first-tier, broad-scale EIS is prepared, the detailed information necessary to complete the section 4(f) evaluation may not be available at that stage in the development of the action. In such cases, an evaluation should be made on the potential impacts that a proposed action will have on section 4(f) land and whether those impacts could have a bearing on the decision to be made. A preliminary determination may be

made at this time as to whether there are feasible and prudent locations or alternatives for the action to avoid the use of section 4(f) land. This preliminary determination shall consider all possible planning to minimize harm to the extent that the level of detail available at the first-tier EIS stage allows. It is recognized that such planning at this stage will normally be limited to ensuring that opportunities to minimize harm at subsequent stages in the development process have not been precluded by decisions made at the first-tier stage. This preliminary determination is then incorporated into the first-tier EIS.

2. A section 4(f) approval made when additional design details are available will include a determination that:
   i. The preliminary section 4(f) determination made pursuant to paragraph (o)(1) of this section is still valid; and
   ii. The criteria of paragraph (a) of this section have been met.

p. *Use.*

1. Except as set forth in paragraphs (f), (g)(2), and (h) of this section, “use”; (in paragraph (a)(1) of this section) occurs:
   i. When land is permanently incorporated into a transportation facility;
   ii. When there is a temporary occupancy of land that is adverse in terms of the statute's preservationist purposes as determined by the criteria in paragraph (p)(7) of this section; or
   iii. When there is a constructive use of land.
2. Constructive use occurs when the transportation project does not incorporate land from a section 4(f) resource, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the resource are substantially diminished.
3. The Administration is not required to determine that there is no constructive use. However, such a determination could be made at the discretion of the Administration.
4. The Administration has reviewed the following situations and determined that a constructive use occurs when:
   i. The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise-sensitive facility of a resource protected by section 4(f), such as hearing the performances at an outdoor amphitheater, sleeping in the sleeping area of a campground, enjoyment of a historic site where a quiet setting is a generally recognized feature or attribute of the site's significance, or enjoyment of an urban park where serenity and quiet are significant attributes;
   ii. The proximity of the proposed project substantially impairs esthetic features or attributes of a resource protected by section 4(f), where such features or attributes are considered important contributing elements to the value of the resource. Examples of substantial impairment to visual or esthetic qualities would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building, or substantially detracts from the setting of a park or historic site which derives its value in substantial part due to its setting;
   iii. The project results in a restriction on access which substantially diminishes the utility of a significant publicly owned park, recreation area, or a historic site;
   iv. The vibration impact from operation of the project substantially impairs the use of a section 4(f) resource, such as projected vibration levels from a rail transit project that are great enough to affect the structural integrity of a historic building or substantially diminish the utility of the building; or
   v. The ecological intrusion of the project substantially diminishes the value of wildlife habitat in a wildlife or waterfowl refuge adjacent to the project or substantially interferes with the access to a wildlife or waterfowl refuge, when

such access is necessary for established wildlife migration or critical life cycle processes.

5. The Administration has reviewed the following situations and determined that a constructive use does *not* occur when:
    i. Compliance with the requirements of section 106 of the National Historic Preservation Act and 36 CFR part 800 for proximity impacts of the proposed action, on a site listed on or eligible for the National Register of Historic Places, results in an agreement of “no effect”; or “no adverse effect”;
    ii. The projected traffic noise levels of the proposed highway project do not exceed the FHWA noise abatement criteria as contained in Table 1, 23 CFR part 772, or the projected operational noise levels of the proposed transit project do not exceed the noise impact criteria in the UMTA guidelines;
    iii. The projected noise levels exceed the relevant threshold in paragraph (p)(5)(ii) of this section because of high existing noise, but the increase in the projected noise levels if the proposed project is constructed, when compared with the projected noise levels if the project is not built, is barely perceptible (3 dBA or less);
    iv. There are proximity impacts to a section 4(f) resource, but a governmental agency's right-of-way acquisition, an applicant's adoption of project location, or the Administration approval of a final environmental document, established the location for a proposed transportation project before the designation, establishment, or change in the significance of the resource. However, if the age of an historic site is close to, but less than, 50 years at the time of the governmental agency's acquisition, adoption, or approval, and except for its age would be eligible for the National Register, and construction would begin after the site was eligible, then the site is considered a historic site eligible for the National Register;
    v. There are impacts to a proposed public park, recreation area, or wildlife refuge, but the proposed transportation project and the resource are concurrently planned or developed. Examples of such concurrent planning or development include, but are not limited to:
        A. Designation or donation of property for the specific purpose of such concurrent development by the entity with jurisdiction or ownership of the property for both the potential transportation project and the section 4(f) resource, or
        B. Designation, donation, planning or development of property by two or more governmental agencies, with jurisdiction for the potential transportation project and the section 4(f) resource, in consultation with each other;
    vi. Overall (combined) proximity impacts caused by a proposed project do not substantially impair the activities, features, or attributes that qualify a resource for protection under section 4(f);
    vii. Proximity impacts will be mitigated to a condition equivalent to, or better than, that which would occur under a no-build scenario;
    viii. Change in accessibility will not substantially diminish the utilization of the section 4(f) resource; or
    ix. Vibration levels from project construction activities are mitigated, through advance planning and monitoring of the activities, to levels that do not cause a substantial impairment of the section 4(f) resource.
6. When a constructive use determination is made, it will be based, to the extent it reasonably can, upon the following:
    i. Identification of the current activities, features, or attributes of a resource qualified for protection under section 4(f) and which may be sensitive to proximity impacts;

ii. An analysis of the proximity impacts of the proposed project on the section 4(f) resource. If any of the proximity impacts will be mitigated, only the net impact need be considered in this analysis. The analysis should also describe and consider the impacts which could reasonably be expected if the proposed project were not implemented, since such impacts should not be attributed to the proposed project;

iii. Consultation, on the above identification and analysis, with the Federal, State, or local officials having jurisdiction over the park, recreation area, refuge, or historic site.

7. A temporary occupancy of land is so minimal that it does not constitute a use within the meaning of section 4(f) when the following conditions are satisfied:
   i. Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
   ii. Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the section 4(f) resource are minimal;
   iii. There are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purposes of the resource, on either a temporary or permanent basis;
   iv. The land being used must be fully restored, i.e., the resource must be returned to a condition which is at least as good as that which existed prior to the project; and
   v. There must be documented agreement of the appropriate Federal, State, or local officials having jurisdiction over the resource regarding the above conditions.

[52 FR 32660, Aug. 28, 1987; 53 FR 11066, Apr. 5, 1988, as amended at 56 FR 13279, Apr. 1, 1991; 57 FR 12411, Apr. 10, 1992]

§771.137 International actions.

a. The requirements of this part apply to:
   1. Administration actions significantly affecting the environment of a foreign nation not participating in the action or not otherwise involved in the action.
   2. Administration actions outside the U.S., its territories, and possessions which significantly affect natural resources of global importance designated for protection by the President or by international agreement.
b. If communication with a foreign government concerning environmental studies or documentation is anticipated, the Administration shall coordinate such communication with the Department of State through the Office of the Secretary of Transportation.

CEQ Regulations

Title 40 CODE OF FEDERAL REGULATION, PART 1500--PURPOSE, POLICY, AND MANDATE

1500.1 Purpose.
1500.2 Policy.
1500.3 Mandate.
1500.4 Reducing paperwork.
1500.5 Reducing delay.
1500.6 Agency authority.

Authority: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 et seq.), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609) and E.O. 11514, Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

Source: 43 FR 55990, Nov. 28, 1978, unless otherwise noted.

Sec. 1500.1 Purpose.

(a) The National Environmental Policy Act (NEPA) is our basic national charter for protection of the environment. It establishes policy, sets goals (section 101), and provides means (section 102) for carrying out the policy. Section 102(2) contains "action-forcing" provisions to make sure that federal agencies act according to the letter and spirit of the Act. The regulations that follow implement section 102(2). Their purpose is to tell federal agencies what they must do to comply with the procedures and achieve the goals of the Act. The President, the federal agencies, and the courts share responsibility for enforcing the Act so as to achieve the substantive requirements of section 101.

(b) NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA. Most important, NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.

(c) Ultimately, of course, it is not better documents but better decisions that count. NEPA's purpose is not to generate paperwork--even excellent paperwork--but to foster excellent action. The NEPA process is intended to help public officials make decisions that are based on understanding of environmental consequences, and take actions that protect, restore, and enhance the environment. These regulations provide the direction to achieve this purpose.

Sec. 1500.2 Policy.

Federal agencies shall to the fullest extent possible:

(a) Interpret and administer the policies, regulations, and public laws of the United States in accordance with the policies set forth in the Act and in these regulations.

(b) Implement procedures to make the NEPA process more useful to decisionmakers and the public; to reduce paperwork and the accumulation of extraneous background data; and to emphasize real environmental issues and alternatives. Environmental impact statements shall be concise, clear, and to the point, and shall be supported by evidence that agencies have made the necessary environmental analyses.

(c) Integrate the requirements of NEPA with other planning and environmental review procedures required by law or by agency practice so that all such procedures run concurrently rather than consecutively.

(d) Encourage and facilitate public involvement in decisions which affect the quality of the human environment.

(e) Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment.

(f) Use all practicable means, consistent with the requirements of the Act and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment.

Sec. 1500.3 Mandate.

Parts 1500 through 1508 of this title provide regulations applicable to and binding on all Federal agencies for implementing the procedural provisions of the National Environmental Policy Act of 1969, as amended (Pub. L. 91-190, 42 U.S.C. 4321 et seq.) (NEPA or the Act) except where compliance would be inconsistent with other statutory requirements. These regulations are issued pursuant to NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 et seq.) section 309 of the Clean Air Act, as amended (42 U.S.C. 7609) and Executive Order 11514, Protection and Enhancement of Environmental Quality (March 5, 1970, as amended by Executive Order 11991, May 24, 1977). These regulations, unlike the predecessor guidelines, are not confined to sec. 102(2)(C) (environmental impact statements). The regulations apply to the whole of section 102(2). The provisions of the Act and of these regulations must be read together as a whole in order to comply with the spirit and letter of the law. It is the Council's intention that judicial review of agency compliance with these regulations not occur before an agency has filed the final environmental impact statement, or has made a final finding of no significant impact (when such a finding will result in action affecting the environment), or takes action that will result in irreparable injury. Furthermore, it is the Council's intention that any trivial violation of these regulations not give rise to any independent cause of action.

Sec. 1500.4 Reducing paperwork.

Agencies shall reduce excessive paperwork by:

(a) Reducing the length of environmental impact statements (Sec. 1502.2(c)), by means such as setting appropriate page limits (Secs. 1501.7(b)(1) and 1502.7).

(b) Preparing analytic rather than encyclopedic environmental impact statements (Sec. 1502.2(a)).

(c) Discussing only briefly issues other than significant ones (Sec. 1502.2(b)).

(d) Writing environmental impact statements in plain language (Sec. 1502.8).

(e) Following a clear format for environmental impact statements (Sec. 1502.10).

(f) Emphasizing the portions of the environmental impact statement that are useful to decisionmakers and the public (Secs. 1502.14 and 1502.15) and reducing emphasis on background material (Sec. 1502.16).

(g) Using the scoping process, not only to identify significant environmental issues deserving of study, but also to deemphasize insignificant issues, narrowing the scope of the environmental impact statement process accordingly (Sec. 1501.7).

(h) Summarizing the environmental impact statement (Sec. 1502.12) and circulating the summary instead of the entire environmental impact statement if the latter is unusually long (Sec. 1502.19).

(i) Using program, policy, or plan environmental impact statements and tiering from statements of broad scope to those of narrower scope, to eliminate repetitive discussions of the same issues (Secs. 1502.4 and 1502.20).

(j) Incorporating by reference (Sec. 1502.21).

(k) Integrating NEPA requirements with other environmental review and consultation requirements (Sec. 1502.25).

(l) Requiring comments to be as specific as possible (Sec. 1503.3). (m) Attaching and circulating only changes to the draft environmental impact statement, rather than rewriting and circulating the entire statement when changes are minor (Sec. 1503.4(c)).

(n) Eliminating duplication with State and local procedures, by providing for joint preparation (Sec. 1506.2), and with other Federal procedures, by providing that an agency may adopt appropriate environmental documents prepared by another agency (Sec. 1506.3).

(o) Combining environmental documents with other documents (Sec. 1506.4).

(p) Using categorical exclusions to define categories of actions which do not individually or cumulatively have a significant effect on the human environment and which are therefore exempt from requirements to prepare an environmental impact statement (Sec. 1508.4).

(q) Using a finding of no significant impact when an action not otherwise excluded will not have a significant effect on the human environment and is therefore exempt from requirements to prepare an environmental impact statement (Sec. 1508.13).

[43 FR 55990, Nov. 29, 1978; 44 FR 873, Jan. 3, 1979]

Sec. 1500.5 Reducing delay.

Agencies shall reduce delay by:

(a) Integrating the NEPA process into early planning (Sec. 1501.2).

(b) Emphasizing interagency cooperation before the environmental impact statement is prepared, rather than submission of adversary comments on a completed document (Sec. 1501.6).

(c) Insuring the swift and fair resolution of lead agency disputes (Sec. 1501.5).

(d) Using the scoping process for an early identification of what are and what are not the real issues (Sec. 1501.7).

(e) Establishing appropriate time limits for the environmental impact statement process (Secs. 1501.7(b)(2) and 1501.8).

(f) Preparing environmental impact statements early in the process (Sec. 1502.5).

(g) Integrating NEPA requirements with other environmental review and consultation requirements (Sec. 1502.25).

(h) Eliminating duplication with State and local procedures by providing for joint preparation (Sec. 1506.2) and with other Federal procedures by providing that an agency may adopt appropriate environmental documents prepared by another agency (Sec. 1506.3).

(i) Combining environmental documents with other documents (Sec. 1506.4).

(j) Using accelerated procedures for proposals for legislation (Sec. 1506.8).

(k) Using categorical exclusions to define categories of actions which do not individually or cumulatively have a significant effect on the human environment (Sec. 1508.4) and which are therefore exempt from requirements to prepare an environmental impact statement.

(l) Using a finding of no significant impact when an action not otherwise excluded will not have a significant effect on the human environment (Sec. 1508.13) and is therefore exempt from requirements to prepare an environmental impact statement.

Sec. 1500.6 Agency authority.

Each agency shall interpret the provisions of the Act as a supplement to its existing authority and as a mandate to view traditional policies and missions in the light of the Act's national environmental objectives. Agencies shall review their policies, procedures, and regulations accordingly and revise them as necessary to insure full compliance with the purposes and provisions of the Act. The phrase "to the fullest extent possible" in section 102 means that each agency of the Federal Government shall comply with that section unless existing law applicable to the agency's operations expressly prohibits or makes compliance impossible.

PART 1501--NEPA AND AGENCY PLANNING

1501.1 Purpose.
1501.2 Apply NEPA early in the process.
1501.3 When to prepare an environmental assessment.
1501.4 Whether to prepare an environmental impact statement.
1501.5 Lead agencies.
1501.6 Cooperating agencies.
1501.7 Scoping.
1501.8 Time limits.

Authority: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 et seq.), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609, and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

Source: 43 FR 55992, Nov. 29, 1978, unless otherwise noted.

Sec. 1501.1 Purpose.

The purposes of this part include:

(a) Integrating the NEPA process into early planning to insure appropriate consideration of NEPA's policies and to eliminate delay.

(b) Emphasizing cooperative consultation among agencies before the environmental impact statement is prepared rather than submission of adversary comments on a completed document.

(c) Providing for the swift and fair resolution of lead agency disputes.

(d) Identifying at an early stage the significant environmental issues deserving of study and deemphasizing insignificant issues, narrowing the scope of the environmental impact statement accordingly.

(e) Providing a mechanism for putting appropriate time limits on the environmental impact statement process.

Sec. 1501.2 Apply NEPA early in the process.

Agencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts. Each agency shall:

(a) Comply with the mandate of section 102(2)(A) to "utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment," as specified by Sec. 1507.2.

(b) Identify environmental effects and values in adequate detail so they can be compared to economic and technical analyses. Environmental documents and appropriate analyses shall be circulated and reviewed at the same time as other planning documents.

(c) Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources as provided by section 102(2)(E) of the Act.

(d) Provide for cases where actions are planned by private applicants or other non-Federal entities before Federal involvement so that:

1. Policies or designated staff are available to advise potential applicants of studies or other information foreseeably required for later Federal action.
2. The Federal agency consults early with appropriate State and local agencies and Indian tribes and with interested private persons and organizations when its own involvement is reasonably foreseeable.
3. The Federal agency commences its NEPA process at the earliest possible time.

Sec. 1501.3 When to prepare an environmental assessment.

(a) Agencies shall prepare an environmental assessment (Sec. 1508.9) when necessary under the procedures adopted by individual agencies to supplement these regulations as described in Sec. 1507.3. An assessment is not necessary if the agency has decided to prepare an environmental impact statement.

(b) Agencies may prepare an environmental assessment on any action at any time in order to assist agency planning and decisionmaking.

Sec. 1501.4 Whether to prepare an environmental impact statement.

In determining whether to prepare an environmental impact statement the Federal agency shall:

(a) Determine under its procedures supplementing these regulations (described in Sec. 1507.3) whether the proposal is one which:

1. Normally requires an environmental impact statement, or
2. Normally does not require either an environmental impact statement or an environmental assessment (categorical exclusion).

(b) If the proposed action is not covered by paragraph (a) of this section, prepare an environmental assessment (Sec. 1508.9). The agency shall involve environmental agencies, applicants, and the public, to the extent practicable, in preparing assessments required by Sec. 1508.9(a)(1).

(c) Based on the environmental assessment make its determination whether to prepare an environmental impact statement.

(d) Commence the scoping process (Sec. 1501.7), if the agency will prepare an environmental impact statement.

(e) Prepare a finding of no significant impact (Sec. 1508.13), if the agency determines on the basis of the environmental assessment not to prepare a statement.

3. The agency shall make the finding of no significant impact available to the affected public as specified in Sec. 1506.6.
4. certain limited circumstances, which the agency may cover in its procedures under Sec. 1507.3, the agency shall make the finding of no significant impact available for public review (including State and areawide clearinghouses) for 30 days before the agency makes its final determination whether to prepare an environmental impact statement and before the action may begin. The circumstances are:

(i) The proposed action is, or is closely similar to, one which normally requires the preparation of an environmental impact statement under the procedures adopted by the agency pursuant to Sec. 1507.3, or

(ii) The nature of the proposed action is one without precedent.

Sec. 1501.5 Lead agencies.

(a) A lead agency shall supervise the preparation of an environmental impact statement if more than one Federal agency either:

1. Proposes or is involved in the same action; or
2. Is involved in a group of actions directly related to each other because of their functional interdependence or geographical proximity.

(b) Federal, State, or local agencies, including at least one Federal agency, may act as joint lead agencies to prepare an environmental impact statement (Sec. 1506.2).

(c) If an action falls within the provisions of paragraph (a) of this section the potential lead agencies shall determine by letter or memorandum which agency shall be the lead agency and which shall be cooperating agencies. The agencies shall resolve the lead agency question so as not to cause delay. If there is disagreement among the agencies, the following factors (which are listed in order of descending importance) shall determine lead agency designation:

1. Magnitude of agency's involvement.
2. Project approval/disapproval authority.
3. Expertise concerning the action's environmental effects.
4. Duration of agency's involvement.
5. Sequence of agency's involvement.

(d) Any Federal agency, or any State or local agency or private person substantially affected by the absence of lead agency designation, may make a written request to the potential lead agencies that a lead agency be designated.

(e) If Federal agencies are unable to agree on which agency will be the lead agency or if the procedure described in paragraph (c) of this section has not resulted within 45 days in a lead

agency designation, any of the agencies or persons concerned may file a request with the Council asking it to determine which Federal agency shall be the lead agency. A copy of the request shall be transmitted to each potential lead agency. The request shall consist of:

1. A precise description of the nature and extent of the proposed action.
2. A detailed statement of why each potential lead agency should or should not be the lead agency under the criteria specified in paragraph (c) of this section.

(f) A response may be filed by any potential lead agency concerned within 20 days after a request is filed with the Council. The Council shall determine as soon as possible but not later than 20 days after receiving the request and all responses to it which Federal agency shall be the lead agency and which other Federal agencies shall be cooperating agencies.

[43 FR 55992, Nov. 29, 1978; 44 FR 873, Jan. 3, 1979]

Sec. 1501.6 Cooperating agencies.

The purpose of this section is to emphasize agency cooperation early in the NEPA process. Upon request of the lead agency, any other Federal agency which has jurisdiction by law shall be a cooperating agency. In addition any other Federal agency which has special expertise with respect to any environmental issue, which should be addressed in the statement may be a cooperating agency upon request of the lead agency. An agency may request the lead agency to designate it a cooperating agency.

(a) The lead agency shall:

1. Request the participation of each cooperating agency in the NEPA process at the earliest possible time.
2. Use the environmental analysis and proposals of cooperating agencies with jurisdiction by law or special expertise, to the maximum extent possible consistent with its responsibility as lead agency.
3. Meet with a cooperating agency at the latter's request.

(b) Each cooperating agency shall:

1. Participate in the NEPA process at the earliest possible time.
2. Participate in the scoping process (described below in Sec. 1501.7).
3. Assume on request of the lead agency responsibility for developing information and preparing environmental analyses including portions of the environmental impact statement concerning which the cooperating agency has special expertise.
4. Make available staff support at the lead agency's request to enhance the latter's interdisciplinary capability.
5. Normally use its own funds. The lead agency shall, to the extent available funds permit, fund those major activities or analyses it requests from cooperating agencies. Potential lead agencies shall include such funding requirements in their budget requests.

(c) A cooperating agency may in response to a lead agency's request for assistance in preparing the environmental impact statement (described in paragraph (b)(3), (4), or (5) of this section) reply that other program commitments preclude any involvement or the degree of involvement requested in the action that is the subject of the environmental impact statement. A copy of this reply shall be submitted to the Council.

Sec. 1501.7 Scoping. There shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. This process shall be termed scoping. As soon as practicable after its decision to prepare an environmental impact statement and before the scoping process the lead agency shall publish a notice of intent (Sec. 1508.22) in the Federal Register except as provided in Sec. 1507.3(e).

(a) As part of the scoping process the lead agency shall:

1. Invite the participation of affected Federal, State, and local agencies, any affected Indian tribe, the proponent of the action, and other interested persons (including those who might not be in accord with the action on environmental grounds), unless there is a limited exception under Sec. 1507.3(c). An agency may give notice in accordance with Sec. 1506.6.
2. Determine the scope (Sec. 1508.25) and the significant issues to be analyzed in depth in the environmental impact statement.
3. Identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3), narrowing the discussion of these issues in the statement to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere.
4. Allocate assignments for preparation of the environmental impact statement among the lead and cooperating agencies, with the lead agency retaining responsibility for the statement.
5. Indicate any public environmental assessments and other environmental impact statements which are being or will be prepared that are related to but are not part of the scope of the impact statement under consideration.
6. Identify other environmental review and consultation requirements so the lead and cooperating agencies may prepare other required analyses and studies concurrently with, and integrated with, the environmental impact statement as provided in Sec. 1502.25.
7. Indicate the relationship between the timing of the preparation of environmental analyses and the agency's tentative planning and decisionmaking schedule.

(b) As part of the scoping process the lead agency may:

1. Set page limits on environmental documents (Sec. 1502.7).
2. Set time limits (Sec. 1501.8).
3. Adopt procedures under Sec. 1507.3 to combine its environmental assessment process with its scoping process.
4. Hold an early scoping meeting or meetings which may be integrated with any other early planning meeting the agency has. Such a scoping meeting will often be appropriate when the impacts of a particular action are confined to specific sites.

(c) An agency shall revise the determinations made under paragraphs (a) and (b) of this section if substantial changes are made later in the proposed action, or if significant new circumstances or information arise which bear on the proposal or its impacts.

Sec. 1501.8 Time limits.

Although the Council has decided that prescribed universal time limits for the entire NEPA process are too inflexible, Federal agencies are encouraged to set time limits appropriate to individual actions

(consistent with the time intervals required by Sec. 1506.10). When multiple agencies are involved the reference to agency below means lead agency.

(a) The agency shall set time limits if an applicant for the proposed action requests them: Provided, That the limits are consistent with the purposes of NEPA and other essential considerations of national policy.

(b) The agency may:

1. Consider the following factors in determining time limits:

   (i) Potential for environmental harm.
   (ii) Size of the proposed action.
   (iii) State of the art of analytic techniques.
   (iv) Degree of public need for the proposed action, including the consequences of delay.
   (v) Number of persons and agencies affected.
   (vi) Degree to which relevant information is known and if not known the time required for obtaining it.
   (vii) Degree to which the action is controversial.
   (viii) Other time limits imposed on the agency by law, regulations, or executive order.

2. Set overall time limits or limits for each constituent part of the NEPA process, which may include:

   (i) Decision on whether to prepare an environmental impact statement (if not already decided).
   (ii) Determination of the scope of the environmental impact statement.
   (iii) Preparation of the draft environmental impact statement.
   (iv) Review of any comments on the draft environmental impact statement from the public and agencies.
   (v) Preparation of the final environmental impact statement.
   (vi) Review of any comments on the final environmental impact statement.
   (vii) Decision on the action based in part on the environmental impact statement.

3. Designate a person (such as the project manager or a person in the agency's office with NEPA responsibilities) to expedite the NEPA process.

(c) State or local agencies or members of the public may request a Federal Agency to set time limits.

PART 1502--ENVIRONMENTAL IMPACT STATEMENT

Sec. 1502.1 Purpose.
1502.2 Implementation.
1502.3 Statutory requirements for statements.
1502.4 Major Federal actions requiring the preparation of environmental impact statements.
1502.5 Timing.
1502.6 Interdisciplinary preparation.

1502.7 Page limits.
1502.8 Writing.
1502.9 Draft, final, and supplemental statements.
1502.10 Recommended format.
1502.11 Cover sheet.
1502.12 Summary.
1502.13 Purpose and need.
1502.14 Alternatives including the proposed action.
1502.15 Affected environment.
1502.16 Environmental consequences.
1502.17 List of preparers.
1502.18 Appendix.
1502.19 Circulation of the environmental impact statement.
1502.20 Tiering.
1502.21 Incorporation by reference.
1502.22 Incomplete or unavailable information.
1502.23 Cost-benefit analysis.
1502.24 Methodology and scientific accuracy.
1502.25 Environmental review and consultation requirements.

Authority: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 et seq.), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

Source: 43 FR 55994, Nov. 29, 1978, unless otherwise noted.

Sec. 1502.1 Purpose.

The primary purpose of an environmental impact statement is to serve as an action-forcing device to insure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government. It shall provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment. Agencies shall focus on significant environmental issues and alternatives and shall reduce paperwork and the accumulation of extraneous background data. Statements shall be concise, clear, and to the point, and shall be supported by evidence that the agency has made the necessary environmental analyses. An environmental impact statement is more than a disclosure document. It shall be used by Federal officials in conjunction with other relevant material to plan actions and make decisions.

Sec. 1502.2 Implementation.

To achieve the purposes set forth in Sec. 1502.1 agencies shall prepare environmental impact statements in the following manner:

(a) Environmental impact statements shall be analytic rather than encyclopedic.

(b) Impacts shall be discussed in proportion to their significance. There shall be only brief discussion of other than significant issues. As in a finding of no significant impact, there should be only enough discussion to show why more study is not warranted.

(c) Environmental impact statements shall be kept concise and shall be no longer than absolutely necessary to comply with NEPA and with these regulations. Length should vary first with potential environmental problems and then with project size.

(d) Environmental impact statements shall state how alternatives considered in it and decisions based on it will or will not achieve the requirements of sections 101 and 102(1) of the Act and other environmental laws and policies.

(e) The range of alternatives discussed in environmental impact statements shall encompass those to be considered by the ultimate agency decisionmaker.

(f) Agencies shall not commit resources prejudicing selection of alternatives before making a final decision (Sec. 1506.1).

(g) Environmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made.

Sec. 1502.3 Statutory requirements for statements.

As required by sec. 102(2)(C) of NEPA environmental impact statements (Sec. 1508.11) are to be included in every recommendation or report.

On proposals (Sec. 1508.23).
For legislation and (Sec. 1508.17).
Other major Federal actions (Sec. 1508.18).
Significantly (Sec. 1508.27).
Affecting (Secs. 1508.3, 1508.8).
The quality of the human environment (Sec. 1508.14).

Sec. 1502.4 Major Federal actions requiring the preparation of environmental impact statements.

(a) Agencies shall make sure the proposal which is the subject of an environmental impact statement is properly defined. Agencies shall use the criteria for scope (Sec. 1508.25) to determine which proposal(s) shall be the subject of a particular statement. Proposals or parts of proposals which are related to each other closely enough to be, in effect, a single course of action shall be evaluated in a single impact statement.

(b) Environmental impact statements may be prepared, and are sometimes required, for broad Federal actions such as the adoption of new agency programs or regulations (Sec. 1508.18). Agencies shall prepare statements on broad actions so that they are relevant to policy and are timed to coincide with meaningful points in agency planning and decisionmaking.

(c) When preparing statements on broad actions (including proposals by more than one agency), agencies may find it useful to evaluate the proposal(s) in one of the following ways:

1. Geographically, including actions occurring in the same general location, such as body of water, region, or metropolitan area.
2. Generically, including actions which have relevant similarities, such as common timing, impacts, alternatives, methods of implementation, media, or subject matter.

3. By stage of technological development including federal or federally assisted research, development or demonstration programs for new technologies which, if applied, could significantly affect the quality of the human environment. Statements shall be prepared on such programs and shall be available before the program has reached a stage of investment or commitment to implementation likely to determine subsequent development or restrict later alternatives.

(d) Agencies shall as appropriate employ scoping (Sec. 1501.7), tiering (Sec. 1502.20), and other methods listed in Secs. 1500.4 and 1500.5 to relate broad and narrow actions and to avoid duplication and delay.

Sec. 1502.5 Timing.

An agency shall commence preparation of an environmental impact statement as close as possible to the time the agency is developing or is presented with a proposal (Sec. 1508.23) so that preparation can be completed in time for the final statement to be included in any recommendation or report on the proposal. The statement shall be prepared early enough so that it can serve practically as an important contribution to the decisionmaking process and will not be used to rationalize or justify decisions already made (Secs. 1500.2(c), 1501.2, and 1502.2). For instance:

(a) For projects directly undertaken by Federal agencies the environmental impact statement shall be prepared at the feasibility analysis (go-no go) stage and may be supplemented at a later stage if necessary.

(b) For applications to the agency appropriate environmental assessments or statements shall be commenced no later than immediately after the application is received. Federal agencies are encouraged to begin preparation of such assessments or statements earlier, preferably jointly with applicable☐State or local agencies.

(c) For adjudication, the final environmental impact statement shall normally precede the final staff recommendation and that portion of the public hearing related to the impact study. In appropriate circumstances the statement may follow preliminary hearings designed to gather information for use in the statements.

(d) For informal rulemaking the draft environmental impact statement shall normally accompany the proposed rule.

Sec. 1502.6 Interdisciplinary preparation.

Environmental impact statements shall be prepared using an inter- disciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts (section 102(2)(A) of the Act). The disciplines of the preparers shall be appropriate to the scope and issues identified in the scoping process (Sec. 1501.7).

Sec. 1502.7 Page limits.

The text of final environmental impact statements (e.g., paragraphs (d) through (g) of Sec. 1502.10) shall normally be less than 150 pages and for proposals of unusual scope or complexity shall normally be less than 300 pages.

Sec. 1502.8 Writing.

Environmental impact statements shall be written in plain language and may use appropriate graphics so that decisionmakers and the public can readily understand them. Agencies should employ writers of clear prose or editors to write, review, or edit statements, which will be based upon the analysis and supporting data from the natural and social sciences and the environmental□design arts.

Sec. 1502.9 Draft, final, and supplemental statements.

Except for proposals for legislation as provided in Sec. 1506.8 environmental impact statements shall be prepared in two stages and may be supplemented.

(a) Draft environmental impact statements shall be prepared in accordance with the scope decided upon in the scoping process. The lead agency shall work with the cooperating agencies and shall obtain comments as required in Part 1503 of this chapter. The draft statement must fulfill and satisfy to the fullest extent possible the requirements established for final statements in section 102(2)(C) of the Act. If a draft statement is so inadequate as to preclude meaningful analysis, the agency shall prepare and circulate a revised draft of the appropriate portion. The agency shall make every effort to disclose and discuss at appropriate points in the draft statement all major points of view on the environmental impacts of the alternatives including the proposed action.

(b) Final environmental impact statements shall respond to comments as required in Part 1503 of this chapter. The agency shall discuss at appropriate points in the final statement any responsible opposing view which was not adequately discussed in the draft statement and shall indicate the agency's response to the issues raised.

(c) Agencies:

1. Shall prepare supplements to either draft or final environmental□impact statements if:

   (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or

   (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

2. May also prepare supplements when the agency determines that the purposes of the Act will be furthered by doing so.
3. Shall adopt procedures for introducing a supplement into its formal administrative record, if such a record exists.
4. Shall prepare, circulate, and file a supplement to a statement in the same fashion (exclusive of scoping) as a draft and final statement unless alternative procedures are approved by the Council.

Sec. 1502.10 Recommended format.

Agencies shall use a format for environmental impact statements which will encourage good analysis and clear presentation of the alternatives including the proposed action. The following standard format for

environmental impact statements should be followed unless the agency determines that there is a compelling reason to do otherwise:

(a) Cover sheet.
(b) Summary.
(c) Table of contents.
(d) Purpose of and need for action.
(e) Alternatives including proposed action (sections 102(2)(C)(iii) and 102(2)(E) of the Act).
(f) Affected environment.
(g) Environmental consequences (especially sections 102(2)(C)(i), (ii), (iv), and (v) of the Act).
(h) List of preparers.
(i) List of Agencies, Organizations, and persons to whom copies of the statement are sent.
(j) Index.
(k) Appendices (if any).

If a different format is used, it shall include paragraphs (a), (b), (c), (h), (i), and (j), of this section and shall include the substance of paragraphs (d), (e), (f), (g), and (k) of this section, as further described in Secs. 1502.11 through 1502.18, in any appropriate format.

Sec. 1502.11 Cover sheet.

The cover sheet shall not exceed one page. It shall include:

(a) A list of the responsible agencies including the lead agency and any cooperating agencies.

(b) The title of the proposed action that is the subject of the statement (and if appropriate the titles of related cooperating agency actions), together with the State(s) and county(ies) (or other jurisdiction if applicable) where the action is located.

(c) The name, address, and telephone number of the person at the agency who can supply further information.

(d) A designation of the statement as a draft, final, or draft or final supplement.

(e) A one paragraph abstract of the statement.

(f) The date by which comments must be received (computed in cooperation with EPA under Sec. 1506.10).

The information required by this section may be entered on Standard Form 424 (in items 4, 6, 7, 10, and 18).

Sec. 1502.12 Summary.

Each environmental impact statement shall contain a summary which adequately and accurately summarizes the statement. The summary shall stress the major conclusions, areas of controversy (including issues raised by agencies and the public), and the issues to be resolved (including the choice among alternatives). The summary will normally not exceed 15 pages.

Sec. 1502.13 Purpose and need.

The statement shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action.

Sec. 1502.14 Alternatives including the proposed action.

This section is the heart of the environmental impact statement. Based on the information and analysis presented in the sections on the Affected Environment (Sec. 1502.15) and the Environmental Consequences (Sec. 1502.16), it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public. In this section agencies shall:

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

(c) Include reasonable alternatives not within the jurisdiction of the lead agency.

(d) Include the alternative of no action.

(e) Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.

(f) Include appropriate mitigation measures not already included in the proposed action or alternatives.

Sec. 1502.15 Affected environment.

The environmental impact statement shall succinctly describe the environment of the area(s) to be affected or created by the alternatives under consideration. The descriptions shall be no longer than is necessary to understand the effects of the alternatives. Data and analyses in a statement shall be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced. Agencies shall avoid useless bulk in statements and shall concentrate effort and attention on important issues. Verbose descriptions of the affected environment are themselves no measure of the adequacy of an environmental impact statement.

Sec. 1502.16 Environmental consequences.

This section forms the scientific and analytic basis for the comparisons under Sec. 1502.14. It shall consolidate the discussions of those elements required by sections 102(2)(C)(i), (ii), (iv), and (v) of NEPA which are within the scope of the statement and as much of section 102(2)(C)(iii) as is necessary to

support the comparisons. The discussion will include the environmental impacts of the alternatives including the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources which would be involved in the proposal should it be implemented. This section should not duplicate discussions in Sec. 1502.14. It shall include discussions of:

(a) Direct effects and their significance (Sec. 1508.8).

(b) Indirect effects and their significance (Sec. 1508.8).

(c) Possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned. (See Sec. 1506.2(d).)

(d) The environmental effects of alternatives including the proposed action. The comparisons under Sec. 1502.14 will be based on this discussion.

(e) Energy requirements and conservation potential of various alternatives and mitigation measures.

(f) Natural or depletable resource requirements and conservation potential of various alternatives and mitigation measures.

(g) Urban quality, historic and cultural resources, and the design of the built environment, including the reuse and conservation potential of various alternatives and mitigation measures.

(h) Means to mitigate adverse environmental impacts (if not fully covered under Sec. 1502.14(f)).

[43 FR 55994, Nov. 29, 1978; 44 FR 873, Jan. 3, 1979]

Sec. 1502.17 List of preparers.

The environmental impact statement shall list the names, together with their qualifications (expertise, experience, professional disciplines), of the persons who were primarily responsible for preparing the environmental impact statement or significant background papers, including basic components of the statement (Secs. 1502.6 and 1502.8). Where possible the persons who are responsible for a particular analysis, including analyses in background papers, shall be identified. Normally the list will not exceed two pages.

Sec. 1502.18 Appendix.

If an agency prepares an appendix to an environmental impact statement the appendix shall:

(a) Consist of material prepared in connection with an environmental impact statement (as distinct from material which is not so prepared and which is incorporated by reference (Sec. 1502.21)).

(b) Normally consist of material which substantiates any analysis fundamental to the impact statement.

(c) Normally be analytic and relevant to the decision to be made.

(d) Be circulated with the environmental impact statement or be readily available on request.

Sec. 1502.19 Circulation of the environmental impact statement.

Agencies shall circulate the entire draft and final environmental impact statements except for certain appendices as provided in Sec. 1502.18(d) and unchanged statements as provided in Sec. 1503.4(c). However, if the statement is unusually long, the agency may circulate the summary instead, except that the entire statement shall be furnished to:

(a) Any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved and any appropriate Federal, State or local agency authorized to develop and enforce environmental standards.

(b) The applicant, if any.

(c) Any person, organization, or agency requesting the entire environmental impact statement.

(d) In the case of a final environmental impact statement any person, organization, or agency which submitted substantive comments on the draft.

If the agency circulates the summary and thereafter receives a timely request for the entire statement and for additional time to comment, the time for that requestor only shall be extended by at least 15 days beyond the minimum period.

Sec. 1502.20 Tiering.

Agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review (Sec. 1508.28). Whenever a broad environmental impact statement has been prepared (such as a program or policy statement) and a subsequent statement or environmental assessment is then prepared on an action included within the entire program or policy (such as a site specific action) the subsequent statement or environmental assessment need only summarize the issues discussed in the broader statement and incorporate discussions from the broader statement by reference and shall concentrate on the issues specific to the subsequent action. The subsequent document shall state where the earlier document is available. Tiering may also be appropriate for different stages of actions. (Section 1508.28).

Sec. 1502.21 Incorporation by reference.

Agencies shall incorporate material into an environmental impact statement by reference when the effect will be to cut down on bulk without impeding agency and public review of the action. The incorporated material shall be cited in the statement and its content briefly described. No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the

time allowed for comment. Material based on proprietary data which is itself not available for review and comment shall not be incorporated by reference.

Sec. 1502.22 Incomplete or unavailable information.

When an agency is evaluating reasonably foreseeable significant adverse effects on the human environment in an environmental impact statement and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking.

(a) If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement.

(b) If the information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known, the agency shall include within the environmental impact statement:

1. A statement that such information is incomplete or unavailable;
2. a statement of the relevance of the incomplete or unavailable information to evaluating reasonably foreseeable significant adverse impacts on the human environment;
3. a summary of existing credible scientific evidence which is relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment, and
4. the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community. For the purposes of this section, "reasonably foreseeable" includes impacts which have catastrophic consequences, even if their probability of occurrence is low, provided that the analysis of the impacts is supported by credible scientific evidence, is not based on pure conjecture, and is within the rule of reason.

(c) The amended regulation will be applicable to all environmental impact statements for which a Notice of Intent (40 CFR 1508.22) is published in the Federal Register on or after May 27, 1986. For environmental impact statements in progress, agencies may choose to comply with the requirements of either the original or amended regulation.

[51 FR 15625, Apr. 25, 1986]

Sec. 1502.23 Cost-benefit analysis.

If a cost-benefit analysis relevant to the choice among environmentally different alternatives is being considered for the proposed action, it shall be incorporated by reference or appended to the statement as an aid in evaluating the environmental consequences. To assess the adequacy of compliance with section 102(2)(B) of the Act the statement shall, when a cost-benefit analysis is prepared, discuss the relationship between that analysis and any analyses of unquantified environmental impacts, values, and amenities. For purposes of complying with the Act, the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations. In any event, an environmental impact statement should at

least indicate those considerations, including factors not related to environmental quality, which are likely to be relevant and important to a decision.

Sec. 1502.24 Methodology and scientific accuracy.

Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement. An agency may place discussion of methodology in an appendix.

Sec. 1502.25 Environmental review and consultation requirements.

(a) To the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the National Historic Preservation Act of 1966 (16 U.S.C. 470 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), and other environmental review laws and executive orders.

(b) The draft environmental impact statement shall list all Federal permits, licenses, and other entitlements which must be obtained in implementing the proposal. If it is uncertain whether a Federal permit, license, or other entitlement is necessary, the draft environmental impact statement shall so indicate.

PART 1503--COMMENTING

Sec. 1503.1 Inviting comments.
1503.2 Duty to comment.
1503.3 Specificity of comments.
1503.4 Response to comments.

Authority: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 et seq.), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

Source: 43 FR 55997, Nov. 29, 1978, unless otherwise noted.

Sec. 1503.1 Inviting comments.

(a) After preparing a draft environmental impact statement and before preparing a final environmental impact statement the agency shall:

1. Obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved or which is authorized to develop and enforce environmental standards.
2. Request the comments of:

(i) Appropriate State and local agencies which are authorized to develop and enforce environmental standards;

(ii) Indian tribes, when the effects may be on a reservation; and

(iii) Any agency which has requested that it receive statements on actions of the kind proposed.

Office of Management and Budget Circular A-95 (Revised), through its system of clearinghouses, provides a means of securing the views of State and local environmental agencies. The clearinghouses may be used, by mutual agreement of the lead agency and the clearinghouse, for securing State and local reviews of the draft environmental impact statements.

3. Request comments from the applicant, if any.
4. Request comments from the public, affirmatively soliciting comments from those persons or organizations who may be interested or affected.

(b) An agency may request comments on a final environmental impact statement before the decision is finally made. In any case other agencies or persons may make comments before the final decision unless a different time is provided under Sec. 1506.10.

Sec. 1503.2 Duty to comment.

Federal agencies with jurisdiction by law or special expertise with respect to any environmental impact involved and agencies which are authorized to develop and enforce environmental standards shall comment on statements within their jurisdiction, expertise, or authority. Agencies shall comment within the time period specified for comment in Sec. 1506.10. A Federal agency may reply that it has no comment. If a cooperating agency is satisfied that its views are adequately reflected in the environmental impact statement, it should reply that it has no comment.

Sec. 1503.3 Specificity of comments.

(a) Comments on an environmental impact statement or on a proposed action shall be as specific as possible and may address either the adequacy of the statement or the merits of the alternatives discussed or both.

(b) When a commenting agency criticizes a lead agency's predictive methodology, the commenting agency should describe the alternative methodology which it prefers and why.

(c) A cooperating agency shall specify in its comments whether it needs additional information to fulfill other applicable environmental reviews or consultation requirements and what information it needs. In particular, it shall specify any additional information it needs to comment adequately on the draft statement's analysis of significant site-specific effects associated with the granting or approving by that cooperating agency of necessary Federal permits, licenses, or entitlements.

(d) When a cooperating agency with jurisdiction by law objects to or expresses reservations about the proposal on grounds of environmental impacts, the agency expressing the objection or reservation shall specify the mitigation measures it considers necessary to allow the agency to grant or approve applicable permit, license, or related requirements or concurrences.

Sec. 1503.4 Response to comments.

(a) An agency preparing a final environmental impact statement shall assess and consider comments both individually and collectively, and shall respond by one or more of the means listed below, stating its response in the final statement. Possible responses are to:

1. Modify alternatives including the proposed action.
2. Develop and evaluate alternatives not previously given serious consideration by the agency.
3. Supplement, improve, or modify its analyses.
4. Make factual corrections.
5. Explain why the comments do not warrant further agency response, citing the sources, authorities, or reasons which support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response.

(b) All substantive comments received on the draft statement (or summaries thereof where the response has been exceptionally voluminous), should be attached to the final statement whether or not the comment is thought to merit individual discussion by the agency in the text of the statement.

(c) If changes in response to comments are minor and are confined to the responses described in paragraphs (a)(4) and (5) of this section, agencies may write them on errata sheets and attach them to the statement instead of rewriting the draft statement. In such cases only the comments, the responses, and the changes and not the final statement need be circulated (Sec. 1502.19). The entire document with a new cover sheet shall be filed as the final statement (Sec. 1506.9).

PART 1504--PREDECISION REFERRALS TO THE COUNCIL OF PROPOSED FEDERAL ACTIONS DETERMINED TO BE ENVIRONMENTALLY UNSATISFACTORY

Sec. 1504.1 Purpose.
1504.2 Criteria for referral.
1504.3 Procedure for referrals and response.

Authority: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 et seq.), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

Source: 43 FR 55998, Nov. 29, 1978, unless otherwise noted.

Sec. 1504.1 Purpose.

(a) This part establishes procedures for referring to the Council Federal interagency disagreements concerning proposed major Federal actions that might cause unsatisfactory environmental effects. It provides means for early resolution of such disagreements.

(b) Under section 309 of the Clean Air Act (42 U.S.C. 7609), the Administrator of the Environmental Protection Agency is directed to review and comment publicly on the environmental impacts of Federal activities, including actions for which environmental impact statements are prepared. If after this review the Administrator determines that the matter is

"unsatisfactory from the standpoint of public health or welfare or environmental quality," section 309 directs that the matter be referred to the Council (hereafter "environmental referrals").

(c) Under section 102(2)(C) of the Act other Federal agencies may make similar reviews of environmental impact statements, including judgments on the acceptability of anticipated environmental impacts. These reviews must be made available to the President, the Council and the public.

Sec. 1504.2 Criteria for referral.

Environmental referrals should be made to the Council only after concerted, timely (as early as possible in the process), but unsuccessful attempts to resolve differences with the lead agency. In determining what environmental objections to the matter are appropriate to refer to the Council, an agency should weigh potential adverse environmental impacts, considering:

(a) Possible violation of national environmental standards or policies.

(b) Severity.

(c) Geographical scope.

(d) Duration.

(e) Importance as precedents.

(f) Availability of environmentally preferable alternatives.

Sec. 1504.3 Procedure for referrals and response.

(a) A Federal agency making the referral to the Council shall:

1. Advise the lead agency at the earliest possible time that it intends to refer a matter to the Council unless a satisfactory agreement is reached.
2. Include such advice in the referring agency's comments on the draft environmental impact statement, except when the statement does not contain adequate information to permit an assessment of the matter's environmental acceptability.
3. Identify any essential information that is lacking and request that it be made available at the earliest possible time.
4. Send copies of such advice to the Council.

(b) The referring agency shall deliver its referral to the Council not later than twenty-five (25) days after the final environmental impact statement has been made available to the Environmental Protection Agency, commenting agencies, and the public. Except when an extension of this period has been granted by the lead agency, the Council will not accept a referral after that date.

(c) The referral shall consist of:

1. A copy of the letter signed by the head of the referring agency and delivered to the lead agency informing the lead agency of the referral and the reasons for it, and requesting that no action be taken to implement the matter until the Council acts upon the referral. The letter shall include a copy of the statement referred to in (c)(2) of this section.

2. A statement supported by factual evidence leading to the conclusion that the matter is unsatisfactory from the standpoint of public health or welfare or environmental quality. The statement shall:

    (i) Identify any material facts in controversy and incorporate (by reference if appropriate) agreed upon facts,

    (ii) Identify any existing environmental requirements or policies which would be violated by the matter,

    (iii) Present the reasons why the referring agency believes the matter is environmentally unsatisfactory,

    (iv) Contain a finding by the agency whether the issue raised is of national importance because of the threat to national environmental resources or policies or for some other reason,

    (v) Review the steps taken by the referring agency to bring its concerns to the attention of the lead agency at the earliest possible time, and

    (vi) Give the referring agency's recommendations as to what mitigation alternative, further study, or other course of action (including abandonment of the matter) are necessary to remedy the situation.

(d) Not later than twenty-five (25) days after the referral to the Council the lead agency may deliver a response to the Council, and the referring agency. If the lead agency requests more time and gives assurance that the matter will not go forward in the interim, the Council may grant an extension. The response shall:

1. Address fully the issues raised in the referral.
2. Be supported by evidence.
3. Give the lead agency's response to the referring agency's recommendations.

(e) Interested persons (including the applicant) may deliver their views in writing to the Council. Views in support of the referral should be delivered not later than the referral. Views in support of the response shall be delivered not later than the response. (f) Not later than twenty-five (25) days after receipt of both the referral and any response or upon being informed that there will be no response (unless the lead agency agrees to a longer time), the Council may take one or more of the following actions:

1. Conclude that the process of referral and response has successfully resolved the problem.
2. Initiate discussions with the agencies with the objective of mediation with referring and lead agencies.
3. Hold public meetings or hearings to obtain additional views and information.
4. Determine that the issue is not one of national importance and request the referring and lead agencies to pursue their decision process.
5. Determine that the issue should be further negotiated by the referring and lead agencies and is not appropriate for Council consideration until one or more heads of agencies report to the Council that the agencies' disagreements are irreconcilable.

6. Publish its findings and recommendations (including where appropriate a finding that the submitted evidence does not support the position of an agency).
7. When appropriate, submit the referral and the response together with the Council's recommendation to the President for action.

(g) The Council shall take no longer than 60 days to complete the actions specified in paragraph (f)(2), (3), or (5) of this section.

(h) When the referral involves an action required by statute to be determined on the record after opportunity for agency hearing, the referral shall be conducted in a manner consistent with 5 U.S.C. 557(d) (Administrative Procedure Act).

PART 1505--NEPA AND AGENCY DECISIONMAKING

Sec. 1505.1 Agency decisionmaking procedures.
1505.2 Record of decision in cases requiring environmental impact statements.
1505.3 Implementing the decision.

Authority: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 et seq.), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

Source: 43 FR 55999, Nov. 29, 1978, unless otherwise noted.

Sec. 1505.1 Agency decisionmaking procedures.

Agencies shall adopt procedures (Sec. 1507.3) to ensure that decisions are made in accordance with the policies and purposes of the Act. Such procedures shall include but not be limited to:

(a) Implementing procedures under section 102(2) to achieve the requirements of sections 101 and 102(1).

(b) Designating the major decision points for the agency's principal programs likely to have a significant effect on the human environment and assuring that the NEPA process corresponds with them.

(c) Requiring that relevant environmental documents, comments, and responses be part of the record in formal rulemaking or adjudicatory proceedings.

(d) Requiring that relevant environmental documents, comments, and responses accompany the proposal through existing agency review processes so that agency officials use the statement in making decisions.

(e) Requiring that the alternatives considered by the decisionmaker are encompassed by the range of alternatives discussed in the relevant environmental documents and that the decisionmaker consider the alternatives described in the environmental impact statement. If another decision document accompanies the relevant environmental documents to the decisionmaker, agencies are encouraged to make available to the public before the decision is made any part of that document that relates to the comparison of alternatives.

Sec. 1505.2 Record of decision in cases requiring environmental impact statements.

At the time of its decision (Sec. 1506.10) or, if appropriate, its recommendation to Congress, each agency shall prepare a concise public record of decision. The record, which may be integrated into any other record prepared by the agency, including that required by OMB Circular A-95 (Revised), part I, sections 6(c) and (d), and Part II, section 5(b)(4), shall:

(a) State what the decision was.

(b) Identify all alternatives considered by the agency in reaching its decision, specifying the alternative or alternatives which were considered to be environmentally preferable. An agency may discuss preferences among alternatives based on relevant factors including economic and technical considerations and agency statutory missions. An agency shall identify and discuss all such factors including any essential considerations of national policy which were balanced by the agency in making its decision and state how those considerations entered into its decision.

(c) State whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not. A monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation.

Sec. 1505.3 Implementing the decision.

Agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases. Mitigation (Sec. 1505.2(c)) and other conditions established in the environmental impact statement or during its review and committed as part of the decision shall be implemented by the lead agency or other appropriate consenting agency. The lead agency shall:

(a) Include appropriate conditions in grants, permits or other approvals.

(b) Condition funding of actions on mitigation.

(c) Upon request, inform cooperating or commenting agencies on progress in carrying out mitigation measures which they have proposed and which were adopted by the agency making the decision.

(d) Upon request, make available to the public the results of relevant monitoring.

PART 1506--OTHER REQUIREMENTS OF NEPA

Sec.
1506.1 Limitations on actions during NEPA process.
1506.2 Elimination of duplication with State and local procedures.
1506.3 Adoption.
1506.4 Combining documents.
1506.5 Agency responsibility.
1506.6 Public involvement.
1506.7 Further guidance.
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1506.10 Timing of agency action.
1506.11 Emergencies.
1506.12 Effective date.

Authority: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 et seq.), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

Source: 43 FR 56000, Nov. 29, 1978, unless otherwise noted.

Sec. 1506.1 Limitations on actions during NEPA process.

(a) Until an agency issues a record of decision as provided in Sec. 1505.2 (except as provided in paragraph (c) of this section), no action concerning the proposal shall be taken which would:

1. Have an adverse environmental impact; or
2. Limit the choice of reasonable alternatives.

(b) If any agency is considering an application from a non-Federal entity, and is aware that the applicant is about to take an action within the agency's jurisdiction that would meet either of the criteria in paragraph (a) of this section, then the agency shall promptly notify the applicant that the agency will take appropriate action to insure that the objectives and procedures of NEPA are achieved.

(c) While work on a required program environmental impact statement is in progress and the action is not covered by an existing program statement, agencies shall not undertake in the interim any major Federal action covered by the program which may significantly affect the quality of the human environment unless such action:

3. Is justified independently of the program;
4. Is itself accompanied by an adequate environmental impact statement; and
5. Will not prejudice the ultimate decision on the program. Interim action prejudices the ultimate decision on the program when it tends to determine subsequent development or limit alternatives.

(d) This section does not preclude development by applicants of plans or designs or performance of other work necessary to support an application for Federal, State or local permits or assistance. Nothing in this section shall preclude Rural Electrification Administration approval of minimal expenditures not affecting the environment (e.g. long leadtime equipment and purchase options) made by non-governmental entities seeking loan guarantees from the Administration.

Sec. 1506.2 Elimination of duplication with State and local procedures.

(a) Agencies authorized by law to cooperate with State agencies of statewide jurisdiction pursuant to section 102(2)(D) of the Act may do so.

(b) Agencies shall cooperate with State and local agencies to the fullest extent possible to reduce duplication between NEPA and State and local requirements, unless the agencies are specifically barred from doing so by some other law. Except for cases covered by paragraph (a) of this section, such cooperation shall to the fullest extent possible include:

1. Joint planning processes.
2. Joint environmental research and studies.
3. Joint public hearings (except where otherwise provided by statute).
4. Joint environmental assessments.

(c) Agencies shall cooperate with State and local agencies to the fullest extent possible to reduce duplication between NEPA and comparable State and local requirements, unless the agencies are specifically barred from doing so by some other law. Except for cases covered by paragraph (a) of this section, such cooperation shall to the fullest extent possible include joint environmental impact statements. In such cases one or more Federal agencies and one or more State or local agencies shall be joint lead agencies. Where State laws or local ordinances have environmental impact statement requirements in addition to but not in conflict with those in NEPA, Federal agencies shall cooperate in fulfilling these requirements as well as those of Federal laws so that one document will comply with all applicable laws.

(d) To better integrate environmental impact statements into State or local planning processes, statements shall discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law.

Sec. 1506.3 Adoption.

(a) An agency may adopt a Federal draft or final environmental impact statement or portion thereof provided that the statement or portion thereof meets the standards for an adequate statement under these regulations.

(b) If the actions covered by the original environmental impact statement and the proposed action are substantially the same, the agency adopting another agency's statement is not required to recirculate it except as a final statement. Otherwise the adopting agency shall treat the statement as a draft and recirculate it (except as provided in paragraph (c) of this section).

(c) A cooperating agency may adopt without recirculating the environmental impact statement of a lead agency when, after an independent review of the statement, the cooperating agency concludes that its comments and suggestions have been satisfied.

(d) When an agency adopts a statement which is not final within the agency that prepared it, or when the action it assesses is the subject of a referral under Part 1504, or when the statement's adequacy is the subject of a judicial action which is not final, the agency shall so specify.

Sec. 1506.4 Combining documents.

Any environmental document in compliance with NEPA may be combined with any other agency document to reduce duplication and paperwork.

Sec. 1506.5 Agency responsibility.

(a) Information. If an agency requires an applicant to submit environmental information for possible use by the agency in preparing an environmental impact statement, then the agency should assist the applicant by outlining the types of information required. The agency shall independently evaluate the information submitted and shall be responsible for its accuracy. If the agency chooses to use the information submitted by the applicant in the environmental impact statement, either directly or by reference, then the names of the persons responsible for the independent evaluation shall be included in the list of preparers (Sec. 1502.17). It is the intent of this paragraph that acceptable work not be redone, but that it be verified by the agency.

(b) Environmental assessments. If an agency permits an applicant to prepare an environmental assessment, the agency, besides fulfilling the requirements of paragraph (a) of this section, shall make its own evaluation of the environmental issues and take responsibility for the scope and content of the environmental assessment.

(c) Environmental impact statements. Except as provided in Secs. 1506.2 and 1506.3 any environmental impact statement prepared pursuant to the requirements of NEPA shall be prepared directly by or by a contractor selected by the lead agency or where appropriate under Sec. 1501.6(b), a cooperating agency. It is the intent of these regulations that the contractor be chosen solely by the lead agency, or by the lead agency in cooperation with cooperating agencies, or where appropriate by a cooperating agency to avoid any conflict of interest. Contractors shall execute a disclosure statement prepared by the lead agency, or where appropriate the cooperating agency, specifying that they have no financial or other interest in the outcome of the project. If the document is prepared by contract, the responsible Federal official shall furnish guidance and participate in the preparation and shall independently evaluate the statement prior to its approval and take responsibility for its scope and contents. Nothing in this section is intended to prohibit any agency from requesting any person to submit information to it or to prohibit any person from submitting information to any agency.

Sec. 1506.6 Public involvement.

Agencies shall:

(a) Make diligent efforts to involve the public in preparing and implementing their NEPA procedures.

(b) Provide public notice of NEPA-related hearings, public meetings, and the availability of environmental documents so as to inform those persons and agencies who may be interested or affected.

1. In all cases the agency shall mail notice to those who have requested it on an individual action.
2. In the case of an action with effects of national concern notice shall include publication in the Federal Register and notice by mail to national organizations reasonably expected to

be interested in the matter and may include listing in the 102 Monitor. An agency engaged in rulemaking may provide notice by mail to national organizations who have requested that notice regularly be provided. Agencies shall maintain a list of such organizations.

3. In the case of an action with effects primarily of local concern the notice may include:

(i) Notice to State and areawide clearinghouses pursuant to OMB Circular A- 95 (Revised).

(ii) Notice to Indian tribes when effects may occur on reservations.

(iii) Following the affected State's public notice procedures for comparable actions.

(iv) Publication in local newspapers (in papers of general circulation rather than legal papers).

(v) Notice through other local media.

(vi) Notice to potentially interested community organizations including small business associations.

(vii) Publication in newsletters that may be expected to reach potentially interested persons.

(viii) Direct mailing to owners and occupants of nearby or affected property.

(ix) Posting of notice on and off site in the area where the action is to be located.

(c) Hold or sponsor public hearings or public meetings whenever appropriate or in accordance with statutory requirements applicable to the agency. Criteria shall include whether there is:

4. Substantial environmental controversy concerning the proposed action or substantial interest in holding the hearing.
5. A request for a hearing by another agency with jurisdiction over the action supported by reasons why a hearing will be helpful. If a draft environmental impact statement is to be considered at a public hearing, the agency should make the statement available to the public at least 15 days in advance (unless the purpose of the hearing is to provide information for the draft environmental impact statement).

(d) Solicit appropriate information from the public.

(e) Explain in its procedures where interested persons can get information or status reports on environmental impact statements and other elements of the NEPA process.

(f) Make environmental impact statements, the comments received, and any underlying documents available to the public pursuant to the provisions of the Freedom of Information Act (5 U.S.C. 552), without regard to the exclusion for interagency memoranda where such memoranda transmit comments of Federal agencies on the environmental impact of the proposed action. Materials to be made available to the public shall be provided to the public without charge to the

extent practicable, or at a fee which is not more than the actual costs of reproducing copies required to be sent to other Federal agencies, including the Council.

Sec. 1506.7 Further guidance.

The Council may provide further guidance concerning NEPA and its procedures including:

(a) A handbook which the Council may supplement from time to time, which shall in plain language provide guidance and instructions concerning the application of NEPA and these regulations.

(b) Publication of the Council's Memoranda to Heads of Agencies.

(c) In conjunction with the Environmental Protection Agency and the publication of the 102 Monitor, notice of:

1. Research activities;
2. Meetings and conferences related to NEPA; and
3. Successful and innovative procedures used by agencies to implement NEPA.

Sec. 1506.8 Proposals for legislation.

(a) The NEPA process for proposals for legislation (Sec. 1508.17) significantly affecting the quality of the human environment shall be integrated with the legislative process of the Congress. A legislative environmental impact statement is the detailed statement required by law to be included in a recommendation or report on a legislative proposal to Congress. A legislative environmental impact statement shall be considered part of the formal transmittal of a legislative proposal to Congress; however, it may be transmitted to Congress up to 30 days later in order to allow time for completion of an accurate statement which can serve as the basis for public and Congressional debate. The statement must be available in time for Congressional hearings and deliberations.

(b) Preparation of a legislative environmental impact statement shall conform to the requirements of these regulations except as follows:

1. There need not be a scoping process.
2. The legislative statement shall be prepared in the same manner as a draft statement, but shall be considered the "detailed statement" required by statute; Provided, That when any of the following conditions exist both the draft and final environmental impact statement on the legislative proposal shall be prepared and circulated as provided by Secs. 1503.1 and 1506.10.

    (i) A Congressional Committee with jurisdiction over the proposal has a rule requiring both draft and final environmental impact statements.

(ii) The proposal results from a study process required by statute (such as those required by the Wild and Scenic Rivers Act (16 U.S.C. 1271 et seq.) and the Wilderness Act (16 U.S.C. 1131 et seq.)).

(iii) Legislative approval is sought for Federal or federally assisted construction or other projects which the agency recommends be located at specific geographic locations. For proposals requiring an environmental impact statement for the acquisition of space by the General Services Administration, a draft statement shall accompany the Prospectus or the 11(b) Report of Building Project Surveys to the Congress, and a final statement shall be completed before site acquisition.

(iv) The agency decides to prepare draft and final statements.

(c) Comments on the legislative statement shall be given to the lead agency which shall forward them along with its own responses to the Congressional committees with jurisdiction.

Sec. 1506.9 Filing requirements.

Environmental impact statements together with comments and responses shall be filed with the Environmental Protection Agency, attention Office of Federal Activities (A-104), 401 M Street SW., Washington, DC 20460. Statements shall be filed with EPA no earlier than they are also transmitted to commenting agencies and made available to the public. EPA shall deliver one copy of each statement to the Council, which shall satisfy the requirement of availability to the President. EPA may issue guidelines to agencies to implement its responsibilities under this section and Sec. 1506.10.

Sec. 1506.10 Timing of agency action.

(a) The Environmental Protection Agency shall publish a notice in the Federal Register each week of the environmental impact statements filed during the preceding week. The minimum time periods set forth in this section shall be calculated from the date of publication of this notice.

(b) No decision on the proposed action shall be made or recorded under Sec. 1505.2 by a Federal agency until the later of the following dates:

1. Ninety (90) days after publication of the notice described above in paragraph (a) of this section for a draft environmental impact statement.
2. Thirty (30) days after publication of the notice described above in paragraph (a) of this section for a final environmental impact statement. An exception to the rules on timing may be made in the case of an agency decision which is subject to a formal internal appeal. Some agencies have a formally established appeal process which allows other agencies or the public to take appeals on a decision and make their views known, after publication of the final environmental impact statement. In such cases, where a real opportunity exists to alter the decision, the decision may be made and recorded at the same time the environmental impact statement is published.

This means that the period for appeal of the decision and the 30-day period prescribed in paragraph (b)(2) of this section may run concurrently. In such cases the environmental impact statement shall explain the timing and the public's right of appeal. An agency engaged in rulemaking under the Administrative Procedure Act or other statute for the purpose of protecting the public health or safety, may waive the time period in paragraph (b)(2) of this section and publish a decision on the final rule simultaneously with publication of the notice of the availability of the final environmental impact statement as described in paragraph (a) of this section.

(c) If the final environmental impact statement is filed within ninety (90) days after a draft environmental impact statement is filed with the Environmental Protection Agency, the minimum thirty (30) day period and the minimum ninety (90) day period may run concurrently. However, subject to paragraph (d) of this section agencies shall allow not less than 45 days for comments on draft statements.

(d) The lead agency may extend prescribed periods. The Environmental Protection Agency may upon a showing by the lead agency of compelling reasons of national policy reduce the prescribed periods and may upon a showing by any other Federal agency of compelling reasons of national policy also extend prescribed periods, but only after consultation with the lead agency. (Also see Sec. 1507.3(d).) Failure to file timely comments shall not be a sufficient reason for extending a period. If the lead agency does not concur with the extension of time, EPA may not extend it for more than 30 days. When the Environmental Protection Agency reduces or extends any period of time it shall notify the Council.

[43 FR 56000, Nov. 29, 1978; 44 FR 874, Jan. 3, 1979]

Sec. 1506.11 Emergencies.

Where emergency circumstances make it necessary to take an action with significant environmental impact without observing the provisions of these regulations, the Federal agency taking the action should consult with the Council about alternative arrangements. Agencies and the Council will limit such arrangements to actions necessary to control the immediate impacts of the emergency. Other actions remain subject to NEPA review.

Sec. 1506.12 Effective date.

The effective date of these regulations is July 30, 1979, except that for agencies that administer programs that qualify under section 102(2)(D) of the Act or under section 104(h) of the Housing and Community Development Act of 1974 an additional four months shall be allowed for the State or local agencies to adopt their implementing procedures.

(a) These regulations shall apply to the fullest extent practicable to ongoing activities and environmental documents begun before the effective date. These regulations do not apply to an environmental impact statement or supplement if the draft statement was filed before the effective date of these regulations. No completed environmental documents need be redone by reasons of these regulations. Until these regulations are applicable, the Council's guidelines published in the Federal Register of August 1, 1973, shall continue to be applicable. In cases where these regulations are applicable the guidelines are superseded. However, nothing shall prevent an agency from proceeding under these regulations at an earlier time.

(b) NEPA shall continue to be applicable to actions begun before January 1, 1970, to the fullest extent possible.

PART 1507--AGENCY COMPLIANCE

Sec. 1507.1 Compliance.
1507.2 Agency capability to comply.
1507.3 Agency procedures.

Authority: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 et seq.), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

Source: 43 FR 56002, Nov. 29, 1978, unless otherwise noted.

Sec. 1507.1 Compliance.

All agencies of the Federal Government shall comply with these regulations. It is the intent of these regulations to allow each agency flexibility in adapting its implementing procedures authorized by Sec. 1507.3 to the requirements of other applicable laws.

Sec. 1507.2 Agency capability to comply.

Each agency shall be capable (in terms of personnel and other resources) of complying with the requirements enumerated below. Such compliance may include use of other's resources, but the using agency shall itself have sufficient capability to evaluate what others do for it. Agencies shall:

(a) Fulfill the requirements of section 102(2)(A) of the Act to utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on the human environment. Agencies shall designate a person to be responsible for overall review of agency NEPA compliance.

(b) Identify methods and procedures required by section 102(2)(B) to insure that presently unquantified environmental amenities and values may be given appropriate consideration.

(c) Prepare adequate environmental impact statements pursuant to section 102(2)(C) and comment on statements in the areas where the agency has jurisdiction by law or special expertise or is authorized to develop and enforce environmental standards.

(d) Study, develop, and describe alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources. This

requirement of section 102(2)(E) extends to all such proposals, not just the more limited scope of section 102(2)(C)(iii) where the discussion of alternatives is confined to impact statements.

(e) Comply with the requirements of section 102(2)(H) that the agency initiate and utilize ecological information in the planning and development of resource-oriented projects.

(f) Fulfill the requirements of sections 102(2)(F), 102(2)(G), and 102(2)(I), of the Act and of Executive Order 11514, Protection and Enhancement of Environmental Quality, Sec. 2.

Sec. 1507.3 Agency procedures.

(a) Not later than eight months after publication of these regulations as finally adopted in the Federal Register, or five months after the establishment of an agency, whichever shall come later, each agency shall as necessary adopt procedures to supplement these regulations. When the agency is a department, major subunits are encouraged (with the consent of the department) to adopt their own procedures. Such procedures shall not paraphrase these regulations. They shall confine themselves to implementing procedures. Each agency shall consult with the Council while developing its procedures and before publishing them in the Federal Register for comment. Agencies with similar programs should consult with each other and the Council to coordinate their procedures, especially for programs requesting similar information from applicants. The procedures shall be adopted only after an opportunity for public review and after review by the Council for conformity with the Act and these regulations. The Council shall complete its review within 30 days. Once in effect they shall be filed with the Council and made readily available to the public. Agencies are encouraged to publish explanatory guidance for these regulations and their own procedures. Agencies shall continue to review their policies and procedures and in consultation with the Council to revise them as necessary to ensure full compliance with the purposes and provisions of the Act.

(b) Agency procedures shall comply with these regulations except where compliance would be inconsistent with statutory requirements and shall include:

1. Those procedures required by Secs. 1501.2(d), 1502.9(c)(3), 1505.1, 1506.6(e), and 1508.4.
2. Specific criteria for and identification of those typical classes of action:

    (i) Which normally do require environmental impact statements.

    (ii) Which normally do not require either an environmental impact statement or an environmental assessment (categorical exclusions (Sec. 1508.4)).

    (iii) Which normally require environmental assessments but not necessarily environmental impact statements.

(c) Agency procedures may include specific criteria for providing limited exceptions to the provisions of these regulations for classified proposals. They are proposed actions which are specifically authorized under criteria established by an Executive Order or statute to be kept secret in the interest of national defense or foreign policy and are in fact properly classified pursuant to such Executive Order or statute. Environmental assessments and environmental impact statements which address classified proposals may be safeguarded and restricted from public dissemination in accordance with agencies' own regulations applicable to classified information. These documents may be organized so that classified portions can be

included as annexes, in order that the unclassified portions can be made available to the public.

(d) Agency procedures may provide for periods of time other than those presented in Sec. 1506.10 when necessary to comply with other specific statutory requirements.

(e) Agency procedures may provide that where there is a lengthy period between the agency's decision to prepare an environmental impact statement and the time of actual preparation, the notice of intent required by Sec. 1501.7 may be published at a reasonable time in advance of preparation of the draft statement.

PART 1508--TERMINOLOGY AND INDEX

Sec.

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Authority: NEPA, the Environmental Quality Improvement Act of 1970, as amended (42 U.S.C. 4371 et seq.), sec. 309 of the Clean Air Act, as amended (42 U.S.C. 7609), and E.O. 11514 (Mar. 5, 1970, as amended by E.O. 11991, May 24, 1977).

Source: 43 FR 56003, Nov. 29, 1978, unless otherwise noted.

Sec. 1508.1 Terminology.

The terminology of this part shall be uniform throughout the Federal Government.

Sec. 1508.2 Act.

"Act" means the National Environmental Policy Act, as amended (42 U.S.C. 4321, et seq.) which is also referred to as "NEPA."

Sec. 1508.3 Affecting.

"Affecting" means will or may have an effect on.

Sec. 1508.4 Categorical exclusion.

"Categorical exclusion" means a category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a Federal agency in implementation of these regulations (Sec. 1507.3) and for which, therefore, neither an environmental assessment nor an environmental impact statement is required. An agency may decide in its procedures or otherwise, to prepare environmental assessments for the reasons stated in Sec. 1508.9 even though it is not required to do so. Any procedures under this section shall provide for extraordinary circumstances in which a normally excluded action may have a significant environmental effect.

Sec. 1508.5 Cooperating agency.

"Cooperating agency" means any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment. The selection and responsibilities of a cooperating agency are described in Sec. 1501.6. A State or local agency of similar qualifications or, when the effects are on a reservation, an Indian Tribe, may by agreement with the lead agency become a cooperating agency.

Sec. 1508.6 Council.

"Council" means the Council on Environmental Quality established by Title II of the Act.

Sec. 1508.7 Cumulative impact.

"Cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Sec. 1508.8 Effects.

"Effects" include:

(a) Direct effects, which are caused by the action and occur at the same time and place.

(b) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

Effects and impacts as used in these regulations are synonymous. Effects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

Sec. 1508.9 Environmental assessment.

"Environmental assessment":

(a) Means a concise public document for which a Federal agency is responsible that serves to:

1. Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.
2. Aid an agency's compliance with the Act when no environmental impact statement is necessary.
3. Facilitate preparation of a statement when one is necessary.

(b) Shall include brief discussions of the need for the proposal, of alternatives as required by section 102(2)(E), of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.

Sec. 1508.10 Environmental document.

"Environmental document" includes the documents specified in Sec. 1508.9 (environmental assessment), Sec. 1508.11 (environmental impact statement), Sec. 1508.13 (finding of no significant impact), and Sec. 1508.22 (notice of intent).

Sec. 1508.11 Environmental impact statement.

"Environmental impact statement" means a detailed written statement as required by section 102(2)(C) of the Act.

Sec. 1508.12 Federal agency.

"Federal agency" means all agencies of the Federal Government. It does not mean the Congress, the Judiciary, or the President, including the performance of staff functions for the President in his Executive Office. It also includes for purposes of these regulations States and units of general local government and Indian tribes assuming NEPA responsibilities under section 104(h) of the Housing and Community Development Act of 1974.

Sec. 1508.13 Finding of no significant impact.

"Finding of no significant impact" means a document by a Federal agency briefly presenting the reasons why an action, not otherwise excluded (Sec. 1508.4), will not have a significant effect on the human environment and for which an environmental impact statement therefore will not be prepared. It shall include the environmental assessment or a summary of it and shall note any other environmental documents related to it (Sec. 1501.7(a)(5)). If the assessment is included, the finding need not repeat any of the discussion in the assessment but may incorporate it by reference.

Sec. 1508.14 Human environment.

"Human environment" shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. (See the definition of "effects" (Sec. 1508.8).) This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment.

Sec. 1508.15 Jurisdiction by law.

"Jurisdiction by law" means agency authority to approve, veto, or finance all or part of the proposal.

Sec. 1508.16 Lead agency.

"Lead agency" means the agency or agencies preparing or having taken primary responsibility for preparing the environmental impact statement.

Sec. 1508.17 Legislation.

"Legislation" includes a bill or legislative proposal to Congress developed by or with the significant cooperation and support of a Federal agency, but does not include requests for appropriations. The test for significant cooperation is whether the proposal is in fact predominantly that of the agency rather than another source. Drafting does not by itself constitute significant cooperation. Proposals for legislation include requests for ratification of treaties. Only the agency which has primary responsibility for the subject matter involved will prepare a legislative environmental impact statement.

Sec. 1508.18 Major Federal action.

"Major Federal action" includes actions with effects that may be major and which are potentially subject to Federal control and responsibility. Major reinforces but does not have a meaning independent of significantly (Sec. 1508.27). Actions include the circumstance where the responsible officials fail to act and that failure to act is reviewable by courts or administrative tribunals under the Administrative Procedure Act or other applicable law as agency action.

(a) Actions include new and continuing activities, including projects and programs entirely or partly financed, assisted, conducted, regulated, or approved by federal agencies; new or revised agency rules, regulations, plans, policies, or procedures; and legislative proposals (Secs. 1506.8, 1508.17). Actions do not include funding assistance solely in the form of general revenue sharing funds, distributed under the State and Local Fiscal Assistance Act of 1972, 31 U.S.C. 1221 et seq., with no Federal agency control over the subsequent use of such funds. Actions do not include bringing judicial or administrative civil or criminal enforcement actions.

(b) Federal actions tend to fall within one of the following categories:

1. Adoption of official policy, such as rules, regulations, and interpretations adopted pursuant to the Administrative Procedure Act, 5 U.S.C. 551 et seq.; treaties and international conventions or agreements; formal documents establishing an agency's policies which will result in or substantially alter agency programs.
2. Adoption of formal plans, such as official documents prepared or approved by federal agencies which guide or prescribe alternative uses of Federal resources, upon which future agency actions will be based.
3. Adoption of programs, such as a group of concerted actions to implement a specific policy or plan; systematic and connected agency decisions allocating agency resources to implement a specific statutory program or executive directive.
4. Approval of specific projects, such as construction or management activities located in a defined geographic area. Projects include actions approved by permit or other regulatory decision as well as federal and federally assisted activities.

Sec. 1508.19 Matter.

"Matter" includes for purposes of Part 1504: (a) With respect to the Environmental Protection Agency, any proposed legislation, project, action or regulation as those terms are used in section 309(a) of the Clean Air Act (42 U.S.C. 7609). (b) With respect to all other agencies, any proposed major federal action to which section 102(2)(C) of NEPA applies.

Sec. 1508.20 Mitigation.

"Mitigation" includes:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the impact by replacing or providing substitute resources or environments.

Sec. 1508.21 NEPA process.

"NEPA process" means all measures necessary for compliance with the requirements of section 2 and Title I of NEPA.

Sec. 1508.22 Notice of intent.

"Notice of intent" means a notice that an environmental impact statement will be prepared and considered. The notice shall briefly:

(a) Describe the proposed action and possible alternatives.

(b) Describe the agency's proposed scoping process including whether, when, and where any scoping meeting will be held.

(c) State the name and address of a person within the agency who can answer questions about the proposed action and the environmental impact statement.

Sec. 1508.23 Proposal.

"Proposal" exists at that stage in the development of an action when an agency subject to the Act has a goal and is actively preparing to make a decision on one or more alternative means of accomplishing that goal and the effects can be meaningfully evaluated. Preparation of an environmental impact statement on a proposal should be timed (Sec. 1502.5) so that the final statement may be completed in time for the statement to be included in any recommendation or report on the proposal. A proposal may exist in fact as well as by agency declaration that one exists.

Sec. 1508.24 Referring agency.

"Referring agency" means the federal agency which has referred any matter to the Council after a determination that the matter is unsatisfactory from the standpoint of public health or welfare or environmental quality.

Sec. 1508.25 Scope.

Scope consists of the range of actions, alternatives, and impacts to be considered in an environmental impact statement. The scope of an individual statement may depend on its relationships to other statements (Secs.1502.20 and 1508.28). To determine the scope of environmental impact statements, agencies shall consider 3 types of actions, 3 types of alternatives, and 3 types of impacts. They include:

(a) Actions (other than unconnected single actions) which may be:

1. Connected actions, which means that they are closely related and therefore should be discussed in the same impact statement. Actions are connected if they:

(i) Automatically trigger other actions which may require environmental impact statements.

(ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.

(iii) Are interdependent parts of a larger action and depend on the larger action for their justification.

2. Cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.
3. Similar actions, which when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography. An agency may wish to analyze these actions in the same impact statement. It should do so when the best way to assess adequately the combined impacts of similar actions or reasonable alternatives to such actions is to treat them in a single impact statement.

(b) Alternatives, which include:

4. No action alternative.
5. Other reasonable courses of actions.
6. Mitigation measures (not in the proposed action).

(c) Impacts, which may be: (1) Direct; (2) indirect; (3) cumulative.

Sec. 1508.26 Special expertise.

"Special expertise" means statutory responsibility, agency mission, or related program experience.

Sec. 1508.27 Significantly.

"Significantly" as used in NEPA requires considerations of both context and intensity:

(a) Context. This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant.

(b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:

1. Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.
2. The degree to which the proposed action affects public health or safety.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.
4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.
5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
6. The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.
8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

[43 FR 56003, Nov. 29, 1978; 44 FR 874, Jan. 3, 1979]

Sec. 1508.28 Tiering.

"Tiering" refers to the coverage of general matters in broader environmental impact statements (such as national program or policy statements) with subsequent narrower statements or environmental analyses (such as regional or basinwide program statements or ultimately site-specific statements) incorporating by reference the general discussions and concentrating solely on the issues specific to the statement subsequently prepared. Tiering is appropriate when the sequence of statements or analyses is:

(a) From a program, plan, or policy environmental impact statement to a program, plan, or policy statement or analysis of lesser scope or to a site- specific statement or analysis.

(b) From an environmental impact statement on a specific action at an early stage (such as need and site selection) to a supplement (which is preferred) or a subsequent statement or analysis at a later stage (such as environmental mitigation). Tiering in such cases is appropriate when it helps the lead agency to focus on the issues which are ripe for decision and exclude from consideration issues already decided or not yet ripe.

Forty Most Asked Questions Concerning CEQ's NEPA Regulations, March 18, 1983

http://ceq.eh.doe.gov/nepa/regs/40/40p3.htm

1a. **Range of Alternatives.** What is meant by "range of alternatives" as referred to in Sec. 1505.1(e)?

A. The phrase "range of alternatives" refers to the alternatives discussed in environmental documents. It includes all reasonable alternatives, which must be rigorously explored and objectively evaluated, as well as those other alternatives, which are eliminated from detailed study with a brief discussion of the reasons for eliminating them. Section 1502.14. A decisionmaker must not consider alternatives beyond the range of alternatives discussed in the relevant environmental documents. Moreover, a decisionmaker must, in fact, consider all the alternatives discussed in an EIS. Section 1505.1(e).

1b. **How many alternatives** have to be discussed when there is an infinite number of possible alternatives?

A. For some proposals there may exist a very large or even an infinite number of possible reasonable alternatives. For example, a proposal to designate wilderness areas within a National Forest could be said to involve an infinite number of alternatives from 0 to 100 percent of the forest. When there are potentially a very large number of alternatives, only a reasonable number of examples, covering the full spectrum of alternatives, must be analyzed and compared in the EIS. An appropriate series of alternatives might include dedicating 0, 10, 30, 50, 70, 90, or 100 percent of the Forest to wilderness. What constitutes a reasonable range of alternatives depends on the nature of the proposal and the facts in each case.

2a. **Alternatives Outside the Capability of Applicant or Jurisdiction of Agency.** If an EIS is prepared in connection with an application for a permit or other federal approval, must the EIS rigorously analyze and discuss alternatives that are outside the capability of the applicant or can it be limited to reasonable alternatives that can be carried out by the applicant?

A. Section 1502.14 requires the EIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.

2b. Must the EIS analyze **alternatives outside the jurisdiction** or capability of the agency or beyond what Congress has authorized?

A. An alternative that is outside the legal jurisdiction of the lead agency must still be analyzed in the EIS if it is reasonable. A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered. Section 1506.2(d). Alternatives that are outside the scope of what Congress has approved or funded must still be evaluated in the EIS if they are reasonable, because the EIS may serve as the basis for modifying the Congressional approval or funding in light of NEPA's goals and policies. Section 1500.1(a).

3. **No-Action Alternative.** What does the "no action" alternative include? If an agency is under a court order or legislative command to act, must the EIS address the "no action" alternative?

A. Section 1502.14(d) requires the alternatives analysis in the EIS to "include the alternative of no action." There are two distinct interpretations of "no action" that must be considered, depending on the nature of the proposal being evaluated. The first situation might involve an action such as updating a land management plan where ongoing programs initiated under existing legislation and regulations will continue, even as new plans are developed. In these cases "no action" is "no change" from current management direction or level of management intensity. To construct an alternative that is based on no management at all would be a useless academic exercise. Therefore, the "no action" alternative may be thought of in terms of continuing with the present course of action until that action is changed. Consequently, projected impacts of alternative management schemes would be compared in the EIS to those impacts projected for the existing plan. In this case, alternatives would include management plans of both greater and lesser intensity, especially greater and lesser levels of resource development.

The second interpretation of "no action" is illustrated in instances involving federal decisions on proposals for projects. "No action" in such cases would mean the proposed activity would not take place, and the resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity or an alternative activity to go forward.

Where a choice of "no action" by the agency would result in predictable actions by others, this consequence of the "no action" alternative should be included in the analysis. For example, if denial of permission to build a railroad to a facility would lead to construction of a road and increased truck traffic, the EIS should analyze this consequence of the "no action" alternative.

In light of the above, it is difficult to think of a situation where it would not be appropriate to address a "no action" alternative. Accordingly, the regulations require the analysis of the no action alternative even if the agency is under a court order or legislative command to act. This analysis provides a benchmark, enabling decisionmakers to compare the magnitude of environmental effects of the action alternatives. It is also an example of a reasonable alternative outside the jurisdiction of the agency which must be analyzed. Section 1502.14(c). See Question 2 above. Inclusion of such an analysis in the EIS is necessary to inform the Congress, the public, and the President as intended by NEPA. Section 1500.1(a).

4a. **Agency's Preferred Alternative.** What is the "agency's preferred alternative"?

A. The "agency's preferred alternative" is the alternative which the agency believes would fulfill its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors. The concept of the "agency's preferred alternative" is different from the "environmentally preferable alternative," although in some cases one alternative may be both. See Question 6 below. It is identified so that agencies and the public can understand the lead agency's orientation.

4b. Does the **"preferred alternative"** have to be identified in the Draft EIS **and** the Final EIS or just in the Final EIS?

A. Section 1502.14(e) requires the section of the EIS on alternatives to "identify the agency's preferred alternative if one or more exists, in the draft statement, and identify such alternative in the final statement . . ." This means that if the agency has a preferred alternative at the Draft EIS stage, that alternative must be labeled or identified as such in the Draft EIS. If the responsible federal official in fact has no preferred alternative at the Draft EIS stage, a preferred alternative need not be identified there. By the time the Final EIS is filed, Section 1502.14(e) presumes the existence of a preferred alternative and requires its identification in the Final EIS "unless another law prohibits the expression of such a preference."

4c. Who recommends or determines the **"preferred alternative?"**

A. The lead agency's official with line responsibility for preparing the EIS and assuring its adequacy is responsible for identifying the agency's preferred alternative(s). The NEPA regulations do not dictate which official in an agency shall be responsible for preparation of EISs, but agencies can identify this official in their implementing procedures, pursuant to Section 1507.3.

Even though the agency's preferred alternative is identified by the EIS preparer in the EIS, the statement must be objectively prepared and not slanted to support the choice of the agency's preferred alternative over the other reasonable and feasible alternatives.

5a. **Proposed Action v. Preferred Alternative.** Is the "proposed action" the same thing as the "preferred alternative"?

A. The "proposed action" may be, but is not necessarily, the agency's "preferred alternative." The proposed action may be a proposal in its initial form before undergoing analysis in the EIS process. If the proposed action is [46 FR 18028] internally generated, such as preparing a land management plan, the proposed action might end up as the agency's preferred alternative. On the other hand the proposed action may be granting an application to a non-federal entity for a permit. The agency may or may not have a "preferred alternative" at the Draft EIS stage (see Question 4 above). In that case the agency may decide at the Final EIS stage, on the basis of the Draft EIS and the public and agency comments, that an alternative other than the proposed action is the agency's "preferred alternative."

5b. Is the analysis of the **"proposed action"** in an EIS to be treated differently from the analysis of alternatives?

A. The degree of analysis devoted to each alternative in the EIS is to be substantially similar to that devoted to the "proposed action." Section 1502.14 is titled "Alternatives including the proposed action" to reflect such comparable treatment. Section 1502.14(b) specifically requires "substantial treatment" in the EIS of each alternative including the proposed action. This regulation does not dictate an amount of information to be provided, but rather, prescribes a level of treatment, which may in turn require varying amounts of information, to enable a reviewer to evaluate and compare alternatives.

6a. **Environmentally Preferable Alternative.** What is the meaning of the term "environmentally preferable alternative" as used in the regulations with reference to Records of Decision? How is the term "environment" used in the phrase?

A. Section 1505.2(b) requires that, in cases where an EIS has been prepared, the Record of Decision (ROD) must identify all alternatives that were considered, ". . . specifying the alternative or alternatives which were considered to be environmentally preferable." The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA's Section 101. Ordinarily, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources.

The Council recognizes that the identification of the environmentally preferable alternative may involve difficult judgments, particularly when one environmental value must be balanced against another. The public and other agencies reviewing a Draft EIS can assist the lead agency to develop and determine environmentally preferable alternatives by providing their views in comments on the Draft EIS. Through the identification of the environmentally preferable alternative, the decisionmaker is clearly faced with a choice between that alternative and others, and must consider whether the decision accords with the Congressionally declared policies of the Act.

6b. **Who recommends or determines** what is environmentally preferable?

A. The agency EIS staff is encouraged to make recommendations of the environmentally preferable alternative(s) during EIS preparation. In any event the lead agency official responsible for the EIS is encouraged to identify the environmentally preferable alternative(s) in the EIS. In all cases, commentors from other agencies and the public are also encouraged to address this question. The agency must identify the environmentally preferable alternative in the ROD.

7. **Difference Between Sections of EIS on Alternatives and Environmental Consequences.** What is the difference between the sections in the EIS on "alternatives" and "environmental consequences"? How do you avoid duplicating the discussion of alternatives in preparing these two sections?

A. The "alternatives" section is the heart of the EIS. This section rigorously explores and objectively evaluates all reasonable alternatives including the proposed action. Section 1502.14. It should include relevant comparisons on environmental and other grounds. The "environmental consequences" section of the EIS discusses the specific environmental impacts or effects of each of the alternatives including the proposed action. Section 1502.16. In order to avoid duplication between these two sections, most of the "alternatives" section should be devoted to describing and comparing the alternatives. Discussion of the environmental impacts of these alternatives should be limited to a concise descriptive summary of such impacts in a comparative form, including charts or tables, thus sharply defining the issues and providing a clear basis for choice among options. Section 1502.14. The "environmental consequences" section should be devoted largely to a scientific analysis of the direct and indirect environmental effects of the proposed action and of each of the alternatives. It forms the analytic basis for the concise comparison in the "alternatives" section.

8. **Early Application of NEPA.** Section 1501.2(d) of the NEPA regulations requires agencies to provide for the early application of NEPA to cases where actions are planned by **private applicants** or **non-Federal entities** and are, at some stage, subject to federal approval of permits, loans, loan guarantees, insurance or other actions. What must and can agencies do to apply NEPA early in these cases?

A. Section 1501.2(d) requires federal agencies to take steps toward ensuring that private parties and state and local entities initiate environmental studies as soon as federal involvement in their proposals can be foreseen. This section is intended to ensure that environmental factors are considered at an early stage in the planning process and to avoid the situation where the applicant for a federal permit or approval has completed planning and eliminated all alternatives to the proposed action by the time the EIS process commences or before the EIS process has been completed.

Through early consultation, business applicants and approving agencies may gain better appreciation of each other's needs and foster a decisionmaking process which avoids later unexpected confrontations.

Federal agencies are required by Section 1507.3(b) to develop procedures to carry out Section 1501.2(d). The procedures should include an "outreach program", such as a means for prospective applicants to conduct pre-application consultations with the lead and cooperating agencies. Applicants need to find out, in advance of project planning, what environmental studies or other information will be required, and what mitigation requirements are likely, in connection with the later federal NEPA process. Agencies should designate staff to advise potential applicants of the agency's NEPA information requirements and should publicize their pre-application procedures and information requirements in newsletters or other media used by potential applicants.

Complementing Section 1501.2(d), Section 1506.5(a) requires agencies to assist applicants by outlining the types of information required in those cases where the agency requires the applicant to submit environmental data for possible use by the agency in preparing an EIS.

Section 1506.5(b) allows agencies to authorize preparation of environmental assessments by applicants. Thus, the procedures should also include a means for anticipating and utilizing applicants' environmental studies or "early corporate environmental assessments" to fulfill some of the federal agency's NEPA obligations. However, in such cases the agency must still evaluate independently the environmental issues [46 FR 18029] and take responsibility for the environmental assessment.

These provisions are intended to encourage and enable private and other non-federal entities to build environmental considerations into their own planning processes in a way that facilitates the application of NEPA and avoids delay.

9. **Applicant Who Needs Other Permits.** To what extent must an agency inquire into whether an applicant for a federal permit, funding or other approval of a proposal will also need approval from another agency for the same proposal or some other related aspect of it?

A. Agencies must integrate the NEPA process into other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts. Specifically, the agency must "provide for cases where actions are planned by . . . applicants," so that designated staff are available to advise potential applicants of studies or other information that will foreseeably be required for the later federal action; the agency shall consult with the applicant if the agency foresees its own involvement in the proposal; and it shall insure that the NEPA process commences at the earliest possible time. Section 1501.2(d). (See Question 8.)

The regulations emphasize agency cooperation early in the NEPA process. Section 1501.6. Section 1501.7 on "scoping" also provides that all affected Federal agencies are to be invited to participate in scoping the environmental issues and to identify the various environmental review and consultation requirements that may apply to the proposed action. Further, Section 1502.25(b) requires that the draft EIS list all the federal permits, licenses and other entitlements that are needed to implement the proposal.

☐These provisions create an affirmative obligation on federal agencies to inquire early, and to the maximum degree possible, to ascertain whether an applicant is or will be seeking other federal assistance or approval, or whether the applicant is waiting until a proposal has been substantially developed before requesting federal aid or approval.

Thus, a federal agency receiving a request for approval or assistance should determine whether the applicant has filed separate requests for federal approval or assistance with other federal agencies. Other federal agencies that are likely to become involved should then be contacted, and the NEPA process coordinated, to insure an early and comprehensive analysis of the direct and indirect effects of the proposal and any related actions. The agency should inform the applicant that action on its application may be delayed unless it submits all other federal applications (where feasible to do so), so that all the relevant agencies can work together on the scoping process and preparation of the EIS.

10a. **Limitations on Action During 30-Day Review Period for Final EIS.** What actions by agencies and/or applicants are allowed during EIS preparation and during the 30-day review period after publication of a final EIS?

A. No federal decision on the proposed action shall be made or recorded until at least 30 days after the publication by EPA of notice that the particular EIS has been filed with EPA. Sections 1505.2 and 1506.10. Section 1505.2 requires this decision to be stated in a public Record of Decision.

Until the agency issues its Record of Decision, no action by an agency or an applicant concerning the proposal shall be taken which would have an adverse environmental impact or limit the choice of reasonable alternatives. Section 1506.1(a). But this does not preclude preliminary planning or design work which is needed to support an application for permits or assistance. Section 1506.1(d).

When the impact statement in question is a program EIS, no major action concerning the program may be taken which may significantly affect the quality of the human environment, unless the particular action is justified independently of the program, is accompanied by its own adequate environmental impact statement and will not prejudice the ultimate decision on the program. Section 1506.1(c).

10b. Do these **limitations on action** (described in Question 10a) apply to **state or local agencies** that have statutorily delegated responsibility for preparation of environmental documents required by NEPA, for example, under the HUD Block Grant program?

A. Yes, these limitations do apply, without any variation from their application to federal agencies.

> 11. **Limitations on Actions by an Applicant During EIS Process.** What actions must a lead agency take during the NEPA process when it becomes aware that a non-federal applicant is about to take an action within the agency's jurisdiction that would either have an adverse environmental impact or limit the choice of reasonable alternatives (e.g., prematurely commit money or other resources towards the completion of the proposal)?

A. The federal agency must notify the applicant that the agency will take strong affirmative steps to insure that the objectives and procedures of NEPA are fulfilled. Section 1506.1(b). These steps could include seeking injunctive measures under NEPA, or the use of sanctions available under either the agency's permitting authority or statutes setting forth the agency's statutory mission. For example, the agency might advise an applicant that if it takes such action the agency will not process its application.

12a. **Effective Date and Enforceability of the Regulations.** What actions are subject to the Council's new regulations, and what actions are grandfathered under the old guidelines?

A. The effective date of the Council's regulations was July 30, 1979 (except for certain HUD programs under the Housing and Community Development Act, 42 U.S.C. 5304(h), and certain state highway programs that qualify under Section 102(2)(D) of NEPA for which the regulations became effective on November 30, 1979). All the provisions of the regulations are binding as of that date, including those covering decisionmaking, public participation, referrals, limitations on actions, EIS supplements, etc. For example, a Record of Decision would be prepared even for decisions where the draft EIS was filed before July 30, 1979.

But in determining whether or not the new regulations apply to the preparation of a particular environmental document, the relevant factor is the date of filing of the draft of that document. Thus, the new regulations do not require the redrafting of an EIS or supplement if the draft EIS or supplement was filed before July 30, 1979. However, a supplement prepared after the effective date of the regulations for an EIS issued in final before the effective date of the regulations would be controlled by the regulations.

Even though agencies are not required to apply the regulations to an EIS or other document for which the draft was filed prior to July 30, 1979, the regulations encourage agencies to follow the regulations "to the fullest extent practicable," i.e., if it is feasible to do so, in preparing the final document. Section 1506.12(a).

12b. Are **projects authorized by Congress before** the effective date of the Council's regulations grandfathered?

A. No. The date of Congressional authorization for a project is not determinative of whether the Council's regulations or former Guidelines apply to the particular proposal. No incomplete projects or proposals of any kind are grandfathered in whole or in part. Only certain environmental documents, for which the draft was issued before the effective date of the regulations, are grandfathered and [46 FR 18030] subject to the Council's former Guidelines.

12c. **Can a violation of the regulations give rise to a cause of action?**

A. While a trivial violation of the regulations would not give rise to an independent cause of action, such a cause of action would arise from a substantial violation of the regulations. Section 1500.3.

13. **Use of Scoping Before Notice of Intent to Prepare EIS.** Can the scoping process be used in connection with preparation of an **environmental assessment,** i.e., before both the decision to proceed with an EIS and publication of a notice of intent?

A. Yes. Scoping can be a useful tool for discovering alternatives to a proposal, or significant impacts that may have been overlooked. In cases where an environmental assessment is being prepared to help an agency decide whether to prepare an EIS, useful information might result from early participation by other agencies and the public in a scoping process.

The regulations state that the scoping process is to be preceded by a Notice of Intent (NOI) to prepare an EIS. But that is only the minimum requirement. Scoping may be initiated earlier, as long as there is appropriate public notice and enough information available on the proposal so that the public and relevant agencies can participate effectively.

However, scoping that is done before the assessment, and in aid of its preparation, cannot substitute for the normal scoping process after publication of the NOI, unless the earlier public notice stated clearly that this possibility was under consideration, and the NOI expressly provides that written comments on the scope of alternatives and impacts will still be considered.

14a. **Rights and Responsibilities of Lead and Cooperating Agencies.** What are the respective rights and responsibilities of lead and cooperating agencies? What letters and memoranda must be prepared?

A. After a lead agency has been designated (Sec. 1501.5), that agency has the responsibility to solicit cooperation from other federal agencies that have jurisdiction by law or special expertise on any environmental issue that should be addressed in the EIS being prepared. Where appropriate, the lead agency should seek the cooperation of state or local agencies of similar qualifications. When the proposal may affect an Indian reservation, the agency should consult with the Indian tribe. Section 1508.5. The request for cooperation should come at the earliest possible time in the NEPA process.

After discussions with the candidate cooperating agencies, the lead agency and the cooperating agencies are to determine by letter or by memorandum which agencies will undertake cooperating responsibilities. To the extent possible at this stage, responsibilities for specific issues should be assigned. The allocation of responsibilities will be completed during scoping. Section 1501.7(a)(4).

Cooperating agencies must assume responsibility for the development of information and the preparation of environmental analyses at the request of the lead agency. Section 1501.6(b)(3). Cooperating agencies are now required by Section 1501.6 to devote staff resources that were normally primarily used to critique or comment on the Draft EIS after its preparation, much earlier in the NEPA process -- primarily at the scoping and Draft EIS preparation stages. If a cooperating agency determines that its resource limitations preclude any involvement, or the degree of involvement (amount of work) requested by the lead agency, it must so inform the lead agency in writing and submit a copy of this correspondence to the Council. Section 1501.6(c).

In other words, the potential cooperating agency must decide early if it is able to devote any of its resources to a particular proposal. For this reason the regulation states that an agency may reply to a request for cooperation that "other program commitments preclude any involvement or the degree of involvement requested in the action that is the subject of the environmental impact statement." (Emphasis added). The regulation refers to the "action," rather than to the EIS, to clarify that the agency is taking itself out of all phases of the federal action, not just draft EIS preparation. This means that the agency has determined that it cannot be involved in the later stages of EIS review and comment, as well as decisionmaking on the proposed action. For this reason, cooperating agencies with jurisdiction by law (those which have permitting or other approval authority) cannot opt out entirely of the duty to cooperate on the EIS. See also Question 15, relating specifically to the responsibility of EPA.

14b. How are **disputes resolved between lead and cooperating agencies** concerning the scope and level of detail of analysis and the quality of data in impact statements?

A. Such disputes are resolved by the agencies themselves. A lead agency, of course, has the ultimate responsibility for the content of an EIS. But it is supposed to use the environmental analysis and recommendations of cooperating agencies with jurisdiction by law or special expertise to the maximum extent possible, consistent with its own responsibilities as lead agency. Section 1501.6(a)(2).

If the lead agency leaves out a significant issue or ignores the advice and expertise of the cooperating agency, the EIS may be found later to be inadequate. Similarly, where cooperating agencies have their own decisions to make and they intend to adopt the environmental impact statement and base their decisions on it, one document should include all of the information necessary for the decisions by the cooperating agencies. Otherwise they may be forced to duplicate the EIS process by issuing a new, more complete EIS or Supplemental EIS, even though the original EIS could have sufficed if it had been properly done at the outset. Thus, both lead and cooperating agencies have a stake in producing a document of good quality. Cooperating agencies also have a duty to participate fully in the scoping process to ensure that the appropriate range of issues is determined early in the EIS process.

Because the EIS is not the Record of Decision, but instead constitutes the information and analysis on which to base a decision, disagreements about conclusions to be drawn from the EIS need not inhibit agencies from issuing a joint document, or adopting another agency's EIS, if the analysis is adequate. Thus, if each agency has its own "preferred alternative," both can be identified in the EIS. Similarly, a cooperating agency with jurisdiction by law may determine in its own ROD that alternative A is the environmentally preferable action, even though the lead agency has decided in its separate ROD that Alternative B is environmentally preferable.

14c. What are the specific responsibilities of federal and state **cooperating agencies to review draft EISs**?

A. Cooperating agencies (i.e., agencies with jurisdiction by law or special expertise) and agencies that are authorized to develop or enforce environmental standards, must comment on environmental impact statements within their jurisdiction, expertise or authority. Sections 1503.2, 1508.5. If a cooperating agency is satisfied that its views are adequately reflected in the environmental impact statement, it should simply comment accordingly. Conversely, if the cooperating agency determines that a draft EIS is incomplete, inadequate or inaccurate, or it has other comments, it should promptly make such comments, conforming to the requirements of specificity in section 1503.3.

14d. How is the lead agency to treat the comments of another agency with jurisdiction by law or special expertise which has **failed or refused to cooperate or participate in scoping or EIS preparation**?

A. A lead agency has the responsibility to respond to all substantive comments raising significant issues regarding a draft EIS. Section 1503.4. However, cooperating agencies are generally under an obligation to raise issues or otherwise participate in the EIS process during scoping and EIS preparation if they reasonably can do so. In practical terms, if a cooperating agency fails to cooperate at the outset, such as during scoping, it will find that its comments at a later stage will not be as persuasive to the lead agency.

15. **Commenting Responsibilities of EPA.** Are EPA's responsibilities to review and comment on the environmental effects of agency proposals under **Section 309 of the Clean Air Act** independent of its responsibility as a cooperating agency?

A. Yes. EPA has an obligation under Section 309 of the Clean Air Act to review and comment in writing on the environmental impact of any matter relating to the authority of the Administrator contained in proposed legislation, federal construction projects, other federal actions requiring EISs, and new regulations. 42 U.S.C. Sec. 7609. This obligation is independent of its role as a cooperating agency under the NEPA regulations.

16. **Third Party Contracts.** What is meant by the term "third party contracts" in connection with the preparation of an EIS? See Section 1506.5(c). When can "third party contracts" be used?

A. As used by EPA and other agencies, the term "third party contract" refers to the preparation of EISs by contractors paid by the applicant. In the case of an EIS for a National Pollution Discharge Elimination System (NPDES) permit, the applicant, aware in the early planning stages of the proposed project of the need for an EIS, contracts directly with a consulting firm for its preparation. See 40 C.F.R. 6.604(g). The "third party" is EPA which, under Section 1506.5(c), must select the consulting firm, even though the applicant pays for the cost of preparing the EIS. The consulting firm is responsible to EPA for preparing an EIS that meets the requirements of the NEPA regulations and EPA's NEPA procedures. It is in the applicant's interest that the EIS comply with the law so that EPA can take prompt action on the NPDES permit application. The "third party contract" method under EPA's NEPA procedures is purely voluntary, though most applicants have found it helpful in expediting compliance with NEPA.

If a federal agency uses "third party contracting," the applicant may undertake the necessary paperwork for the solicitation of a field of candidates under the agency's direction, so long as the agency complies with Section 1506.5(c). Federal procurement requirements do not apply to the agency because it incurs no obligations or costs under the contract, nor does the agency procure anything under the contract.

17a. **Disclosure Statement to Avoid Conflict of Interest.** If an EIS is prepared with the assistance of a consulting firm, the firm must execute a disclosure statement. What criteria must the firm follow in determining whether it has any "financial or other interest in the outcome of the project" which would cause a conflict of interest?

A. Section 1506.5(c), which specifies that a consulting firm preparing an EIS must execute a disclosure statement, does not define "financial or other interest in the outcome of the project." The Council interprets this term broadly to cover any known benefits other than general enhancement of professional reputation. This includes any financial benefit such as a promise of future construction or design work on the project, as well as indirect benefits the consultant is aware of (e.g., if the project would aid proposals sponsored by the firm's other clients). For example, completion of a highway project may encourage construction of a shopping center or industrial park from which the consultant stands to benefit. If a consulting firm is aware that it has such an interest in the decision on the proposal, it should be disqualified from preparing the EIS, to preserve the objectivity and integrity of the NEPA process.

When a consulting firm has been involved in developing initial data and plans for the project, but does not have any financial or other interest in the outcome of the decision, it need not be disqualified from preparing the EIS. However, a disclosure statement in the draft EIS should clearly state the scope and extent of the firm's prior involvement to expose any potential conflicts of interest that may exist.

17b. If the firm in fact has no promise of future work or other interest in the outcome of the proposal, **may the firm later bid** in competition with others for future work on the project if the proposed action is approved?

A. Yes.

18. **Uncertainties About Indirect Effects of A Proposal.** How should uncertainties about indirect effects of a proposal be addressed, for example, in cases of disposal of federal lands, when the identity or plans of future landowners is unknown?

A. The EIS must identify all the indirect effects that are known, and make a good faith effort to explain the effects that are not known but are "reasonably foreseeable." Section 1508.8(b). In the example, if there is total uncertainty about the identity of future land owners or the nature of future land uses, then of course, the agency is not required to engage in speculation or contemplation about their future plans. But, in the ordinary course of business, people do make judgments based upon reasonably foreseeable occurrences. It will often be possible to consider the likely purchasers and the development trends in that area or similar areas in recent years; or the likelihood that the land will be used for an energy project, shopping center, subdivision, farm or factory. The agency has the responsibility to make an informed judgment, and to estimate future impacts on that basis, especially if trends are ascertainable or potential purchasers have made themselves known. The agency cannot ignore these uncertain, but probable, effects of its decisions.

19a. **Mitigation Measures.** What is the scope of mitigation measures that must be discussed?

A. The mitigation measures discussed in an EIS must cover the range of impacts of the proposal. The measures must include such things as design alternatives that would decrease pollution emissions, construction impacts, esthetic intrusion, as well as relocation assistance, possible land use controls that could be enacted, and other possible efforts. Mitigation measures must be considered even for impacts that by themselves would not be considered "significant." Once the proposal itself is considered as a

whole to have significant effects, all of its specific effects on the environment (whether or not "significant") must be considered, and mitigation measures must be developed where it is feasible to do so. Sections 1502.14(f), 1502.16(h), 1508.14.

19b. How should an EIS treat the subject of available mitigation measures that are (1) **outside the jurisdiction** of the lead or cooperating agencies, or (2) **unlikely** to be adopted or enforced by the responsible agency?

A. All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies, and thus would not be committed as part of the RODs of these agencies. Sections 1502.16(h), 1505.2(c). This will serve to [46 FR 18032] alert agencies or officials who can implement these extra measures, and will encourage them to do so. Because the EIS is the most comprehensive environmental document, it is an ideal vehicle in which to lay out not only the full range of environmental impacts but also the full spectrum of appropriate mitigation.

However, to ensure that environmental effects of a proposed action are fairly assessed, the probability of the mitigation measures being implemented must also be discussed. Thus the EIS and the Record of Decision should indicate the likelihood that such measures will be adopted or enforced by the responsible agencies. Sections 1502.16(h), 1505.2. If there is a history of nonenforcement or opposition to such measures, the EIS and Record of Decision should acknowledge such opposition or nonenforcement. If the necessary mitigation measures will not be ready for a long period of time, this fact, of course, should also be recognized.

20. **Worst Case Analysis.** [Withdrawn.]

21. **Combining Environmental and Planning Documents.** Where an EIS or an EA is combined with another project planning document (sometimes called **"piggybacking"**), to what degree may the EIS or EA refer to and rely upon information in the project document to satisfy NEPA's requirements?

A. Section 1502.25 of the regulations requires that draft EISs be prepared concurrently and integrated with environmental analyses and related surveys and studies required by other federal statutes. In addition, Section 1506.4 allows any environmental document prepared in compliance with NEPA to be combined with any other agency document to reduce duplication and paperwork. However, these provisions were not intended to authorize the preparation of a short summary or outline EIS, attached to a detailed project report or land use plan containing the required environmental impact data. In such circumstances, the reader would have to refer constantly to the detailed report to understand the environmental impacts and alternatives which should have been found in the EIS itself.

The EIS must stand on its own as an analytical document which fully informs decisionmakers and the public of the environmental effects of the proposal and those of the reasonable alternatives. Section 1502.1. But, as long as the EIS is clearly identified and is self-supporting, it can be physically included in or attached to the project report or land use plan, and may use attached report material as technical backup.

Forest Service environmental impact statements for forest management plans are handled in this manner. The EIS identifies the agency's preferred alternative, which is developed in detail as the proposed management plan. The detailed proposed plan accompanies the EIS through the review process, and the documents are appropriately cross-referenced. The proposed plan is useful for EIS

readers as an example, to show how one choice of management options translates into effects on natural resources. This procedure permits initiation of the 90-day public review of proposed forest plans, which is required by the National Forest Management Act.

All the alternatives are discussed in the EIS, which can be read as an independent document. The details of the management plan are not repeated in the EIS, and vice versa. This is a reasonable functional separation of the documents: the EIS contains information relevant to the choice among alternatives; the plan is a detailed description of proposed management activities suitable for use by the land managers. This procedure provides for concurrent compliance with the public review requirements of both NEPA and the National Forest Management Act.

Under some circumstances, a project report or management plan may be totally merged with the EIS, and the one document labeled as both "EIS" and "management plan" or "project report." This may be reasonable where the documents are short, or where the EIS format and the regulations for clear, analytical EISs also satisfy the requirements for a project report.

22. **State and Federal Agencies as Joint Lead Agencies.** May state and federal agencies serve as joint lead agencies? If so, how do they resolve law, policy and resource conflicts under NEPA and the relevant state environmental policy act? How do they resolve differences in perspective where, for example, national and local needs may differ?

A. Under Section 1501.5(b), federal, state or local agencies, as long as they include at least one federal agency, may act as joint lead agencies to prepare an EIS. Section 1506.2 also strongly urges state and local agencies and the relevant federal agencies to cooperate fully with each other. This should cover joint research and studies, planning activities, public hearings, environmental assessments and the preparation of joint EISs under NEPA and the relevant "little NEPA" state laws, so that one document will satisfy both laws.

The regulations also recognize that certain inconsistencies may exist between the proposed federal action and any approved state or local plan or law. The joint document should discuss the extent to which the federal agency would reconcile its proposed action with such plan or law. Section 1506.2(d). (See Question 23).

Because there may be differences in perspective as well as conflicts among [46 FR 18033] federal, state and local goals for resources management, the Council has advised participating agencies to adopt a flexible, cooperative approach. The joint EIS should reflect all of their interests and missions, clearly identified as such. The final document would then indicate how state and local interests have been accommodated, or would identify conflicts in goals (e.g., how a hydroelectric project, which might induce second home development, would require new land use controls). The EIS must contain a complete discussion of scope and purpose of the proposal, alternatives, and impacts so that the discussion is adequate to meet the needs of local, state and federal decisionmakers.

23a. **Conflicts of Federal Proposal With Land Use Plans, Policies or Controls.** How should an agency handle potential **conflicts** between a proposal and the objectives of Federal, state or local land use plans, policies and controls for the area concerned? See Sec. 1502.16(c).

A. The agency should first inquire of other agencies whether there are any potential conflicts. If there would be immediate conflicts, or if conflicts could arise in the future when the plans are finished (see Question 23(b) below), the EIS must acknowledge and describe the extent of those conflicts. If there are any possibilities of resolving the conflicts, these should be explained as well. The EIS should also

evaluate the seriousness of the impact of the proposal on the land use plans and policies, and whether, or how much, the proposal will impair the effectiveness of land use control mechanisms for the area. Comments from officials of the affected area should be solicited early and should be carefully acknowledged and answered in the EIS.

23b. What constitutes a **"land use plan or policy"** for purposes of this discussion?

A. The term "land use plans," includes all types of formally adopted documents for land use planning, zoning and related regulatory requirements. Local general plans are included, even though they are subject to future change. Proposed plans should also be addressed if they have been formally proposed by the appropriate government body in a written form, and are being actively pursued by officials of the jurisdiction. Staged plans, which must go through phases of development such as the Water Resources Council's Level A, B and C planning process should also be included even though they are incomplete.

The term "policies" includes formally adopted statements of land use policy as embodied in laws or regulations. It also includes proposals for action such as the initiation of a planning process, or a formally adopted policy statement of the local, regional or state executive branch, even if it has not yet been formally adopted by the local, regional or state legislative body.

23c. What options are available for the decisionmaker when **conflicts with such plans** or policies are identified?

A. After identifying any potential land use conflicts, the decisionmaker must weigh the significance of the conflicts, among all the other environmental and non-environmental factors that must be considered in reaching a rational and balanced decision. Unless precluded by other law from causing or contributing to any inconsistency with the land use plans, policies or controls, the decisionmaker retains the authority to go forward with the proposal, despite the potential conflict. In the Record of Decision, the decisionmaker must explain what the decision was, how it was made, and what mitigation measures are being imposed to lessen adverse environmental impacts of the proposal, among the other requirements of Section 1505.2. This provision would require the decisionmaker to explain any decision to override land use plans, policies or controls for the area.

24a. **Environmental Impact Statements on Policies, Plans or Programs.** When are EISs required on policies, plans or programs?

A. An EIS must be prepared if an agency proposes to implement a specific policy, to adopt a plan for a group of related actions, or to implement a specific statutory program or executive directive. Section 1508.18. In addition, the adoption of official policy in the form of rules, regulations and interpretations pursuant to the Administrative Procedure Act, treaties, conventions, or other formal documents establishing governmental or agency policy which will substantially alter agency programs, could require an EIS. Section 1508.18. In all cases, the policy, plan, or program must have the potential for significantly affecting the quality of the human environment in order to require an EIS. It should be noted that a proposal "may exist in fact as well as by agency declaration that one exists." Section 1508.23.

24b. When is an **area-wide or overview EIS** appropriate?

A. The preparation of an area-wide or overview EIS may be particularly useful when similar actions, viewed with other reasonably foreseeable or proposed agency actions, share common timing or geography. For example, when a variety of energy projects may be located in a single watershed, or when a series of new energy technologies may be developed through federal funding, the overview or area-wide EIS would serve as a valuable and necessary analysis of the affected environment and the

potential cumulative impacts of the reasonably foreseeable actions under that program or within that geographical area.

24c. What is the function of **tiering** in such cases?

A. Tiering is a procedure which allows an agency to avoid duplication of paperwork through the incorporation by reference of the general discussions and relevant specific discussions from an environmental impact statement of broader scope into one of lesser scope or vice versa. In the example given in Question 24b, this would mean that an overview EIS would be prepared for all of the energy activities reasonably foreseeable in a particular geographic area or resulting from a particular development program. This impact statement would be followed by site-specific or project-specific EISs. The tiering process would make each EIS of greater use and meaning to the public as the plan or program develops, without duplication of the analysis prepared for the previous impact statement.

25a. **Appendices and Incorporation by Reference.** When is it appropriate to use appendices instead of including information in the body of an EIS?

A. The body of the EIS should be a succinct statement of all the information on environmental impacts and alternatives that the decisionmaker and the public need, in order to make the decision and to ascertain that every significant factor has been examined. The EIS must explain or summarize methodologies of research and modeling, and the results of research that may have been conducted to analyze impacts and alternatives.

Lengthy technical discussions of modeling methodology, baseline studies, or other work are best reserved for the appendix. In other words, if only technically trained individuals are likely to understand a particular discussion then it should go in the appendix, and a plain language summary of the analysis and conclusions of that technical discussion should go in the text of the EIS.

The final statement must also contain the agency's responses to comments on the draft EIS. These responses will be primarily in the form of changes in the document itself, but specific answers to each significant comment should also be included. These specific responses may be placed in an appendix. If the comments are especially voluminous, summaries of the comments and responses will suffice. (See Question 29 regarding the level of detail required for responses to comments.)

25b. How does an **appendix** differ from **incorporation by reference?**

A. First, if at all possible, the appendix accompanies the EIS, whereas the material which is incorporated by reference does not accompany the EIS. Thus the appendix should contain information that reviewers will be likely to want to examine. The appendix should include material that pertains to preparation of a particular EIS. Research papers directly relevant to the proposal, lists of affected species, discussion of the methodology of models used in the analysis of impacts, extremely detailed responses to comments, or other information, would be placed in the appendix.

The appendix must be complete and available at the time the EIS is filed. Five copies of the appendix must be sent to EPA with five copies of the EIS for filing. If the appendix is too bulky to be circulated, it instead must be placed in conveniently accessible locations or furnished directly to commentors upon request. If it is not circulated with the EIS, the Notice of Availability published by EPA must so state, giving a telephone number to enable potential commentors to locate or request copies of the appendix promptly.

Material that is not directly related to preparation of the EIS should be incorporated by reference. This would include other EISs, research papers in the general literature, technical background papers or other material that someone with technical training could use to evaluate the analysis of the proposal. These must be made available, either by citing the literature, furnishing copies to central locations, or sending copies directly to commentors upon request.

Care must be taken in all cases to ensure that material incorporated by reference, and the occasional appendix that does not accompany the EIS, are in fact available for the full minimum public comment period.

26a. **Index and Keyword Index in EISs.** How detailed must an EIS index be?

A. The EIS index should have a level of detail sufficient to focus on areas of the EIS of reasonable interest to any reader. It cannot be restricted to the most important topics. On the other hand, it need not identify every conceivable term or phrase in the EIS. If an agency believes that the reader is reasonably likely to be interested in a topic, it should be included.

26b. Is a **keyword index** required?

A. No. A keyword index is a relatively short list of descriptive terms that identifies the key concepts or subject areas in a document. For example it could consist of 20 terms which describe the most significant aspects of an EIS that a future researcher would need: type of proposal, type of impacts, type of environment, geographical area, sampling or modeling methodologies used. This technique permits the compilation of EIS data banks, by facilitating quick and inexpensive access to stored materials. While a keyword index is not required by the regulations, it could be a useful addition for several reasons. First, it can be useful as a quick index for reviewers of the EIS, helping to focus on areas of interest. Second, if an agency keeps a listing of the keyword indexes of the EISs it produces, the EIS preparers themselves will have quick access to similar research data and methodologies to aid their future EIS work. Third, a keyword index will be needed to make an EIS available to future researchers using EIS data banks that are being developed. Preparation of such an index now when the document is produced will save a later effort when the data banks become operational.

27a. **List of Preparers.** If a consultant is used in preparing an EIS, must the list of preparers identify members of the consulting firm as well as the agency NEPA staff who were primarily responsible?

A. Section 1502.17 requires identification of the names and qualifications of persons who were primarily responsible for preparing the EIS or significant background papers, including basic components of the statement. This means that members of a consulting firm preparing material that is to become part of the EIS must be identified. The EIS should identify these individuals even though the consultant's contribution may have been modified by the agency.

27b. Should agency staff involved in reviewing and editing the EIS also be included in the **list of preparers?**

A. Agency personnel who wrote basic components of the EIS or significant background papers must, of course, be identified. The EIS should also list the technical editors who reviewed or edited the statements.

27c. How much information should be included on each person listed?

A. The list of preparers should normally not exceed two pages. Therefore, agencies must determine which individuals had primary responsibility and need not identify individuals with minor involvement. The list of preparers should include a very brief identification of the individuals involved, their qualifications (expertise, professional disciplines) and the specific portion of the EIS for which they are responsible. This may be done in tabular form to cut down on length. A line or two for each person's qualifications should be sufficient.

28. **Advance or Xerox Copies of EIS.** May an agency file xerox copies of an EIS with EPA pending the completion of printing the document?

A. Xerox copies of an EIS may be filed with EPA prior to printing only if the xerox copies are simultaneously made available to other agencies and the public. Section 1506.9 of the regulations, which governs EIS filing, specifically requires Federal agencies to file EISs with EPA no earlier than the EIS is distributed to the public. However, this section does not prohibit xeroxing as a form of reproduction and distribution. When an agency chooses xeroxing as the reproduction method, the EIS must be clear and legible to permit ease of reading and ultimate microfiching of the EIS. Where color graphs are important to the EIS, they should be reproduced and circulated with the xeroxed copy.

29a. **Responses to Comments.** What response must an agency provide to a comment on a draft EIS which states that the EIS's methodology is inadequate or inadequately explained? For example, what level of detail must an agency include in its response to a simple postcard comment making such an allegation?

A. Appropriate responses to comments are described in Section 1503.4. Normally the responses should result in changes in the text of the EIS, not simply a separate answer at the back of the document. But, in addition, the agency must state what its response was, and if the agency decides that no substantive response to a comment is necessary, it must explain briefly why.

An agency is not under an obligation to issue a lengthy reiteration of its methodology for any portion of an EIS if the only comment addressing the methodology is a simple complaint that the EIS methodology is inadequate. But agencies must respond to comments, however brief, which are specific in their criticism of agency methodology. For example, if a commentor on an EIS said that an agency's air quality dispersion analysis or methodology was inadequate, and the agency had included a discussion of that analysis in the EIS, little if anything need be added in response to such a comment. However, if the commentor said that the dispersion analysis was inadequate because of its use of a certain computational technique, or that a dispersion analysis was inadequately explained because computational techniques were not included or referenced, then the agency would have to respond in a substantive and meaningful way to such a comment.

If a number of comments are identical or very similar, agencies may group the comments and prepare a single answer for each group. Comments may be summarized if they are especially voluminous. The comments or summaries must be attached to the EIS regardless of whether the agency believes they merit individual discussion in the body of the final EIS.

29b. How must an agency respond to a comment on a draft EIS that raises a **new alternative not previously considered** in the draft EIS?

A. This question might arise in several possible situations. First, a commentor on a draft EIS may indicate that there is a possible alternative which, in the agency's view, is not a reasonable alternative. Section 1502.14(a). If that is the case, the agency must explain why the comment does not warrant further

agency response, citing authorities or reasons that support the agency's position and, if appropriate, indicate those circumstances which would trigger agency reappraisal or further response. Section 1503.4(a). For example, a commentor on a draft EIS on a coal fired power plant may suggest the alternative of using synthetic fuel. The agency may reject the alternative with a brief discussion (with authorities) of the unavailability of synthetic fuel within the time frame necessary to meet the need and purpose of the proposed facility.

A second possibility is that an agency may receive a comment indicating that a particular alternative, while reasonable, should be modified somewhat, for example, to achieve certain mitigation benefits, or for other reasons. If the modification is reasonable, the agency should include a discussion of it in the final EIS. For example, a commentor on a draft EIS on a proposal for a pumped storage power facility might suggest that the applicant's proposed alternative should be enhanced by the addition of certain reasonable mitigation measures, including the purchase and set-aside of a wildlife preserve to substitute for the tract to be destroyed by the project. The modified alternative including the additional mitigation measures should be discussed by the agency in the final EIS.

A third slightly different possibility is that a comment on a draft EIS will raise an alternative which is a minor variation of one of the alternatives discussed in the draft EIS, but this variation was not given any consideration by the agency. In such a case, the agency should develop and evaluate the new alternative, if it is reasonable, in the final EIS. If it is qualitatively within the spectrum of alternatives that were discussed in the draft, a supplemental draft will not be needed. For example, a commentor on a draft EIS to designate a wilderness area within a National Forest might reasonably identify a specific tract of the forest, and urge that it be considered for designation. If the draft EIS considered designation of a range of alternative tracts which encompassed forest area of similar quality and quantity, no supplemental EIS would have to be prepared. The agency could fulfill its obligation by addressing that specific alternative in the final EIS.

As another example, an EIS on an urban housing project may analyze the alternatives of constructing 2,000, 4,000, or 6,000 units. A commentor on the draft EIS might urge the consideration of constructing 5,000 units utilizing a different configuration of buildings. This alternative is within the spectrum of alternatives already considered, and, therefore, could be addressed in the final EIS.

A fourth possibility is that a commentor points out an alternative which is not a variation of the proposal or of any alternative discussed in the draft impact statement, and is a reasonable alternative that warrants serious agency response. In such a case, the agency must issue a supplement to the draft EIS that discusses this new alternative. For example, a commentor on a draft EIS on a nuclear power plant might suggest that a reasonable alternative for meeting the projected need for power would be through peak load management and energy conservation programs. If the permitting agency has failed to consider that approach in the Draft EIS, and the approach cannot be dismissed by the agency as unreasonable, a supplement to the Draft EIS, which discusses that alternative, must be prepared. (If necessary, the same supplement should also discuss substantial changes in the proposed action or significant new circumstances or information, as required by Section 1502.9(c)(1) of the Council's regulations.)

If the new alternative was not raised by the commentor during scoping, but could have been, commentors may find that they are unpersuasive in their efforts to have their suggested alternative analyzed in detail by the agency. However, if the new alternative is discovered or developed later, and it could not reasonably have been raised during the scoping process, then the agency must address it in a supplemental draft EIS. The agency is, in any case, ultimately responsible for preparing an adequate EIS that considers all alternatives.

30. **Adoption of EISs.** When a cooperating agency with jurisdiction by law intends to adopt a lead agency's EIS and it is not satisfied with the adequacy of the document, may the cooperating agency

adopt only the part of the EIS with which it is satisfied? If so, would a cooperating agency with jurisdiction by law have to prepare a separate EIS or EIS supplement covering the areas of disagreement with the lead agency?

A. Generally, a cooperating agency may adopt a lead agency's EIS without recirculating it if it concludes that its NEPA requirements and its comments and suggestions have been satisfied. Section 1506.3(a), (c). If necessary, a cooperating agency may adopt only a portion of the lead agency's EIS and may reject that part of the EIS with which it disagrees, stating publicly why it did so. Section 1506.3(a).

A cooperating agency with jurisdiction by law (e.g., an agency with independent legal responsibilities with respect to the proposal) has an independent legal obligation to comply with NEPA. Therefore, if the cooperating agency determines that the EIS is wrong or inadequate, it must prepare a supplement to the EIS, replacing or adding any needed information, and must circulate the supplement as a draft for public and agency review and comment. A final supplemental EIS would be required before the agency could take action. The adopted portions of the lead agency EIS should be circulated with the supplement. Section 1506.3(b). A cooperating agency with jurisdiction by law will have to prepare its own Record of Decision for its action, in which it must explain how it reached its conclusions. Each agency should explain how and why its conclusions differ, if that is the case, from those of other agencies which issued their Records of Decision earlier.

An agency that did not cooperate in preparation of an EIS may also adopt an EIS or portion thereof. But this would arise only in rare instances, because an agency adopting an EIS for use in its own decision normally would have been a cooperating agency. If the proposed action for which the EIS was prepared is substantially the same as the proposed action of the adopting agency, the EIS may be adopted as long as it is recirculated as a final EIS and the agency announces what it is doing. This would be followed by the 30-day review period and issuance of a Record of Decision by the adopting agency. If the proposed action by the adopting agency is not substantially the same as that in [46 FR 18036] the EIS (i.e., if an EIS on one action is being adapted for use in a decision on another action), the EIS would be treated as a draft and circulated for the normal public comment period and other procedures. Section 1506.3(b).

31a. **Application of Regulations to Independent Regulatory Agencies.** Do the Council's NEPA regulations apply to independent regulatory agencies like the Federal Energy Regulatory Commission (FERC) and the Nuclear Regulatory Commission?

A. The statutory requirements of NEPA's Section 102 apply to "all agencies of the federal government." The NEPA regulations implement the procedural provisions of NEPA as set forth in NEPA's Section 102(2) for all agencies of the federal government. The NEPA regulations apply to independent regulatory agencies, however, they do not direct independent regulatory agencies or other agencies to make decisions in any particular way or in a way inconsistent with an agency's statutory charter. Sections 1500.3, 1500.6, 1507.1, and 1507.3.

31b. Can an Executive Branch agency like the Department of the Interior **adopt an EIS** prepared by an independent regulatory agency such as FERC?

A. If an independent regulatory agency such as FERC has prepared an EIS in connection with its approval of a proposed project, an Executive Branch agency (e.g., the Bureau of Land Management in the Department of the Interior) may, in accordance with Section 1506.3, adopt the EIS or a portion thereof for its use in considering the same proposal. In such a case the EIS must, to the satisfaction of the adopting agency, meet the standards for an adequate statement under the NEPA regulations (including scope and quality of analysis of alternatives) and must satisfy the adopting agency's comments and suggestions. If the independent regulatory agency fails to comply with the NEPA regulations, the

cooperating or adopting agency may find that it is unable to adopt the EIS, thus forcing the preparation of a new EIS or EIS Supplement for the same action. The NEPA regulations were made applicable to all federal agencies in order to avoid this result, and to achieve uniform application and efficiency of the NEPA process.

32. **Supplements to Old EISs.** Under what circumstances do old EISs have to be supplemented before taking action on a proposal?

A. As a rule of thumb, if the proposal has not yet been implemented, or if the EIS concerns an ongoing program, EISs that are more than 5 years old should be carefully reexamined to determine if the criteria in Section 1502.9 compel preparation of an EIS supplement.

If an agency has made a substantial change in a proposed action that is relevant to environmental concerns, or if there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts, a supplemental EIS must be prepared for an old EIS so that the agency has the best possible information to make any necessary substantive changes in its decisions regarding the proposal. Section 1502.9(c).

33a. **Referrals.** When must a referral of an interagency disagreement be made to the Council?

A. The Council's referral procedure is a pre-decision referral process for interagency disagreements. Hence, Section 1504.3 requires that a referring agency must deliver its referral to the Council not later than 25 days after publication by EPA of notice that the final EIS is available (unless the lead agency grants an extension of time under Section 1504.3(b)).

33b. May a **referral** be made after this issuance of a Record of Decision?

A. No, except for cases where agencies provide an internal appeal procedure which permits simultaneous filing of the final EIS and the record of decision (ROD). Section 1506.10(b)(2). Otherwise, as stated above, the process is a pre-decision referral process. Referrals must be made within 25 days after the notice of availability of the final EIS, whereas the final decision (ROD) may not be made or filed until after 30 days from the notice of availability of the EIS. Sections 1504.3(b), 1506.10(b). If a lead agency has granted an extension of time for another agency to take action on a referral, the ROD may not be issued until the extension has expired.

34a. **Records of Decision.** Must Records of Decision (RODs) be made public? How should they be made available?

A. Under the regulations, agencies must prepare a "concise public record of decision," which contains the elements specified in Section 1505.2. This public record may be integrated into any other decision record prepared by the agency, or it may be separate if decision documents are not normally made public. The Record of Decision is intended by the Council to be an environmental document (even though it is not explicitly mentioned in the definition of "environmental document" in Section 1508.10). Therefore, it must be made available to the public through appropriate public notice as required by Section 1506.6(b). However, there is no specific requirement for publication of the ROD itself, either in the Federal Register or elsewhere.

34b. May the **summary section** in the final Environmental Impact Statement substitute for or constitute an agency's Record of Decision?

A. No. An environmental impact statement is supposed to inform the decisionmaker before the decision is made. Sections 1502.1, 1505.2. The Council's regulations provide for a 30-day period after notice is published that the final EIS has been filed with EPA before the agency may take final action. During that period, in addition to the agency's own internal final review, the public and other agencies can comment on the final EIS prior to the agency's final action on the proposal. In addition, the Council's regulations make clear that the requirements for the summary in an EIS are not the same as the requirements for a ROD. Sections 1502.12 and 1505.2.

34c. What provisions should **Records of Decision** contain pertaining to **mitigation and monitoring**?

A. Lead agencies "shall include appropriate conditions [including mitigation measures and monitoring and enforcement programs] in grants, permits or other approvals" and shall "condition funding of actions on mitigation." Section 1505.3. Any such measures that are adopted must be explained and committed in the ROD.

The reasonable alternative mitigation measures and monitoring programs should have been addressed in the draft and final EIS. The discussion of mitigation and monitoring in a Record of Decision must be more detailed than a general statement that mitigation is being required, but not so detailed as to duplicate discussion of mitigation in the EIS. The Record of Decision should contain a concise summary identification of the mitigation measures which the agency has committed itself to adopt.

The Record of Decision must also state whether all practicable mitigation measures have been adopted, and if not, why not. Section 1505.2(c). The Record of Decision must identify the mitigation measures and monitoring and enforcement programs that have been selected and plainly indicate that they are adopted as part of the agency's decision. If the proposed action is the issuance of a permit or other approval, the specific details of the mitigation measures shall then be included as appropriate conditions in whatever grants, permits, funding or other approvals are being made by the federal agency. Section 1505.3 (a), (b). If the proposal is to be carried out by the [46 FR 18037] federal agency itself, the Record of Decision should delineate the mitigation and monitoring measures in sufficient detail to constitute an enforceable commitment, or incorporate by reference the portions of the EIS that do so.

34d. What is the **enforceability of a Record of Decision?**

A. Pursuant to generally recognized principles of federal administrative law, agencies will be held accountable for preparing Records of Decision that conform to the decisions actually made and for carrying out the actions set forth in the Records of Decision. This is based on the principle that an agency must comply with its own decisions and regulations once they are adopted. Thus, the terms of a Record of Decision are enforceable by agencies and private parties. A Record of Decision can be used to compel compliance with or execution of the mitigation measures identified therein.

35. **Time Required for the NEPA Process.** How long should the NEPA process take to complete?

A. When an EIS is required, the process obviously will take longer than when an EA is the only document prepared. But the Council's NEPA regulations encourage streamlined review, adoption of deadlines, elimination of duplicative work, eliciting suggested alternatives and other comments early through scoping, cooperation among agencies, and consultation with applicants during project planning. The Council has advised agencies that under the new NEPA regulations even large complex energy projects

would require only about 12 months for the completion of the entire EIS process. For most major actions, this period is well within the planning time that is needed in any event, apart from NEPA.

The time required for the preparation of program EISs may be greater. The Council also recognizes that some projects will entail difficult long-term planning and/or the acquisition of certain data which of necessity will require more time for the preparation of the EIS. Indeed, some proposals should be given more time for the thoughtful preparation of an EIS and development of a decision which fulfills NEPA's substantive goals.

For cases in which only an environmental assessment will be prepared, the NEPA process should take no more than 3 months, and in many cases substantially less, as part of the normal analysis and approval process for the action.

36a. **Environmental Assessments (EA).** How long and detailed must an environmental assessment (EA) be?

A. The environmental assessment is a concise public document which has three defined functions. (1) It briefly provides sufficient evidence and analysis for determining whether to prepare an EIS; (2) it aids an agency's compliance with NEPA when no EIS is necessary, i.e., it helps to identify better alternatives and mitigation measures; and (3) it facilitates preparation of an EIS when one is necessary. Section 1508.9(a).

Since the EA is a concise document, it should not contain long descriptions or detailed data which the agency may have gathered. Rather, it should contain a brief discussion of the need for the proposal, alternatives to the proposal, the environmental impacts of the proposed action and alternatives, and a list of agencies and persons consulted. Section 1508.9(b).

While the regulations do not contain page limits for EA's, the Council has generally advised agencies to keep the length of EAs to not more than approximately 10-15 pages. Some agencies expressly provide page guidelines (e.g., 10-15 pages in the case of the Army Corps). To avoid undue length, the EA may incorporate by reference background data to support its concise discussion of the proposal and relevant issues.

36b. Under what circumstances is a **lengthy EA** appropriate?

A. Agencies should avoid preparing lengthy EAs except in unusual cases, where a proposal is so complex that a concise document cannot meet the goals of Section 1508.9 and where it is extremely difficult to determine whether the proposal could have significant environmental effects. In most cases, however, a lengthy EA indicates that an EIS is needed.

37a. **Findings of No Significant Impact (FONSI).** What is the level of detail of information that must be included in a finding of no significant impact (FONSI)?

A. The FONSI is a document in which the agency briefly explains the reasons why an action will not have a significant effect on the human environment and, therefore, why an EIS will not be prepared. Section 1508.13. The finding itself need not be detailed, but must succinctly state the reasons for deciding that the action will have no significant environmental effects, and, if relevant, must show which factors were weighted most heavily in the determination. In addition to this statement, the FONSI must include, summarize, or attach and incorporate by reference, the environmental assessment.

37b. What are the criteria for deciding whether a **FONSI** should be made available for **public review** for 30 days before the agency's final determination whether to prepare an EIS?

A. Public review is necessary, for example, (a) if the proposal is a borderline case, i.e., when there is a reasonable argument for preparation of an EIS; (b) if it is an unusual case, a new kind of action, or a precedent setting case such as a first intrusion of even a minor development into a pristine area; (c) when there is either scientific or public controversy over the proposal; or (d) when it involves a proposal which is or is closely similar to one which normally requires preparation of an EIS. Sections 1501.4(e)(2), 1508.27. Agencies also must allow a period of public review of the FONSI if the proposed action would be located in a floodplain or wetland. E.O. 11988, Sec. 2(a)(4); E.O. 11990, Sec. 2(b).

38. **Public Availability of EAs v. FONSIs.** Must (EAs) and FONSIs be made public? If so, how should this be done?

A. Yes, they must be available to the public. Section 1506.6 requires agencies to involve the public in implementing their NEPA procedures, and this includes public involvement in the preparation of EAs and FONSIs. These are public "environmental documents" under Section 1506.6(b), and, therefore, agencies must give public notice of their availability. A combination of methods may be used to give notice, and the methods should be tailored to the needs of particular cases. Thus, a Federal Register notice of availability of the documents, coupled with notices in national publications and mailed to interested national groups might be appropriate for proposals that are national in scope. Local newspaper notices may be more appropriate for regional or site-specific proposals.

The objective, however, is to notify all interested or affected parties. If this is not being achieved, then the methods should be reevaluated and changed. Repeated failure to reach the interested or affected public would be interpreted as a violation of the regulations.

39. **Mitigation Measures Imposed in EAs and FONSIs.** Can an EA and FONSI be used to impose enforceable mitigation measures, monitoring programs, or other requirements, even though there is no requirement in the regulations in such cases for a formal Record of Decision?

A. Yes. In cases where an environmental assessment is the appropriate environmental document, there still may be mitigation measures or alternatives that would be desirable to consider and adopt even though the impacts of the proposal will not be "significant." In such cases, the EA should include a discussion of these measures or alternatives to "assist [46 FR 18038] agency planning and decisionmaking" and to "aid an agency's compliance with [NEPA] when no environmental impact statement is necessary." Section 1501.3(b), 1508.9(a)(2). The appropriate mitigation measures can be imposed as enforceable permit conditions, or adopted as part of the agency final decision in the same manner mitigation measures are adopted in the formal Record of Decision that is required in EIS cases.

40. **Propriety of Issuing EA When Mitigation Reduces Impacts.** If an environmental assessment indicates that the environmental effects of a proposal are significant but that, with mitigation, those effects may be reduced to less than significant levels, may the agency make a finding of no significant impact rather than prepare an EIS? Is that a legitimate function of an EA and scoping?

[**N.B.:** Courts have disagreed with CEQ's position in Question 40. The 1987-88 CEQ Annual Report stated that CEQ intended to issue additional guidance on this topic. Ed. note.]

A. Mitigation measures may be relied upon to make a finding of no significant impact only if they are imposed by statute or regulation, or submitted by an applicant or agency as part of the original proposal.

As a general rule, the regulations contemplate that agencies should use a broad approach in defining significance and should not rely on the possibility of mitigation as an excuse to avoid the EIS requirement. Sections 1508.8, 1508.27.

If a proposal appears to have adverse effects which would be significant, and certain mitigation measures are then developed during the scoping or EA stages, the existence of such possible mitigation does not obviate the need for an EIS. Therefore, if scoping or the EA identifies certain mitigation possibilities without altering the nature of the overall proposal itself, the agency should continue the EIS process and submit the proposal, and the potential mitigation, for public and agency review and comment. This is essential to ensure that the final decision is based on all the relevant factors and that the full NEPA process will result in enforceable mitigation measures through the Record of Decision.

In some instances, where the proposal itself so integrates mitigation from the beginning that it is impossible to define the proposal without including the mitigation, the agency may then rely on the mitigation measures in determining that the overall effects would not be significant (e.g., where an application for a permit for a small hydro dam is based on a binding commitment to build fish ladders, to permit adequate down stream flow, and to replace any lost wetlands, wildlife habitat and recreational potential). In those instances, agencies should make the FONSI and EA available for 30 days of public comment before taking action. Section 1501.4(e)(2).

Similarly, scoping may result in a redefinition of the entire project, as a result of mitigation proposals. In that case, the agency may alter its previous decision to do an EIS, as long as the agency or applicant resubmits the entire proposal and the EA and FONSI are available for 30 days of review and comment. One example of this would be where the size and location of a proposed industrial park are changed to avoid affecting a nearby wetland area.

"ENDNOTES"

The first endnote appeared in the original *Federal Register*. The other endnotes are for information only.

1. References throughout the document are to the Council on Environmental Quality's Regulations For Implementing The Procedural Provisions of the National Environmental Policy Act. 40 CFR Parts 1500-1508.
2. [46 FR 18027] indicates that the subsequent text may be cited to 48 Fed. Reg. 18027 (1981). Ed Note.
3. Q20 Worst Case Analysis was withdrawn by final rule issued at 51 Fed. Reg. 15618 (Apr. 25. 1986); textual errors corrected 51 F.R. p. 16,846 (May 7, 1986). The preamble to this rule is published at ELR Admin. Mat. 35055.
4. Section 4(f), as amended and codified in 49 U.S.C. Section 303 reads as follows:

   (a) It is the policy of the United States Government that special effort be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.
   (b) The Secretary of Transportation shall cooperate and consult with the Secretaries of the Interior, Housing and Urban Developments, and Agriculture, and with the States, in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of lands crossed by transportation activities or facilities.
   (c) The Secretary may approve a transportation program or project requiring the use of publicly owned land of a public park, recreation areas or wildlife and waterfowl refuge, or land of an historic site of national, State, or local significance (as determined by the Federal State, or local officials having jurisdiction over the park, recreation areas refuge, or site) only if,

(1) there is no prudent and feasible alternative to using that land; and
(2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuges or historic site resulting from the use.

PUBLIC LAW 109–59—AUG. 10, 2005

SAFE, ACCOUNTABLE, FLEXIBLE, EFFICIENT TRANSPORTATION EQUITY ACT: A LEGACY FOR USERS

Excerpt from Title VI

TITLE VI—TRANSPORTATION PLANNING AND PROJECT DELIVERY

Sec. 6001. Transportation planning.
Sec. 6002. Efficient environmental reviews for project decisionmaking.
Sec. 6003. State assumption of responsibilities for certain programs and projects.
Sec. 6004. State assumption of responsibility for categorical exclusions.
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SEC. 6002. EFFICIENT ENVIRONMENTAL REVIEWS FOR PROJECT DECISIONMAKING.

(a) IN GENERAL.—Subchapter I of chapter 1 of title 23, United States Code, is amended by inserting after section 138 the following:

"§ 139. Efficient environmental reviews for project decision-making

"(a) DEFINITIONS.—In this section, the following definitions apply:

"(1) AGENCY.—The term 'agency' means any agency, department, or other unit of Federal, State, local, or Indian tribal government.

"(2) ENVIRONMENTAL IMPACT STATEMENT.—The term 'environmental impact statement' means the detailed statement of environmental impacts required to be prepared under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

"(3) ENVIRONMENTAL REVIEW PROCESS.—

"(A) IN GENERAL.—The term 'environmental review process' means the process for preparing for a project an environmental impact statement, environmental assessment, categorical exclusion, or other document prepared under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

"(B) INCLUSIONS.—The term 'environmental review process' includes the process for and completion of any environmental permit, approval, review, or study required for a project under any Federal law other than the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

"(4) LEAD AGENCY.—The term 'lead agency' means the Department of Transportation and, if applicable, any State or local governmental entity serving as a joint lead agency pursuant to this section.

"(5) MULTIMODAL PROJECT.—The term 'multimodal project' means a project funded, in whole or in part, under this title or chapter 53 of title 49 and involving the participation of more than one Department of Transportation administration or agency.

"(6) PROJECT.—The term 'project' means any highway project, public transportation capital project, or multimodal project that requires the approval of the Secretary.

"(7) PROJECT SPONSOR.—The term 'project sponsor' means the agency or other entity, including any private or public-private entity, that seeks approval of the Secretary for a project.

"(8) STATE TRANSPORTATION DEPARTMENT.—The term 'State transportation department' means any statewide agency of a State with responsibility for one or more modes of transportation.

"(b) APPLICABILITY.—

"(1) IN GENERAL.—The project development procedures in this section are applicable to all projects for which an environmental impact statement is prepared under the National Environmental Policy Act of 1969 and may be applied, to the extent determined appropriate by the Secretary, to other projects for which an environmental document is prepared pursuant to such Act.

"(2) FLEXIBILITY.—Any authorities granted in this section may be exercised for a project, class of projects, or program of projects.

"(c) LEAD AGENCIES.—

"(1) FEDERAL LEAD AGENCY.—The Department of Transportation shall be the Federal lead agency in the environmental review process for a project.

"(2) JOINT LEAD AGENCIES.—Nothing in this section precludes another agency from being a joint lead agency in accordance with regulations under the National Environmental Policy Act of 1969.

"(3) PROJECT SPONSOR AS JOINT LEAD AGENCY.—Any project sponsor that is a State or local governmental entity receiving funds under this title or chapter 53 of title 49 for the project shall serve as a joint lead agency with the Department for purposes of preparing any environmental document under the National Environmental Policy Act of 1969 and may prepare any such environmental document required in support of any action or approval by the Secretary if the Federal lead agency furnishes guidance in such preparation and independently evaluates such document and the document is approved and adopted by the Secretary prior to the Secretary taking any subsequent action or making any approval based on such document, whether or not the Secretary's action or approval results in Federal funding.

"(4) ENSURING COMPLIANCE.—The Secretary shall ensure that the project sponsor complies with all design and mitigation commitments made jointly by the Secretary and the project sponsor in any environmental document prepared by the project sponsor in accordance with this subsection and that such document is appropriately supplemented if project changes become necessary.

"(5) ADOPTION AND USE OF DOCUMENTS.—Any environmental document prepared in accordance with this subsection may be adopted or used by any Federal agency making any approval to the same extent that such Federal agency could adopt or use a document prepared by another Federal agency.

"(6) ROLES AND RESPONSIBILITY OF LEAD AGENCY.—With respect to the environmental review process for any project, the lead agency shall have authority and responsibility—

"(A) to take such actions as are necessary and proper, within the authority of the lead agency, to facilitate the expeditious resolution of the environmental review process for the project; and

"(B) to prepare or ensure that any required environmental impact statement or other document required to be completed under the National Environmental Policy Act of 1969 is completed in accordance with this section and applicable Federal law.

"(d) PARTICIPATING AGENCIES.—

"(1) IN GENERAL.—The lead agency shall be responsible for inviting and designating participating agencies in accordance with this subsection.

"(2) INVITATION.—The lead agency shall identify, as early as practicable in the environmental review process for a project, any other Federal and non-Federal agencies that may have an interest in the project, and shall invite such agencies to become participating agencies in the environmental review process for the project. The invitation shall set a deadline for responses to be submitted. The deadline may be extended by the lead agency for good cause.

"(3) FEDERAL PARTICIPATING AGENCIES.—Any Federal agency that is invited by the lead agency to participate in the environmental review process for a project shall be designated as a participating agency by the lead agency unless the invited agency informs the lead agency, in writing, by the deadline specified in the invitation that the invited agency—

"(A) has no jurisdiction or authority with respect to the project;

"(B) has no expertise or information relevant to the project; and

"(C) does not intend to submit comments on the project.

"(4) EFFECT OF DESIGNATION.—Designation as a participating agency under this subsection shall not imply that the participating agency—

"(A) supports a proposed project; or

"(B) has any jurisdiction over, or special expertise with respect to evaluation of, the project.

"(5) COOPERATING AGENCY.—A participating agency may also be designated by a lead agency as a 'cooperating agency' under the regulations contained in part 1500 of title 40, Code of Federal Regulations.

"(6) DESIGNATIONS FOR CATEGORIES OF PROJECTS.—The Secretary may exercise the authorities granted under this subsection for a project, class of projects, or program of projects.

"(7) CONCURRENT REVIEWS.—Each Federal agency shall, to the maximum extent practicable—

"(A) carry out obligations of the Federal agency under other applicable law concurrently, and in conjunction, with the review required under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), unless doing so would impair the ability of the Federal agency to carry out those obligations; and

Procedures.

"(B) formulate and implement administrative, policy, and procedural mechanisms to enable the agency to ensure completion of the environmental review process in a timely, coordinated, and environmentally responsible manner.

Notification.

"(e) PROJECT INITIATION.—The project sponsor shall notify the Secretary of the type of work, termini, length and general location of the proposed project, together with a statement of any Federal approvals anticipated to be necessary for the proposed project, for the purpose of informing the Secretary that the environmental review process should be initiated.

"(f) PURPOSE AND NEED.—

"(1) PARTICIPATION.—As early as practicable during the environmental review process, the lead agency shall provide an opportunity for involvement by participating agencies and the public in defining the purpose and need for a project.

"(2) DEFINITION.—Following participation under paragraph (1), the lead agency shall define the project's purpose and need for purposes of any document which the lead agency is responsible for preparing for the project.

"(3) OBJECTIVES.—The statement of purpose and need shall include a clear statement of the objectives that the proposed action is intended to achieve, which may include—

"(A) achieving a transportation objective identified in an applicable statewide or metropolitan transportation plan;

"(B) supporting land use, economic development, or growth objectives established in applicable Federal, State, local, or tribal plans; and

"(C) serving national defense, national security, or other national objectives, as established in Federal laws, plans, or policies.

"(4) ALTERNATIVES ANALYSIS.—

"(A) PARTICIPATION.—As early as practicable during the environmental review process, the lead agency shall provide an opportunity for involvement by participating agencies and the public in determining the range of alternatives to be considered for a project.

"(B) RANGE OF ALTERNATIVES.—Following participation under paragraph (1), the lead agency shall determine the range of alternatives for consideration in any document which the lead agency is responsible for preparing for the project.

"(C) METHODOLOGIES.—The lead agency also shall determine, in collaboration with participating agencies at appropriate times during the study process, the methodologies to be used and the level of detail required in the analysis of each alternative for a project.

"(D) PREFERRED ALTERNATIVE.—At the discretion of the lead agency, the preferred alternative for a project, after being identified, may be developed to a higher level of detail than other alternatives in order to facilitate the development of mitigation measures or concurrent compliance with other applicable laws if the lead agency determines that the development of such higher level of detail will not prevent the lead agency from making an impartial decision as to whether to accept another alternative which is being considered in the environmental review process.

"(g) COORDINATION AND SCHEDULING.—

"(1) COORDINATION PLAN.—

"(A) IN GENERAL.—The lead agency shall establish a plan for coordinating public and agency participation in and comment on the environmental review process for a project or category of projects. The coordination plan may be incorporated into a memorandum of understanding.

"(B) SCHEDULE.—

"(i) IN GENERAL.—The lead agency may establish as part of the coordination plan, after consultation with each participating agency for the project and with the State in which the project is located (and, if the State is not the project sponsor, with the project sponsor), a schedule for completion of the environmental review process for the project.

"(ii) FACTORS FOR CONSIDERATION.—In establishing the schedule, the lead agency shall consider factors such as—

"(I) the responsibilities of participating agencies under applicable laws;

"(II) resources available to the cooperating agencies;

"(III) overall size and complexity of the project;

"(IV) the overall schedule for and cost of the project; and

"(V) the sensitivity of the natural and historic resources that could be affected by the project.

"(C) CONSISTENCY WITH OTHER TIME PERIODS.—A schedule under subparagraph (B) shall be consistent with any other relevant time periods established under Federal law.

"(D) MODIFICATION.—The lead agency may—

"(i) lengthen a schedule established under subparagraph (B) for good cause; and

"(ii) shorten a schedule only with the concurrence of the affected cooperating agencies.

"(E) DISSEMINATION.—A copy of a schedule under subparagraph (B), and of any modifications to the schedule, shall be—

"(i) provided to all participating agencies and to the State transportation department of the State in which the project is located (and, if the State is not the project sponsor, to the project sponsor); and

"(ii) made available to the public.

"(2) COMMENT DEADLINES.—The lead agency shall establish the following deadlines for comment during the environmental review process for a project:

Federal Register, publication.

"(A) For comments by agencies and the public on a draft environmental impact statement, a period of not more than 60 days after publication in the Federal Register of notice of the date of public availability of such document, unless—

"(i) a different deadline is established by agreement of the lead agency, the project sponsor, and all participating agencies; or

"(ii) the deadline is extended by the lead agency for good cause.

"(B) For all other comment periods established by the lead agency for agency or public comments in the environmental review process, a period of no more than 30 days from availability of the materials on which comment is requested, unless—

"(i) a different deadline is established by agreement of the lead agency, the project sponsor, and all participating agencies; or

"(ii) the deadline is extended by the lead agency for good cause.

"(3) DEADLINES FOR DECISIONS UNDER OTHER LAWS.—In any case in which a decision under any Federal law relating to a project (including the issuance or denial of a permit or license) is required to be made by the later of the date that is 180 days after the date on which the Secretary made all final decisions of the lead agency with respect to the project, or 180 days after the date on which an application was submitted for the permit or license, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives—

Notice.

"(A) as soon as practicable after the 180-day period, an initial notice of the failure of the Federal agency to make the decision; and

"(B) every 60 days thereafter until such date as all decisions of the Federal agency relating to the project have been made by the Federal agency, an additional notice that describes the number of decisions of the Federal agency that remain outstanding as of the date of the additional notice. Notice.

"(4) INVOLVEMENT OF THE PUBLIC.—Nothing in this subsection shall reduce any time period provided for public comment in the environmental review process under existing Federal law, including a regulation.

"(h) ISSUE IDENTIFICATION AND RESOLUTION.—

"(1) COOPERATION.—The lead agency and the participating agencies shall work cooperatively in accordance with this section to identify and resolve issues that could delay completion of the environmental review process or could result in denial of any approvals required for the project under applicable laws.

"(2) LEAD AGENCY RESPONSIBILITIES.—The lead agency shall make information available to the participating agencies as early as practicable in the environmental review process regarding the environmental and socioeconomic resources located within the project area and the general locations of the alternatives under consideration. Such information may be based on existing data sources, including geographic information systems mapping.

"(3) PARTICIPATING AGENCY RESPONSIBILITIES.—Based on information received from the lead agency, participating agencies shall identify, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts. In this paragraph, issues of concern include any issues that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project.

"(4) ISSUE RESOLUTION.—

"(A) MEETING OF PARTICIPATING AGENCIES.—At any time upon request of a project sponsor or the Governor of a State in which the project is located, the lead agency shall promptly convene a meeting with the relevant participating agencies, the project sponsor, and the Governor (if the meeting was requested by the Governor) to resolve issues that could delay completion of the environmental review process or could result in denial of any approvals required for the project under applicable laws.

"(B) NOTICE THAT RESOLUTION CANNOT BE ACHIEVED.—If a resolution cannot be achieved within 30 days following such a meeting and a determination by the lead agency that all information necessary to resolve the issue has been obtained, the lead agency shall notify the heads of all participating agencies, the project sponsor, the Governor, the Committee on Environment and Public Works of the Senate, the Committee on Transportation and Infrastructure of the House of Representatives, and the Council on Environmental Quality, and shall publish such notification in the Federal Register. Deadline. Federal Register, publication.

"(i) PERFORMANCE MEASUREMENT.—The Secretary shall establish a program to measure and report on progress toward improving and expediting the planning and environmental review process.

"(j) ASSISTANCE TO AFFECTED STATE AND FEDERAL AGENCIES.—

"(1) IN GENERAL.—For a project that is subject to the environmental review process established under this section and for which funds are made available to a State under this title or chapter 53 of title 49, the Secretary may approve a request by the State to provide funds so made available under this title or such chapter 53 to affected Federal agencies (including the Department of Transportation), State agencies, and Indian tribes participating in the environmental review process for the projects in that State or participating in a State process that has been approved by the Secretary for that State. Such funds may be provided only to support activities that directly and meaningfully contribute to expediting and improving transportation project planning and delivery for projects in that State.

"(2) ACTIVITIES ELIGIBLE FOR FUNDING.—Activities for which funds may be provided under paragraph (1) include transportation planning activities that precede the initiation of the environmental review process, dedicated staffing, training of agency personnel, information gathering and mapping, and development of programmatic agreements.

"(3) USE OF FEDERAL LANDS HIGHWAY FUNDS.—The Secretary may also use funds made available under section 204 for a project for the purposes specified in this subsection with respect to the environmental review process for the project.

"(4) AMOUNTS.—Requests under paragraph (1) may be approved only for the additional amounts that the Secretary determines are necessary for the Federal agencies, State agencies, or Indian tribes participating in the environmental review process to meet the time limits for environmental review.

"(5) CONDITION.—A request under paragraph (1) to expedite time limits for environmental review may be approved only if such time limits are less than the customary time necessary for such review.

"(k) JUDICIAL REVIEW AND SAVINGS CLAUSE.—

"(1) JUDICIAL REVIEW.—Except as set forth under subsection (l), nothing in this section shall affect the reviewability of any final Federal agency action in a court of the United States or in the court of any State.

"(2) SAVINGS CLAUSE.—Nothing in this section shall be construed as superseding, amending, or modifying the National Environmental Policy Act of 1969 or any other Federal environmental statute or affect the responsibility of any Federal officer to comply with or enforce any such statute.

"(3) LIMITATIONS.—Nothing in this section shall preempt or interfere with—

"(A) any practice of seeking, considering, or responding to public comment; or

"(B) any power, jurisdiction, responsibility, or authority that a Federal, State, or local government agency, metropolitan planning organization, Indian tribe, or project sponsor has with respect to carrying out a project or any other provisions of law applicable to projects, plans, or programs.

Deadlines.
Notices.
Federal Register, publication.

"(l) LIMITATIONS ON CLAIMS.—

"(1) IN GENERAL.—Notwithstanding any other provision of law, a claim arising under Federal law seeking judicial review of a permit, license, or approval issued by a Federal agency

for a highway or public transportation capital project shall be barred unless it is filed within 180 days after publication of a notice in the Federal Register announcing that the permit, license, or approval is final pursuant to the law under which the agency action is taken, unless a shorter time is specified in the Federal law pursuant to which judicial review is allowed. Nothing in this subsection shall create a right to judicial review or place any limit on filing a claim that a person has violated the terms of a permit, license, or approval.

"(2) NEW INFORMATION.—The Secretary shall consider new information received after the close of a comment period if the information satisfies the requirements for a supplemental environmental impact statement under section 771.130 of title 23, Code of Federal Regulations. The preparation of a supplemental environmental impact statement when required shall be considered a separate final agency action and the deadline for filing a claim for judicial review of such action shall be 180 days after the date of publication of a notice in the Federal Register announcing such action.".

(b) EXISTING ENVIRONMENTAL REVIEW PROCESS.—Nothing in this section affects any existing State environmental review process, program, agreement, or funding arrangement approved by the Secretary under section 1309 of the Transportation Equity Act for the 21st Century (112 Stat. 232; 23 U.S.C. 109 note) as such section was in effect on the day preceding the date of enactment of the SAFETEA–LU. 23 USC 139 note.

(c) CONFORMING AMENDMENT.—The analysis for such subchapter is amended by inserting after the item relating to section 138 the following:

"139. Efficient environmental reviews for project decisionmaking.".

(d) REPEAL.—Section 1309 of the Transportation Equity Act for the 21st Century (112 Stat. 232) is repealed. 23 USC 109 note.

PART 774—PARKS, RECREATION AREAS, WILDLIFE AND WATERFOWL REFUGES, AND HISTORIC SITES (SECTION 4(F))

Authority: 23 U.S.C. 103(c), 109(h), 138, 325, 326, 327 and 204(h)(2); 49 U.S.C. 303; Section 6009 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (Pub. L. 109–59, Aug. 10, 2005, 119 Stat. 1144); 49 CFR 1.48 and 1.51.

§ 774.1 Purpose.

The purpose of this part is to implement 23 U.S.C. 138 and 49 U.S.C. 303, which were originally enacted as Section 4(f) of the Department of Transportation Act of 1966 and are still commonly referred to as "Section 4(f)."

§ 774.3 Section 4(f) approvals.

The Administration may not approve the use, as defined in §774.17, of Section 4(f) property unless a determination is made under paragraph (a) or (b) of this section.

(a) The Administration determines that:

(1) There is no feasible and prudent avoidance alternative, as defined in §774.17, to the use of land from the property; and

(2) The action includes all possible planning, as defined in §774.17, to minimize harm to the property resulting from such use; or

(b) The Administration determines that the use of the property, including any measure(s) to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) committed to by the applicant, will have a *de minimis* impact, as defined in §774.17, on the property.

(c) If the analysis in paragraph (a)(1) of this section concludes that there is no feasible and prudent avoidance alternative, then the Administration may approve only the alternative that:

(1) Causes the least overall harm in light of the statute's preservation purpose. The least overall harm is determined by balancing the following factors:

(i) The ability to mitigate adverse impacts to each Section 4(f) property (including any measures that result in benefits to the property);

(ii) The relative severity of the remaining harm, after mitigation, to the protected activities, attributes, or features that qualify each Section 4(f) property for protection;

(iii) The relative significance of each Section 4(f) property;

(iv) The views of the official(s) with jurisdiction over each Section 4(f) property;

(v) The degree to which each alternative meets the purpose and need for the project;

(vi) After reasonable mitigation, the magnitude of any adverse impacts to resources not protected by Section 4(f); and

(vii) Substantial differences in costs among the alternatives.

(2) The alternative selected must include all possible planning, as defined in §774.17, to minimize harm to Section 4(f) property.

(d) Programmatic Section 4(f) evaluations are a time-saving procedural alternative to preparing individual Section 4(f) evaluations under paragraph (a) of this section for certain minor uses of Section 4(f) property. Programmatic Section 4(f) evaluations are developed by the Administration based on experience with a specific set of conditions that includes project type, degree of use and impact, and evaluation of avoidance alternatives.[1] An approved programmatic Section 4(f) evaluation may be relied upon to cover a particular project only if the specific conditions in the programmatic evaluation are met

[1] FHWA has issued five programmatic Section 4(f) evaluations: (1) Final Nationwide Programmatic Section 4(f) Evaluation and Determination for Federal-Aid Transportation Projects That Have a Net Benefit to a Section 4(f) Property; (2) Nationwide Section 4(f) Evaluations and Approvals for Federally-Aided Highway Projects With Minor Involvement With Public Parks, Recreation Lands, Wildlife and Waterfowl Refuges, and Historic Sites; (3) Final Nationwide Section 4(f) Evaluation and Approval for Federally-Aided Highway Projects With Minor Involvements With Historic Sites; (4) Historic Bridges; Programmatic Section 4(f) Evaluation and Approval; and (5) Section 4(f) Statement and Determination for Independent Bikeway or Walkway Construction Projects.

(1) The determination whether a programmatic Section 4(f) evaluation applies to the use of a specific Section 4(f) property shall be documented as specified in the applicable programmatic Section 4(f) evaluation.

(2) The Administration may develop additional programmatic Section 4(f) evaluations. Proposed new or revised programmatic Section 4(f) evaluations will be coordinated with the Department of Interior, Department of Agriculture, and Department of Housing and Urban Development, and published in theFederal Registerfor comment prior to being finalized. New or revised programmatic Section 4(f) evaluations shall be reviewed for legal sufficiency and approved by the Headquarters Office of the Administration.

(e) The coordination requirements in §774.5 must be completed before the Administration may make Section 4(f) approvals under this section. Requirements for the documentation and timing of Section 4(f) approvals are located in §§774.7 and 774.9, respectively.

§ 774.5 Coordination.

(a) Prior to making Section 4(f) approvals under §774.3(a), the Section 4(f) evaluation shall be provided for coordination and comment to the official(s) with jurisdiction over the Section 4(f) resource and to the Department of the Interior, and as appropriate to the Department of Agriculture and the Department of Housing and Urban Development. The Administration shall provide a minimum of 45 days for receipt of comments. If comments are not received within 15 days after the comment deadline, the Administration may assume a lack of objection and proceed with the action.

(b) Prior to making *de minimis* impact determinations under §774.3(b), the following coordination shall be undertaken:

(1) For historic properties:

(i) The consulting parties identified in accordance with 36 CFR part 800 must be consulted; and

(ii) The Administration must receive written concurrence from the pertinent State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO), and from the Advisory Council on Historic Preservation (ACHP) if participating in the consultation process, in a finding of “no adverse effect” or “no historic properties affected” in accordance with 36 CFR part 800. The Administration shall inform these officials of its intent to make a *de minimis* impact determination based on their concurrence in the finding of “no adverse effect” or “no historic properties affected.”

(iii) Public notice and comment, beyond that required by 36 CFR part 800, is not required.

(2) For parks, recreation areas, and wildlife and waterfowl refuges:

(i) Public notice and an opportunity for public review and comment concerning the effects on the protected activities, features, or attributes of the property must be provided. This requirement can be satisfied in conjunction with other public involvement procedures, such as a comment period provided on a NEPA document.

(ii) The Administration shall inform the official(s) with jurisdiction of its intent to make a *de minimis* impact finding. Following an opportunity for public review and comment as described in paragraph (b)(2)(i) of this section, the official(s) with jurisdiction over the

Section 4(f) resource must concur in writing that the project will not adversely affect the activities, features, or attributes that make the property eligible for Section 4(f) protection. This concurrence may be combined with other comments on the project provided by the official(s).

(c) The application of a programmatic Section 4(f) evaluation to the use of a specific Section 4(f) property under §774.3(d)(1) shall be coordinated as specified in the applicable programmatic Section 4(f) evaluation.

(d) When Federal encumbrances on Section 4(f) property are identified, coordination with the appropriate Federal agency is required to ascertain the agency's position on the proposed impact, as well as to determine if any other Federal requirements may apply to converting the Section 4(f) land to a different function. Any such requirements must be satisfied, independent of the Section 4(f) approval.

§ 774.7 Documentation.

(a) A Section 4(f) evaluation prepared under §774.3(a) shall include sufficient supporting documentation to demonstrate why there is no feasible and prudent avoidance alternative and shall summarize the results of all possible planning to minimize harm to the Section 4(f) property.

(b) A *de minimis* impact determination under §774.3(b) shall include sufficient supporting documentation to demonstrate that the impacts, after avoidance, minimization, mitigation, or enhancement measures are taken into account, are *de minimis* as defined in §774.17; and that the coordination required in §774.5(b) has been completed.

(c) If there is no feasible and prudent avoidance alternative the Administration may approve only the alternative that causes the least overall harm in accordance with §774.3(c). This analysis must be documented in the Section 4(f) evaluation.

(d) The Administration shall review all Section 4(f) approvals under §§774.3(a) and 774.3(c) for legal sufficiency.

(e) A Section 4(f) approval may involve different levels of detail where the Section 4(f) involvement is addressed in a tiered EIS under §771.111(g) of this chapter.

(1) When the first-tier, broad-scale EIS is prepared, the detailed information necessary to complete the Section 4(f) approval may not be available at that stage in the development of the action. In such cases, the documentation should address the potential impacts that a proposed action will have on Section 4(f) property and whether those impacts could have a bearing on the decision to be made. A preliminary Section 4(f) approval may be made at this time as to whether the impacts resulting from the use

of a Section 4(f) property are *de minimis* or whether there are feasible and prudent avoidance alternatives. This preliminary approval shall include all possible planning to minimize harm to the extent that the level of detail available at the first-tier EIS stage allows. It is recognized that such planning at this stage may be limited to ensuring that opportunities to minimize harm at subsequent stages in the development process have not been precluded by decisions made at the first-tier stage. This preliminary Section 4(f) approval is then incorporated into the first-tier EIS.

(2) The Section 4(f) approval will be finalized in the second-tier study. If no new Section 4(f) use, other than a *de minimis* impact, is identified in the second-tier study and if all possible planning to minimize harm has occurred, then the second-tier Section 4(f) approval may finalize the preliminary approval by reference to the first-tier documentation. Re-evaluation of the preliminary Section 4(f) approval is only needed to the extent that new or more detailed information available at the second-tier stage raises new Section 4(f) concerns not already considered.

(3) The final Section 4(f) approval may be made in the second-tier CE, EA, final EIS, ROD or FONSI.

(f) In accordance with §§771.105(a) and 771.133 of this chapter, the documentation supporting a Section 4(f) approval should be included in the EIS, EA, or for a project classified as a CE, in a separate document. If the Section 4(f) documentation cannot be included in the NEPA document, then it shall be presented in a separate document. The Section 4(f) documentation shall be developed by the applicant in cooperation with the Administration.

§ 774.9 Timing.

(a) The potential use of land from a Section 4(f) property shall be evaluated as early as practicable in the development of the action when alternatives to the proposed action are under study.

(b) Except as provided in paragraph (c) of this section, for actions processed with EISs the Administration will make the Section 4(f) approval either in the final EIS or in the ROD. Where the Section 4(f) approval is documented in the final EIS, the Administration will summarize the basis for its Section 4(f) approval in the ROD. Actions requiring the use of Section 4(f) property, and proposed to be processed with a FONSI or classified as a CE, shall not proceed until notification by the Administration of Section 4(f) approval.

(c) After the CE, FONSI, or ROD has been processed, a separate Section 4(f) approval will be required, except as provided in §774.13, if:

(1) A proposed modification of the alignment or design would require the use of Section 4(f) property; or

(2) The Administration determines that Section 4(f) applies to the use of a property; or

(3) A proposed modification of the alignment, design, or measures to minimize harm (after the original Section 4(f) approval) would result in a substantial increase in the amount of Section 4(f) property used, a substantial increase in the adverse impacts to Section 4(f) property, or a substantial reduction in the measures to minimize harm.

(d) A separate Section 4(f) approval required under paragraph (c) of this section will not necessarily require the preparation of a new or supplemental NEPA document. If a new or supplemental NEPA document is also required under §771.130 of this chapter, then it should include the documentation supporting the separate Section 4(f) approval. Where a separate Section 4(f) approval is required, any activity not directly affected by the separate Section 4(f) approval can proceed during the analysis, consistent with §771.130(f) of this chapter.

(e) Section 4(f) may apply to archeological sites discovered during construction, as set forth in §774.11(f). In such cases, the Section 4(f) process will be expedited and any required evaluation of feasible and prudent avoidance alternatives will take account of the level of investment already made. The review process, including the consultation with other agencies, will be shortened as appropriate.

§ 774.11 Applicability.

(a) The Administration will determine the applicability of Section 4(f) in accordance with this part.

(b) When another Federal agency is the Federal lead agency for the NEPA process, the Administration shall make any required Section 4(f) approvals unless the Federal lead agency is another U.S. DOT agency.

(c) Consideration under Section 4(f) is not required when the official(s) with jurisdiction over a park, recreation area, or wildlife and waterfowl refuge determine that the property, considered in its entirety, is not significant. In the absence of such a determination, the Section 4(f) property will be presumed to be significant. The Administration will review a determination that a park, recreation area, or wildlife and waterfowl refuge is not significant to assure its reasonableness.

(d) Where Federal lands or other public land holdings (e.g., State forests) are administered under statutes permitting management for multiple uses, and, in fact, are managed for multiple uses, Section 4(f) applies only to those portions of such lands which function for, or are designated in the plans of the administering agency as being

for, significant park, recreation, or wildlife and waterfowl refuge purposes. The determination of which lands so function or are so designated, and the significance of those lands, shall be made by the official(s) with jurisdiction over the Section 4(f) resource. The Administration will review this determination to assure its reasonableness.

(e) In determining the applicability of Section 4(f) to historic sites, the Administration, in cooperation with the applicant, will consult with the official(s) with jurisdiction to identify all properties on or eligible for the National Register of Historic Places (National Register). The Section 4(f) requirements apply to historic sites on or eligible for the National Register unless the Administration determines that an exception under §774.13 applies.

(1) The Section 4(f) requirements apply only to historic sites on or eligible for the National Register unless the Administration determines that the application of Section 4(f) is otherwise appropriate.

(2) The Interstate System is not considered to be a historic site subject to Section 4(f), with the exception of those individual elements of the Interstate System formally identified by FHWA for Section 4(f) protection on the basis of national or exceptional historic significance.

(f) Section 4(f) applies to all archeological sites on or eligible for inclusion on the National Register, including those discovered during construction, except as set forth in §774.13(b).

(g) Section 4(f) applies to those portions of federally designated Wild and Scenic Rivers that are otherwise eligible as historic sites, or that are publicly owned and function as, or are designated in a management plan as, a significant park, recreation area, or wildlife and waterfowl refuge. All other applicable requirements of the Wild and Scenic Rivers Act, 16 U.S.C. 1271–1287, must be satisfied, independent of the Section 4(f) approval.

(h) When a property formally reserved for a future transportation facility temporarily functions for park, recreation, or wildlife and waterfowl refuge purposes in the interim, the interim activity, regardless of duration, will not subject the property to Section 4(f).

(i) When a property is formally reserved for a future transportation facility before or at the same time a park, recreation area, or wildlife and waterfowl refuge is established and concurrent or joint planning or development of the transportation facility and the Section 4(f) resource occurs, then any resulting impacts of the transportation facility will not be considered a use as defined in §774.17. Examples of such concurrent or joint planning or development include, but are not limited to:

(1) Designation or donation of property for the specific purpose of such concurrent development by the entity with jurisdiction or ownership of the property for both the potential transportation facility and the Section 4(f) property; or

(2) Designation, donation, planning, or development of property by two or more governmental agencies with jurisdiction for the potential transportation facility and the Section 4(f) property, in consultation with each other.

§ 774.13 Exceptions.

The Administration has identified various exceptions to the requirement for Section 4(f) approval. These exceptions include, but are not limited to:

(a) Restoration, rehabilitation, or maintenance of transportation facilities that are on or eligible for the National Register when:

(1) The Administration concludes, as a result of the consultation under 36 CFR 800.5, that such work will not adversely affect the historic qualities of the facility that caused it to be on or eligible for the National Register, and

(2) The official(s) with jurisdiction over the Section 4(f) resource have not objected to the Administration conclusion in paragraph (a)(1) of this section.

(b) Archeological sites that are on or eligible for the National Register when:

(1) The Administration concludes that the archeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. This exception applies both to situations where data recovery is undertaken and where the Administration decides, with agreement of the official(s) with jurisdiction, not to recover the resource; and

(2) The official(s) with jurisdiction over the Section 4(f) resource have been consulted and have not objected to the Administration finding in paragraph (b)(1) of this section.

(c) Designations of park and recreation lands, wildlife and waterfowl refuges, and historic sites that are made, or determinations of significance that are changed, late in the development of a proposed action. With the exception of the treatment of archeological resources in §774.9(e), the Administration may permit a project to proceed without consideration under Section 4(f) if the property interest in the Section 4(f) land was acquired for transportation purposes prior to the designation or change in the determination of significance and if an adequate effort was made to identify properties protected by Section 4(f) prior to acquisition. However, if it is reasonably foreseeable that a property would qualify as eligible for the National Register prior to the

start of construction, then the property should be treated as a historic site for the purposes of this section.

(d) Temporary occupancies of land that are so minimal as to not constitute a use within the meaning of Section 4(f). The following conditions must be satisfied:

(1) Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;

(2) Scope of the work must be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) property are minimal;

(3) There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;

(4) The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and

(5) There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

(e) Park road or parkway projects under 23 U.S.C. 204.

(f) Certain trails, paths, bikeways, and sidewalks, in the following circumstances:

(1) Trail-related projects funded under the Recreational Trails Program, 23 U.S.C. 206(h)(2);

(2) National Historic Trails and the Continental Divide National Scenic Trail, designated under the National Trails System Act, 16 U.S.C. 1241–1251, with the exception of those trail segments that are historic sites as defined in §774.17;

(3) Trails, paths, bikeways, and sidewalks that occupy a transportation facility right-of-way without limitation to any specific location within that right-of-way, so long as the continuity of the trail, path, bikeway, or sidewalk is maintained; and

(4) Trails, paths, bikeways, and sidewalks that are part of the local transportation system and which function primarily for transportation.

(g) Transportation enhancement projects and mitigation activities, where:

(1) The use of the Section 4(f) property is solely for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection; and

(2) The official(s) with jurisdiction over the Section 4(f) resource agrees in writing to paragraph (g)(1) of this section.

§ 774.15 Constructive use determinations.

(a) A constructive use occurs when the transportation project does not incorporate land from a Section 4(f) property, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify the property for protection under Section 4(f) are substantially impaired. Substantial impairment occurs only when the protected activities, features, or attributes of the property are substantially diminished.

(b) If the project results in a constructive use of a nearby Section 4(f) property, the Administration shall evaluate that use in accordance with §774.3(a).

(c) The Administration shall determine when there is a constructive use, but the Administration is not required to document each determination that a project would not result in a constructive use of a nearby Section 4(f) property. However, such documentation may be prepared at the discretion of the Administration.

(d) When a constructive use determination is made, it will be based upon the following:

(1) Identification of the current activities, features, or attributes of the property which qualify for protection under Section 4(f) and which may be sensitive to proximity impacts;

(2) An analysis of the proximity impacts of the proposed project on the Section 4(f) property. If any of the proximity impacts will be mitigated, only the net impact need be considered in this analysis. The analysis should also describe and consider the impacts which could reasonably be expected if the proposed project were not implemented, since such impacts should not be attributed to the proposed project; and

(3) Consultation, on the foregoing identification and analysis, with the official(s) with jurisdiction over the Section 4(f) property.

(e) The Administration has reviewed the following situations and determined that a constructive use occurs when:

(1) The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise-sensitive facility of a property protected by Section 4(f), such as:

(i) Hearing the performances at an outdoor amphitheater;

(ii) Sleeping in the sleeping area of a campground;

(iii) Enjoyment of a historic site where a quiet setting is a generally recognized feature or attribute of the site's significance;

(iv) Enjoyment of an urban park where serenity and quiet are significant attributes; or

(v) Viewing wildlife in an area of a wildlife and waterfowl refuge intended for such viewing.

(2) The proximity of the proposed project substantially impairs esthetic features or attributes of a property protected by Section 4(f), where such features or attributes are considered important contributing elements to the value of the property. Examples of substantial impairment to visual or esthetic qualities would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building, or substantially detracts from the setting of a Section 4(f) property which derives its value in substantial part due to its setting;

(3) The project results in a restriction of access which substantially diminishes the utility of a significant publicly owned park, recreation area, or a historic site;

(4) The vibration impact from construction or operation of the project substantially impairs the use of a Section 4(f) property, such as projected vibration levels that are great enough to physically damage a historic building or substantially diminish the utility of the building, unless the damage is repaired and fully restored consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties, i.e., the integrity of the contributing features must be returned to a condition which is substantially similar to that which existed prior to the project; or

(5) The ecological intrusion of the project substantially diminishes the value of wildlife habitat in a wildlife and waterfowl refuge adjacent to the project, substantially interferes with the access to a wildlife and waterfowl refuge when such access is necessary for established wildlife migration or critical life cycle processes, or substantially reduces the wildlife use of a wildlife and waterfowl refuge.

(f) The Administration has reviewed the following situations and determined that a constructive use does not occur when:

(1) Compliance with the requirements of 36 CFR 800.5 for proximity impacts of the proposed action, on a site listed on or eligible for the National Register, results in an agreement of “no historic properties affected” or “no adverse effect;”

(2) The impact of projected traffic noise levels of the proposed highway project on a noise-sensitive activity do not exceed the FHWA noise abatement criteria as contained in Table 1 in part 772 of this chapter, or the projected operational noise levels of the proposed transit project do not exceed the noise impact criteria for a Section 4(f) activity in the FTA guidelines for transit noise and vibration impact assessment;

(3) The projected noise levels exceed the relevant threshold in paragraph (f)(2) of this section because of high existing noise, but the increase in the projected noise levels if the proposed project is constructed, when compared with the projected noise levels if the project is not built, is barely perceptible (3 dBA or less);

(4) There are proximity impacts to a Section 4(f) property, but a governmental agency's right-of-way acquisition or adoption of project location, or the Administration's approval of a final environmental document, established the location for the proposed transportation project before the designation, establishment, or change in the significance of the property. However, if it is reasonably foreseeable that a property would qualify as eligible for the National Register prior to the start of construction, then the property should be treated as a historic site for the purposes of this section; or

(5) Overall (combined) proximity impacts caused by a proposed project do not substantially impair the activities, features, or attributes that qualify a property for protection under Section 4(f);

(6) Proximity impacts will be mitigated to a condition equivalent to, or better than, that which would occur if the project were not built, as determined after consultation with the official(s) with jurisdiction;

(7) Change in accessibility will not substantially diminish the utilization of the Section 4(f) property; or

(8) Vibration levels from project construction activities are mitigated, through advance planning and monitoring of the activities, to levels that do not cause a substantial impairment of protected activities, features, or attributes of the Section 4(f) property.

§ 774.17 Definitions.

The definitions contained in 23 U.S.C. 101(a) are applicable to this part. In addition, the following definitions apply:

Administration. The FHWA or FTA, whichever is making the approval for the transportation program or project at issue. A reference herein to the Administration means the State when the State is functioning as the FHWA or FTA in carrying out responsibilities delegated or assigned to the State in accordance with 23 U.S.C. 325, 326, 327, or other applicable law.

All possible planning. All possible planning means that all reasonable measures identified in the Section 4(f) evaluation to minimize harm or mitigate for adverse impacts and effects must be included in the project.

(1) With regard to public parks, recreation areas, and wildlife and waterfowl refuges, the measures may include (but are not limited to): design modifications or design goals; replacement of land or facilities of comparable value and function; or monetary compensation to enhance the remaining property or to mitigate the adverse impacts of the project in other ways.

(2) With regard to historic sites, the measures normally serve to preserve the historic activities, features, or attributes of the site as agreed by the Administration and the official(s) with jurisdiction over the Section 4(f) resource in accordance with the consultation process under 36 CFR part 800.

(3) In evaluating the reasonableness of measures to minimize harm under §774.3(a)(2), the Administration will consider the preservation purpose of the statute and:

(i) The views of the official(s) with jurisdiction over the Section 4(f) property;

(ii) Whether the cost of the measures is a reasonable public expenditure in light of the adverse impacts of the project on the Section 4(f) property and the benefits of the measure to the property, in accordance with §771.105(d) of this chapter; and

(iii) Any impacts or benefits of the measures to communities or environmental resources outside of the Section 4(f) property.

(4) All possible planning does not require analysis of feasible and prudent avoidance alternatives, since such analysis will have already occurred in the context of searching for feasible and prudent alternatives that avoid Section 4(f) properties altogether under §774.3(a)(1), or is not necessary in the case of a *de minimis* impact determination under §774.3(b).

(5) A *de minimis* impact determination under §774.3(b) subsumes the requirement for all possible planning to minimize harm by reducing the impacts on the Section 4(f) property to a *de minimis* level.

Applicant. The Federal, State, or local government authority, proposing a transportation project, that the Administration works with to conduct environmental studies and prepare environmental documents. For transportation actions implemented by the Federal government on Federal lands, the Administration or the Federal land management agency may take on the responsibilities of the applicant described herein.

CE. Refers to a Categorical Exclusion, which denotes an action with no individual or cumulative significant environmental effect pursuant to 40 CFR 1508.4 and §771.117 of this chapter; unusual circumstances are taken into account in making categorical exclusion determinations.

De minimis impact. (1) For historic sites, *de minimis* impact means that the Administration has determined, in accordance with 36 CFR part 800 that no historic property is affected by the project or that the project will have "no adverse effect" on the historic property in question.

(2) For parks, recreation areas, and wildlife and waterfowl refuges, a *de minimis* impact is one that will not adversely affect the features, attributes, or activities qualifying the property for protection under Section 4(f).

EA. Refers to an Environmental Assessment, which is a document prepared pursuant to 40 CFR parts 1500–1508 and §771.119 of this title for a proposed project that is not categorically excluded but for which an EIS is not clearly required.

EIS. Refers to an Environmental Impact Statement, which is a document prepared pursuant to NEPA, 40 CFR parts 1500–1508, and §§771.123 and 771.125 of this chapter for a proposed project that is likely to cause significant impacts on the environment.

Feasible and prudent avoidance alternative. (1) A feasible and prudent avoidance alternative avoids using Section 4(f) property and does not cause other severe problems of a magnitude that substantially outweighs the importance of protecting the Section 4(f) property. In assessing the importance of protecting the Section 4(f) property, it is appropriate to consider the relative value of the resource to the preservation purpose of the statute.

(2) An alternative is not feasible if it cannot be built as a matter of sound engineering judgment.

(3) An alternative is not prudent if:

(i) It compromises the project to a degree that it is unreasonable to proceed with the project in light of its stated purpose and need;

(ii) It results in unacceptable safety or operational problems;

(iii) After reasonable mitigation, it still causes:

(A) Severe social, economic, or environmental impacts;

(B) Severe disruption to established communities;

(C) Severe disproportionate impacts to minority or low income populations; or

(D) Severe impacts to environmental resources protected under other Federal statutes;

(iv) It results in additional construction, maintenance, or operational costs of an extraordinary magnitude;

(v) It causes other unique problems or unusual factors; or

(vi) It involves multiple factors in paragraphs (3)(i) through (3)(v) of this definition, that while individually minor, cumulatively cause unique problems or impacts of extraordinary magnitude.

FONSI. Refers to a Finding of No Significant Impact prepared pursuant to 40 CFR 1508.13 and §771.121 of this chapter.

Historic site. For purposes of this part, the term “historic site” includes any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that are included in, or are eligible for inclusion in, the National Register.

Official(s) with jurisdiction. (1) In the case of historic properties, the official with jurisdiction is the SHPO for the State wherein the property is located or, if the property is located on tribal land, the THPO. If the property is located on tribal land but the Indian tribe has not assumed the responsibilities of the SHPO as provided for in the National Historic Preservation Act, then a representative designated by such Indian tribe shall be recognized as an official with jurisdiction in addition to the SHPO. When the ACHP is involved in a consultation concerning a property under Section 106 of the NHPA, the ACHP is also an official with jurisdiction over that resource for purposes of this part. When the Section 4(f) property is a National Historic Landmark, the National Park Service is also an official with jurisdiction over that resource for purposes of this part.

(2) In the case of public parks, recreation areas, and wildlife and waterfowl refuges, the official(s) with jurisdiction are the official(s) of the agency or agencies that own or administer the property in question and who are empowered to represent the agency on matters related to the property.

(3) In the case of portions of Wild and Scenic Rivers to which Section 4(f) applies, the official(s) with jurisdiction are the official(s) of the Federal agency or agencies that own or administer the affected portion of the river corridor in question. For State administered, federally designated rivers (section 2(a)(ii) of the Wild and Scenic Rivers

Act, 16 U.S.C. 1273(a)(ii)), the officials with jurisdiction include both the State agency designated by the respective Governor and the Secretary of the Interior.

ROD. Refers to a Record of Decision prepared pursuant to 40 CFR 1505.2 and §771.127 of this chapter.

Section 4(f) evaluation. Refers to the documentation prepared to support the granting of a Section 4(f) approval under §774.3(a), unless preceded by the word "programmatic." A "programmatic Section 4(f) evaluation" is the documentation prepared pursuant to §774.3(d) that authorizes subsequent project-level Section 4(f) approvals as described therein.

Section 4(f) Property. Section 4(f) property means publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance.

Use. Except as set forth in §§774.11 and 774.13, a "use" of Section 4(f) property occurs:

(1) When land is permanently incorporated into a transportation facility;

(2) When there is a temporary occupancy of land that is adverse in terms of the statute's preservation purpose as determined by the criteria in §774.13(d); or

(3) When there is a constructive use of a Section 4(f) property as determined by the criteria in §774.15.

Appendix C
TABLE OF AUTHORITIES

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Table C-1. Summary of Environmental Legislation Affecting Transportation C-3

C.0 TABLE OF AUTHORITIES

Table C-1 describes the Federal laws under which environmental studies must be conducted. For each regulation, a summary of its purpose, applicability, general procedures and coordinating agency or agencies is included, as applicable. Familiarity with these laws and implementing regulations is important for the proper application of the environmental procedures.

The legislation presented in the table is listed below:

I. General Environmental Statutes

- National Environmental Policy Act
- Section 4(f), DOT Act
- Tennessee Valley Authority Act
- Economic, Social and Environmental Effects, 23USC109h
- Uniform Relocation and Real Property Acquisition Act
- Title VI, Civil Rights Act
- Executive Order 12898 – Environmental Justice
- Public Hearings, 23 USC 128
- Surface Transportation and Uniform Relocation Assistance Act, Historic Bridges

II. Health

- Safe Drinking Water Act
- Solid Waste Disposal Act

III. Historical and Archeological

- Section 106, National Historic Preservation Act
- Section 110, National Historic Preservation Act
- Archeological and Historic Preservation Act (Moss-Bennett)
- Archeological Resources Protection Act
- Act for Preservation of American Antiquities
- American Indian Religious Freedom Act
- Native American Grave Protection and Repatriation Act

IV. Land and Water

- Wilderness Act
- Wild and Scenic Rivers Act
- Land and Water Conservation Fund Act (Sec 6(f))
- Executive Order 11990 – Protection of Wetlands
- Wetland Mitigation Banking, Intermodal Surface Transportation Equity Act (ISTEA)
- Emergency Wetlands Resources Act of 1986
- National Trails Systems Act
- Rivers and Harbors Act (Sec. 9 and Sec. 10)

- Federal Water Pollution Control Act (Sec. 404)
- Executive Order 11988 – Floodplain Management
- National Flood Insurance Act
- Water Bank Act
- Farmland Protection Policy Act
- Resource Conservation & Recovery Act (Hazardous Waste)
- Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), Superfund
- Endangered Species Act
- Fish and Wildlife Coordination Act
- Executive Order 13112 – Invasive Species
- Migratory Bird Treaty Act

V. Noise and Air Quality

- Noise Standards 23USC109
- Clean Air Act (Transportation Conformity Rule)

Table C-1. Summary of Environmental Legislation Affecting Transportation

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
General					
National Environmental Policy Act: 42 U.S.C. 4321-4335 (P.L. 91-190) (P.L. 94-83)	23 CFR 771-772 40 CFR 1500-1508 Executive Order 11514 as amended by Executive Order 11991 on NEPA responsibilities.	Consider environmental factors through systemic interdisciplinary approach before committing to a course of action.	All FHWA actions.	Procedures set forth in CEQ Regulations and 23 CFR 771.	Appropriate Federal, State, and local agencies
Section 4(f) of The Department of Transportation Act: 23 U.S.C. 138 49 U.S.C. 303 (P.L. 100-17) (P.L. 97-449) (P.L. 86-670)	23 CFR 771.135	Preserve publicly owned public parklands, waterfowl and wildlife refuges, and significant historic sites.	Significant publicly owned public parklands, recreation areas, wildlife and waterfowl refuges, and all significant historic sites "used" for a highway project.	Specific finding required: 1. Selected alternative must avoid protected areas, unless not feasible or prudent; and 2. Includes all possible planning to minimize harm.	DOI, DOA, HUD, State, or local agencies having jurisdiction and State historic preservation officer (for historic sites).
Tennessee Valley Authority Act 16 U.S.C 12 (P.L. 106-580)	18 CFR 1304	Requires permit under Section 26a for the construction, operation, or maintenance of any dam, appurtenant works, or other obstruction affecting navigation, flood control, or public lands or reservations along or in the Tennessee River or any of its tributaries.	Applicable to proposed projects built along, across or in the Tennessee River or any of its tributaries.	Apply for 26a permit.	TVA
Economic, social, and environmental effects: 23 U.S.C. 109(h) (P.L. 91-605) 23 U.S.C. 128	23 CFR 771-772	To assure that possible adverse, economic, social, and environmental effects of proposed highway projects and project locations are fully considered and that final decisions on highway projects are made in the best overall public interest.	Applicable to the planning and development of proposed projects on any Federal-Aid system for which the FHWA approves the plans, specifications, and estimates, or has the responsibility for approving a program.	Identification of economic, social, and environmental effects; consideration of alternative courses of action; involvement of other agencies and the public; systematic interdisciplinary approach. The report required by Section 128 on the consideration given to the subject impacts may be the NEPA compliance document.	Appropriate Federal, State and local agencies
Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (42 U.S.C. 4601 et seq., P.L. 91-646) as amended by the Uniform Relocation Act Amendments of 1987	49 CFR 24	To implement the Uniform Act in an efficient manner; to ensure property owners of real property acquired for and persons displaced by Federal-Aid projects are treated fairly, consistently, and equitably; and so they	All projects involving Federal-aid funds.	Procedures set forth in 49 CFR 24.	DOT/FHWA has lead responsibility. Appropriate Federal, State, and local agencies.

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
(P.L. 100-17)		will not suffer disproportionate injuries.			
Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) 23 U.S.C. 324; Americans with Disabilities Act (42 U.S.C. 12101) and related statutes	49 CFR 21 AND 23 CFR 200	To ensure that no person shall, on the grounds of race, color, national origin, age, sex, or disability be subjected to discrimination under any program or activity receiving federal financial assistance.	All Federal programs and projects.	Procedures set forth in 49 CFR 21 and 23 CFR 200.	FHWA headquarters and field offices.
Executive Order 12898: Environmental Justice	59 CFR 7629, 62 CFR 18377, 60 CFR 33896	Avoid Federal actions which cause disproportionately high and adverse impacts on minority and low income populations with respect to human health and the environment.	All Federal programs and projects.	Procedures set forth in DOT Final Environmental Justice Strategy and DOT order dated April 15,1997.	FHWA headquarters and field offices.
Public hearings: 23 U.S.C. 128	23 CFR 771.111(h)	To ensure adequate opportunity for public hearings on the effects of alternative project locations and major design features; as well as the consistency of the project with local planning goals and objectives.	Public hearings or hearing opportunities are required for projects described in each State's FHWA-approved public involvement procedures.	Public hearings or opportunity for hearings during the consideration of highway location and design proposals are conducted as described in the State's FHWA-approved, public involvement procedures. States must certify to FHWA that such hearings or the opportunity for them have been held and must submit a hearing transcript to FHWA.	Appropriate Federal, State, and local agencies.
Surface Transportation and Uniform Relocation Assistance Act of 1987:Section 123(F) Historic Bridges 23 U.S.C. 144(o) (P.L. 100-17)		Complete an inventory of on and off system bridges to determine their historic significance. Encourage the rehabilitation, reuse, and preservation of historic bridges.	Any bridge that is listed on, or eligible for listing on, the National Register of Historic Places.	1. Identify historic bridges on and off system. 2. Attempt to donate bridge to public or responsible private entity prior to demolition. Preservation costs up to demolition cost available to donee.	State Historic Preservation Officer, Advisory Council on Historic Preservation.
Health					
Safe Drinking Water Act: 42 U.S.C. 300F-300J-6 (P.L. 93-523) (P.L. 99-339)	FAPG Subpart E	Ensure public health and welfare through safe drinking water.	1. All public drinking water systems and reservoirs (including rest area facilities). 2. Actions which may have a significant impact on an aquifer or wellhead protection area which is the sole or principal drinking water.	1. Compliance with national primary drinking water regulations. 2. Compliance with wellhead protection plans. 3. Compliance with MOAs between EPA and FHWA covering specific sole source aquifers.	EPA Appropriate State agency

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976: 42 U.S.C. 6901, et seq., especially 42 U.S.C. 6961-6964 (P.L. 89-272) (P.L. 91-512) (P.L. 94-580)	40 CFR 256-300	Provide for the recovery, recycling, and environmentally safe disposal of solid wastes.	All projects which involve the recycling or disposal of solid wastes.	Solid wastes will be disposed of according to the rules for specific waste involved.	EPA
Historical and Archeological					
Section 106 of the National Historic Preservation Act, as amended: 16 U.S.C. 470f (P.L. 89-665) (P.L. 91-243) (P.L. 93-54) (P.L. 94-422) (P.L. 94-458) (P.L. 96-199) (P.L. 96-244) (P.L. 96-515) (P.L. 102-575)	Executive Order 11593 23 CFR 771 36 CFR 60 36 CFR 63 36 CFR 800	Protect, rehabilitate, restore, and reuse districts, sites, buildings, structures, and objects significant in American architecture, archeology, and culture.	All properties on or eligible for inclusion on the National Register of Historic Places.	1. Identify and determine the effects of project on subject properties. 2. Afford Advisory Council an early opportunity to comment, in accordance with 36 CFR 800. 3. Avoid or mitigate damages to greatest extent possible.	State Historic Preservation Officer Advisory Council on Historic Preservation DOI (NPS)
Section 110 of the National Historic Preservation Act, as amended: 16 U.S.C.470H-2 (P.L. 96-515)	36 CFR 65 36 CFR 78	Protect National historic landmarks. Record historic properties prior to demolition.	All properties designated as National historic landmarks. All properties on or eligible for inclusion on the National Register of Historic Places.	1. Identify and determine the effects of project on subject properties. 2. Afford Advisory Council an early opportunity to comment, in accordance with 36 CFR 800	State Historic Preservation Officer Advisory Council on Historic Preservation DOI (NPS)
Archeological and Historic Preservation Act: 16 U.S.C. 469-469C (P.L. 93-291) (Moss-Bennett Act)	36 CFR 66 (Draft)	Preserving significant historical and archeological data from loss or destruction.	Any unexpected archeological resources discovered as a result of a Federal construction project or Federally licensed activity or program.	1. Notify DOI (NPS) when a Federal project may result in the loss or destruction of a historic or archeological property. 2. DOI and/or the Federal agency may undertake survey or data recovery.	DOI (NPS) Departmental consulting archeologist State Historic Preservation Officer

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Archeological Resources Protection Act: 16 U.S.C. 470aa-11 (P.L. 96-95)	18 CFR 1312 32 CFR 229 36 CFR 79 36 CFR 296 43 CFR 7	Preserve and protect paleo entological resources, historic monuments, memorials, and antiquities from loss or destruction.	Archeological resources on Federally or Native American-owned property	1. Ensure contractor obtains permit, and identifies and evaluates resource. 2. Mitigate or avoid resource in consultation with appropriate officials in the State. 3. If necessary, apply for permission to examine, remove, or excavate such objects.	Department or agency having jurisdiction over land on which resources may be situated (BIA, BLM, DOA, DOD, NPS, TVA, USFS), State Historic Preservation Officer, Recognized Indian Tribe, if appropriate.
Act for the Preservation of American Antiquities 16 U.S.C. 431-433 (P.L. 59-209)	36 CFR 251.50-.64 43 CFR 3			1. Notify DOI (NPS) when a Federal project may result in the loss or destruction of a historic or archeological property. 2. DOI and/or the Federal agency may undertake survey or data recovery	DOI (NPS) Departmental consulting archeologist State Historic Preservation Officer
American Indian Religious Freedom Act: 42 U.S.C. 1996 (P.L. 95-341)	Executive Order No. 13007	Protect places of religious importance to American Indians, Eskimos, and Native Hawaiians.	All projects which affect places of religious importance to Native Americans.	Consult with knowledgeable sources to identify and determine any effects on places of religious importance. Comply with Section 106 procedures if the property is historic.	BIA State Historic Preservation Officer, State Indian Liaison Advisory Council on Historic Preservation, if appropriate

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Native American Grave Protection and Repatriation Act: (P.L. 101-601) 25 U.S.C. 3001 et seq.	43 CFR 10	Protect human remains and cultural material of Native American and Hawaiian groups.	Federal lands and Tribal lands.	Consult with Native American group.	DOI (NPS), BIA State Historic Preservation Officer.
Land and Water					
Wilderness Act: 16 U.S.C. 1131-1136	36 CFR 293 43 CFR 19, 8560 50 CFR 35	Preserve and protect wilderness areas in their natural condition for use and enjoyment by present and future generations.	All lands designated as part of the wilderness system by congress.	Apply for modification or adjustment of wilderness boundary by either Secretary of the Interior or Agriculture, as appropriate.	USDA (USFS), DOI (FWS, NPS, BLM), and State agencies
Wild and Scenic Rivers Act: 16 U.S.C. 1271-1287	36 CFR 297	Preserve and protect wild and scenic rivers and immediate environments for benefit of present and future generations.	All projects which affect designated and potential wild, scenic, and recreational rivers, and/or immediate environments.	Coordinate project proposals and reports with appropriate Federal Agency.	DOI (NPS) and/or USDA (USFS), State agencies.
Land and Water Conservation Fund Act (Section 6(f)): 16 U.S.C. 460 -4 TO -11 (P.L. 88-578)	36 CFR 59	Preserve, develop, and assure the quality and quantity of outdoor recreation resources for present and future generations.	All projects which impact recreational lands purchased or improved with land and water conservation funds	The Secretary of the Interior must approve any conversion of property acquired or developed with assistance under this act to other than public, outdoor recreation use.	DOI State agencies
Executive Order 11990: Protection of Wetlands	DOT Order 5660.1A 23 CFR 777	To avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.	Federally undertaken, financed, or assisted construction, and improvements in or with significant impacts on wetlands	Evaluate and mitigate impacts on wetlands. Specific finding required in final environmental document.	DOI (FWS), EPA, USCE, NMFS, NRCS, State agencies
Intermodal Surface Transportation Efficiency Act of 1991. Wetlands Mitigation Banks: Sec. 1006-1007 (P.L. 102-240,105 STAT 1914) 23 U.S.C. 103(i)(13) 23 U.S.C. 133(b)(11)	23 CFR 771; 777	To mitigate wetlands impacts directly associated with projects funded through NHS and STP, by participating in wetland mitigation banks, restoration, enhancement and creation of wetlands authorized under the Water Resources Dev. Act, and through contributions to statewide and regional efforts	Federally undertaken, financed, or assisted construction, and improvements, or with impacts on wetlands.	Evaluate and mitigate impacts on wetlands. Specific finding required in final environmental document.	DOI (FWS), EPA, USCE, NMFS, NRCS, State agencies
Emergency Wetlands		To promote the conservation	All projects which may	1. Preparation of a national	FWS

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Resources Act of 1986: 16 U.S.C. 3921; 3931. (P.L. 99-645)		of wetlands in the U.S. in order to maintain the public benefits they provide.	impact wetlands	wetlands priority conservation plan which provides priority with respect to Federal and State acquisition. 2. Provide direction for the national wetlands inventory.	
National Trails System Act: 16 U.S.C. 1241-1249	36 CFR 251 43 CFR 8350	Provide for outdoor recreation needs and encourage outdoor recreation	Projects affecting National scenic or historic trails designated by Congress and lands through which such trails pass. National recreation trails and side and connecting trails are proposed by local sponsors and approved by DOI and DOA	1. Apply for right-of-way easement from the Secretary of Interior or Agriculture, as appropriate. 2. Ensure that potential trail properties are made available for use as recreational and scenic trails	DOI (NPS) Agriculture (USFS) Other Federal land management agencies may apply for designation
Rivers and Harbors Act of 1899: 33 U.S.C. 401, et seq., as amended and supplemented	23 CFR 650, Subparts D & H 33 CFR 114-115	Protection of navigable waters in the U.S	Any construction affecting navigable waters and any obstruction, excavation, or filling	Must obtain approval of plans for construction, dumping, and dredging permits (Sec. 10) And bridge permits(Sec. 9)	USCE USCG EPA State agencies
Federal Water Pollution Control Act (1972), as amended by the Clean Water Act (1977 & 1987): 33 U.S.C. 1251-1376 (P.L. 92-500) (P.L. 95-217) (P.L. 100-4)	DOT Order 5660.1A 23 CFR 650 Subpart B, 771 33 CFR 209, 320-323, 325, 328, 329 40 CFR 121-125, 129-131, 133, 135-136, 230-231	Restore and maintain chemical, physical, and biological integrity of the Nation's waters through prevention, reduction, and elimination of pollution.	Any discharge of a pollutant into waters of the U.S	1. Obtain permit for dredge or fill material from USCE or State agency, as appropriate. (Section 404) 2. Permits for all other discharges are to be acquired from EPA or appropriate State agency (Section 402) Phase 1-NPDES-Issued for municipal separate storm sewers serving large (over 250,000)populations or medium(over 100,000). Storm water discharges assoc. with industrial waste. Activities including construction sites > 5 acres. 3. Water quality certification is required from State Water Resource Agency. (Section 401) 4. All projects shall be consistent with the State Non-Point Source Pollution	USCE, EPA, designated State Water Quality Control Agency, designated State Non-Point Source Pollution Agency

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
				Management Program. (Section 319	
Executive Order 11988:, Floodplain Management, as amended by Executive Order 12148	DOT Order 5650.2 23 CFR 650, Subpart A, 23 CFR 771	To avoid the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to restore and preserve the natural and beneficial values served by	All construction of Federal or Federally-aided buildings, structures, roads, or facilities which encroach upon or affect the base floodplain.	1. Assessment of floodplain hazards. 2. Specific finding required in final environmental document for significant encroachments.	FEMA State and local agencies
National Flood Insurance Act: (P.L. 90-448) Flood Disaster Protection Act: (P.L. 93-234) 42 U.S.C. 4001-4128	DOT Order 5650.2 23 CFR 650, Subpart A, 7 23 CFR 771, 44 CFR 59-62, 64-68, 70-71, 75-77	A. Identify flood-prone areas and provide insurance. B. Requires purchase of insurance for buildings in special flood-hazard areas.	Any Federally assisted acquisition or construction project in an area identified as having special flood hazards.	Avoid construction in, or design to be consistent with, FEMA-identified flood-hazard areas.	FEMA State and local agencies
Water Bank Act: 16 U.S.C. 1301-1311 (P.L. 91-559) (P.L. 96-182	7 CFR 752	Preserve, restore, and improve wetlands of the nation.	Any agreements with landowners and operators in important migratory waterfowl nesting and breeding areas.	Apply procedures established for implementing Executive Order 11990.	Secretary of Agriculture Secretary of Interior
Farmland Protection Policy Act of 1981: 7 U.S.C. 4201-4209 (P.L. 97-98) (P.L. 99-198)	7 CFR 658	Minimize impacts on farmland and maximize compatibility with state and local farmland programs and policies.	All projects that take right-of-way in farmland, as defined by the regulation.	1. Early coordination with the NRCS. 2. Land evaluation and site assessment. 3. Determination of whether or not to proceed with farmland conversion, based on severity of impacts and other environmental considerations.	NRCS
Resource Conservation and Recovery Act of 1976 (RCRA), as amended: 42 U.S.C. 6901, et seq. (P.L. 94-580) (P.L. 98-616)	40 CFR 260-271	Protect human health and the environment. Prohibit open dumping. Manage solid wastes. Regulate treatment, storage, transportation, and disposal of hazardous waste.	Any project that takes right-of-way containing a hazardous waste.	Coordinate with EPA or State agency on remedial action.	EPA or State agency approved by EPA, if any
Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended: 42 U.S.C. 9601-9657 (P.L. 96-510) Superfund Amendments and Reauthorization Act of 1986: (SARA) (P.L. 99-499)	40 CFR 300 43 CFR 11	Provide for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive hazardous waste disposal sites.	Any project that might take right-of-way containing a hazardous substance	1. Avoid hazardous waste sites, if possible. 2. Check EPA lists of hazardous waste sites. 3. Field surveys and reviews of past and present land use. 4. Contact appropriate officials if uncertainty exists. 5. If hazardous waste is present or suspected, coordinate with appropriate officials.	EPA or State agency approved by EPA, if any

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
				6. If hazardous waste encountered during construction, stop project and develop remedial action	
Endangered Species Act of 1973, as amended: 16 U.S.C.1531-1543 (P.L. 93-205) (P.L. 94-359) (P.L. 95-632) (P.L. 96-159) (P.L. 97-304)	7 CFR 355 50 CFR 17, 23, 81, 222, 225-227, 402, 424, 450-453	Conserve species of fish, wildlife and plants facing extinction.	Any action that is likely to jeopardize continued existence of such endangered/ threatened species or result in destruction or modification of critical habitat.	Consult with the Secretary of the Interior or Commerce, as appropriate.	DOI (FWS) COMMERCE (NMFS)
Fish and Wildlife Coordination Act: 16 U.S.C. 661-666(C) (P.L. 85-624) (P.L. 89-72) (P.L. 95-616)		Conservation, maintenance, and management of wildlife resources	1. Any project which involves impoundment (surface area of 10 acres or more), diversion, channel deepening, or other modification of a stream or other body of water. 2. Transfer of property by Federal agencies to State agencies for wildlife conservation purposes	Coordinate early in project development with FWS and State Fish and Wildlife Agency	DOI (FWS) State Fish and Wildlife Agencies
Executive Order 13112 Invasive Species		To prevent the introduction of invasive species and provide for their control.	Identify and prevent spread of invasive species through highway project construction.	Identify species and commit to measures to eliminate or reduce spread of species.	FHWA
Migratory Bird Treaty Act 16 U.S.C. 760c-760g		To protect most common wild birds found in the United States.	Makes it unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import, or export any migratory bird. Indirect killing of birds by destroying their nests and eggs, is covered by the act, so construction in nesting areas can constitute a taking.	The FWS is to review and comment on the effects of a proposal that could kill birds, even indirectly	DOI (FWS), State Fish and Wildlife Agencies
Noise and Air Quality					
Noise Standards: 23 U.S.C. 109(i) (P.L. 91-605) (P.L. 93-87)	23 CFR 772	Promulgate noise standards for highway traffic	All Federally funded projects for the construction of a highway on new location, or the physical alteration of an existing highway which significantly changes either the vertical or horizontal alignment or increases the number of through-traffic	1. Noise impact analysis. 2. Analysis of mitigation measures. 3. Incorporate reasonable and feasible noise abatement measures to reduce or eliminate noise impact	TDOT

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
			lanes.		
Clean Air Act (as amended), Transportation Conformity Rule: 23 U.S.C. 109(j) 42 U.S.C. 7521 (a) (P.L. 101-549)	23 CFR 771 40 CFR 51 and 93	To insure that transportation plans, programs and projects conform to the State's air quality implementation plans	Non-attainment and maintenance areas	1. Transportation plans, programs, and projects must conform with State Implementation Plan (SIPs) that provide for attainment of the national ambient air quality standards	FTA, EPA, MPOs, State Departments of Transportation and State and local Air Quality Control Agencies.

Source: FHWA, December 1998 (with modification)

Appendix D
FHWA TECHNICAL ADVISORY T 6640.8A

Appendix D

U.S. Department of Transportation
Federal Highway Administration

TECHNICAL ADVISORY
GUIDANCE FOR PREPARING AND PROCESSING ENVIRONMENTAL AND SECTION 4(F) DOCUMENTS

T 6640.8A

October 30, 1987

1. PURPOSE. To provide guidance to Federal Highway Administration (FHWA) field offices and to project applicants on the preparation and processing of environmental and Section 4(f) documents.
2. CANCELLATION. Technical Advisory T 6640.8, "Guidance Material for the Preparation of Environmental Documents," dated February 24, 1982, is canceled effective on November 27, 1987.
3. APPLICABILITY
    a. This material is not regulatory. It has been developed to provide guidance for uniformity and consistency in the format, content, and processing of the various environmental studies and documents pursuant to the National Environmental Policy Act (NEPA), 23 U.S.C.109(h) and 23 U.S.C. 138 (Section 4(f) of the DOT Act) and the reporting requirements of 23 U.S.C. 128.
    b. The guidance is limited to the format, content and processing of NEPA and Section 4(f) studies and documents. It should be used in combination with a knowledge and understanding of the Council on Environmental Quality (CEQ) Regulations for Implementing NEPA (40 CFR 1500-1508), FHWA's Environmental Impact and Related Procedures (23 CFR 771) and other environmental statutes and orders (see Appendix A).
    c. This guidance should not be used until November 27, 1987, the effective date of the 1987 revisions to 23 CFR 771.

Ali F. Sevin
Director, Office of
Environmental Policy

GUIDANCE FOR PREPARING AND PROCESSING ENVIRONMENTAL AND SECTION 4(F) DOCUMENTS

Background

An earlier edition of this advisory (dated February 24, 1982) placed major emphasis on environmental impact statements (EISs) and provided limited guidance on environmental assessments (EAs) and other environmental studies needed for a categorical exclusion (CE) determination or a finding of no significant impact (FONSI). The revised guidance gives expanded coverage to CE determinations, EAs, FONSIs, EISs, supplemental EISs, reevaluations, and Section 4(f) evaluations. This material is not regulatory. It does, however, provide for uniformity and consistency in the documentation of CEs and the development of environmental and Section 4(f) documents.

The FHWA subscribes to the philosophy that the goal of the NEPA process is better decisions and not more documentation. Environmental documents should be concise, clear, and to the point, and should be supported by evidence that the necessary analyses have been made. They should focus on the important impacts and issues with the less important areas only briefly discussed. The length of EAs should normally be less than 15 pages and EISs should normally be less than 150 pages for most proposed actions and not more than 300 pages for the most complex proposals. The use of technical reports for various subject areas would help reduce the size of the documents.

The FHWA considers the early coordination process to be a valuable tool in determining the scope of issues to be addressed and in identifying and focusing on the proposed action's important issues. This process normally entails the exchange of information with appropriate Federal, State and local agencies, and the public from inception of the proposed action to preparation of the environmental document or to completion of environmental studies for applicable CEs. Formal scoping meetings may also be held where such meetings would assist in the preparation of the environmental document. The role of other agencies and other environmental review and consultation requirements should be established during scoping. The Council on Environmental Quality (CEQ) has issued several guidance publications on NEPA and its regulations as follows: (1) "Questions and Answers about the NEPA Regulations," March 30, 1981; (2) "Scoping Guidance," April 30, 1981; and (3) "Guidance Regarding NEPA Regulations," July 28, 1983. This nonregulatory guidance is used by FHWA in preparing and processing environmental documents. Copies of the CEQ guidance are available in the FHWA Office of Environmental Policy (HEV-11).

Note, highway agency (HA) is used throughout this document to refer to a State and local highway agency responsible for conducting environmental studies and preparing environmental documents and to FHWA's Office of Direct Federal Programs when that office acts in a similar capacity.

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I. CATEGORICAL EXCLUSION (CE)

Categorical exclusions are actions or activities which meet the definition in 23 CFR 771.117(a) and, based on FHWA's past experience, do not have significant environmental effects. The CEs are divided into two groups based on the action's potential for impacts. The level of documentation necessary for a particular CE depends on the group the action falls under as explained below.

A. Documentation of Applicability

The first group is a list of 20 categories of actions in 23 CFR 771.117(c) which experience has shown never or almost never cause significant environmental impacts. These categories are non-construction actions (e.g., planning, grants for training and research programs) or limited construction activities (e.g., pedestrian facilities, landscaping, fencing). These actions are automatically classified as CEs, and except where unusual circumstances are brought to FHWA's attention, do not require approval or documentation by FHWA. However, other environmental laws may still apply. For example, installation of traffic signals in a historic district may require compliance with Section 106, or a proposed noise barrier which would use land protected by Section 4(f) would require preparation of a Section 4(f) evaluation (23 CFR 771.135(i)). In most cases, information is available from planning and programming documents for the FHWA Division Office to determine the applicability of other environmental laws. However, any necessary documentation should be discussed and developed cooperatively by the highway agency (HA) and the FHWA.

The second group consists of actions with a higher potential for impacts than the first group, but due to minor environmental impacts still meets the criteria for categorical exclusions. In 23 CFR 771.117(d), the regulation lists examples of 12 actions which past experience has found appropriate for CE classification. However, the second group is not limited to these 12 examples. Other actions with a similar scope of work may qualify as CEs. For actions in this group, site location is often a key factor. Some of these actions on certain sites may involve unusual circumstances or result in significant adverse environmental impacts. Because of the potential for impacts, these actions require some information to be provided by the HA so that the FHWA can determine if the CE classification is proper (23 CFR 771.117(d)). The level of information to be provided should be commensurate with the action's potential for adverse environmental impacts. Where adverse environmental impacts are likely to occur, the level of analysis should be sufficient to define the extent of impacts, identify appropriate mitigation measures, and address known and foreseeable public and agency concerns. As a minimum, the information should include a description of the proposed action and, as appropriate, its immediate surrounding area, a discussion of any specific areas of environmental concern (e.g., Section 4(f), wetlands, relocations), and a list of other Federal actions required, if any, for the proposal.

The documentation of the decision to advance an action in the second group as a CE can be accomplished by one of the following methods:

1. Minor actions from the list of examples:

Minor construction projects or approval actions need only minimum documentation. Where project-specific information for such minor construction projects is included with the Section 105 program and clearly shows that the project is one of the 12 listed examples in Section 771.117(d), the approval of the Section 105 program can be used to approve the projects as CEs. Similarly, the three approval actions on the list (examples (6), (7) and (12)) should not normally require detailed documentation, and the CE determination can be documented as a part of the approval action being requested.

2. Other actions from the list of examples:

   For more complex actions, additional information and possibly environmental studies will be needed. This information should be furnished to the FHWA on a case-by-case basis for concurrence in the CE determination.

3. Actions not on the list of examples:

   Any action which meets the CE criteria in 23 CFR 771.117(a) may be classified as a CE even though it does not appear on the list of examples in Section 771.117(d). The actions on the list should be used as a guide to identify other actions that may be processed as CEs. The documentation to be submitted to the FHWA must demonstrate that the CE criteria are satisfied and that the proposed project will not result in significant environmental impacts. The classification decision should be documented as a part of the individual project submissions.

4. Consideration of Unusual Circumstances

   Section 771.117(b) lists those unusual circumstances where further environmental studies will be necessary to determine the appropriateness of a CE classification. Unusual circumstances can arise on any project normally advanced with a CE; however, the type and depth of additional studies will vary with the type of CE and the facts and circumstances of each situation. For those actions on the fixed list (first group) of CEs, unusual circumstances should rarely, if ever, occur due to the limited scope of work. Unless unusual circumstances come to the attention of the HA or FHWA, they need not be given further consideration. For actions in the second group of CEs, unusual circumstances should be addressed in the information provided to the FHWA with the request for CE approval. The level of consideration, analysis, and documentation should be commensurate with the action's potential for significant impacts, controversy, or inconsistency with other agencies' environmental requirements.

   When an action may involve unusual circumstances, sufficient early coordination, public involvement and environmental studies should be undertaken to determine the likelihood of significant impacts. If no significant impacts are likely to occur, the results of environmental studies and any agency and public involvement should adequately support such a conclusion and be included in the request to the FHWA for CE approval. If significant impacts are likely to occur, an EIS must be prepared (23 CFR 771.123(a)). If the likelihood of significant impacts is

uncertain even after studies have been undertaken, the HA should consult with the FHWA to determine whether to prepare an EA or an EIS.

II. ENVIRONMENTAL ASSESSMENT (EA)

The primary purpose of an EA is to help the FHWA and HA decide whether or not an EIS is needed. Therefore, the EA should address only those resources or features which the FHWA and the HA decide will have a likelihood for being significantly impacted. The EA should be a concise document and should not contain long descriptions or detailed information which may have been gathered or analyses which may have been conducted for the proposed action. Although the regulations do not set page limits, CEQ recommends that the length of EAs usually be less than 15 pages. To minimize volume, the EA should use good quality maps and exhibits and incorporate by reference and summarize background data and technical analyses to support the concise discussions of the alternatives and their impacts.

The following format and content is suggested:

A. Cover Sheet.

There is no required format for the EA. However, the EIS cover sheet format, as shown in Section V, is recommended as a guide. A document number is not necessary. The due date for comments should be omitted unless the EA is distributed for comments.

B. Purpose of and Need for Action.

Describe the locations, length, termini, proposed improvements, etc. Identify and describe the transportation or other needs which the proposed action is intended to satisfy (e.g., provide system continuity, alleviate traffic congestion, and correct safety or roadway deficiencies). In many cases the project need can be adequately explained in one or two paragraphs. On projects where a law, Executive Order, or regulation (e.g., Section 4(f), Executive Order 11990, or Executive Order 11988) mandates an evaluation of avoidance alternatives, the explanation of the project need should be more specific so that avoidance alternatives that do not meet the stated project need can be readily dismissed.

C. Alternatives.

Discuss alternatives to the proposed action, including the no-action alternative, which are being considered. The EA may either discuss (1) the preferred alternative and identify any other alternatives considered or (2) if the applicant has not identified a preferred alternative, the alternatives under consideration. The EA does not need to evaluate in detail all reasonable alternatives for the project, and may be prepared for one or more build alternatives.

D. Impacts.

For each alternative being considered, discuss any social, economic, and environmental impacts whose significance is uncertain. The level of analysis should be sufficient to

adequately identify the impacts and appropriate mitigation measures, and address known and foreseeable public and agency concerns. Describe why these impacts are considered not significant. Identified impact areas which do not have a reasonable possibility for individual or cumulative significant environmental impacts need not be discussed.

E. Comments and Coordination.

Describe the early and continuing coordination efforts, summarize the key issues and pertinent information received from the public and government agencies through these efforts, and list the agencies and, as appropriate, members of the public consulted.

F. Appendices (if any).

The appendices should include only analytical information that substantiates an analysis which is important to the document (e.g., a biological assessment for threatened or endangered species). Other information should be referenced only (i.e., identify the material and briefly describe its contents).

G. Section 4(f) Evaluation (if any).

If the EA includes a Section 4(f) evaluation, the EA/Section 4(f) evaluation or, if prepared separately, the Section 4(f) evaluation by itself must be circulated to the appropriate agencies for Section 4(f) coordination (23 CFR 771.135(i)). Section VII provides specific details on distribution and coordination of Section 4(f) evaluations. Section IX provides information on format and content of Section 4(f) evaluation.

If a programmatic Section 4(f) evaluation is used on the proposed project, this fact should be included and the Section 4(f) resource identified in the EA. The avoidance alternatives evaluation called for in Section 771.135(i) need not be repeated in the EA. Such evaluation would be part of the documentation to support the applicability and findings of the programmatic document.

H. EA Revisions.

Following the public availability period, the EA should be revised or an attachment provided, as appropriate, to (1) reflect changes in the proposed action or mitigation measures resulting from comments received on the EA or at the public hearing (if one is held) and any impacts of the changes, (2) include any necessary findings, agreements, or determination (e.g., wetlands, Section 106, Section 4(f)) required for the proposal, and (3) include a copy of pertinent comments received on the EA and appropriate responses to the comments.

III. FINDING OF NO SIGNIFICANT IMPACT (FONSI)

The EA, revised or with attachment(s) (see paragraph above), is submitted by the HA to the FHWA along with (1) a copy of the public hearing transcript, when one is held, (2) a recommendation of the preferred alternative, and (3) a request that a finding of no significant

impact be made. The basis for the HA's finding of no significant impact request should be adequately documented in the EA and any attachment(s).

After review of the EA and any other appropriate information, the FHWA may determine that the proposed action has no significant impacts. This is documented by attaching to the EA a separate statement (sample follows) which clearly sets forth the FHWA conclusions. If necessary, the FHWA may expand the sample FONSI to identify the basis for the decision, uses of land from Section 4(f) properties, wetland finding, etc.

The EA or FONSI should document compliance with NEPA and other applicable environmental laws, Executive Orders, and related requirements. If full compliance with these other requirements is not possible by the time the FONSI is prepared, the documents should reflect consultation with the appropriate agencies and describe when and how the requirements will be met. For example, any action requiring the use of Section 4(f) property cannot proceed until FHWA gives a Section 4(f) approval (49 U.S.C. 303(c)).

Sample

FEDERAL HIGHWAY ADMINISTRATION
FINDING OF NO SIGNIFICANT IMPACT

FOR

(Title of Proposed Action)

The FHWA has determined that alternative (identify the alternative selected) will have no sigificant impact on the human environment. This FONSI is based on the attached EA (reference other environmental and non-environmental documents as appropriate) which has been independently evaluated by the FHWA and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an EIS is not required. The FHWA takes full responsibility for the accuracy, scope, and content of the attached EA (and other documents as appropriate).

_____ _____

Date For FHWA

IV. DISTRIBUTION OF EAs AND FONSIs

A. Environmental Assessment

After clearance by FHWA, EAs must be made available for public inspection at the HA and FHWA Division offices (23 CFR 771.119(d)). Although only a notice of availability of the EA is required, the HA is encouraged to distribute a copy of the document with the notice to Federal, State, and local government agencies likely to have an interest in the undertaking and to the State intergovernmental review contacts. The HA should also distribute the EA to any Federal, State, or local agency known to have interest or special expertise (e.g., EPA for wetlands, water quality, air, noise, etc.) in those areas addressed in the EA which have or may have had potential for significant impact. The possible impacts and the agencies involved should be identified following the early coordination process. Where an individual permit would be required from the Corps of Engineers (COE) (i.e., Section 404 or Section 10) or from the Coast Guard (CG) (i.e., Section 9), a copy of the EA should be distributed to the involved agency in accordance with the U.S. Department of Transportation (DOT)/Corps of Engineers Memorandum of Agreement or the FHWA/U.S. Coast Guard Memorandum of Understanding, respectively. Any internal FHWA distribution will be determined by the Division Office on a case-by-case basis.

B. Finding of No Significant Impact

Formal distribution of a FONSI is not required. The HA must send a notice of availability of the FONSI to Federal, State, and local government agencies likely to have an interest in the undertaking and the State intergovernmental review contacts (23 CFR 771.121(b)). However, it is encouraged that agencies which commented on the EA (or requested to be informed) be advised of the project decision and the disposition of their comments and be provided a copy of the FONSI. This fosters good lines of communication and enhances interagency coordination.

V. ENVIRONMENTAL IMPACT STATEMENT (EIS) – FORMAT AND CONTENT

A. Cover Sheet

Each EIS should have a cover sheet containing the following information:

(EIS NUMBER)

Route, Termini, City or County, and State

Draft (Final) (Supplement)

Environmental Impact Statement

Submitted Pursuant to 42 U.S.C. 4332 (2) (c)(and where applicable, 49 U.S.C. 303) by the U.S. Department of Transportation, Federal Highway Administration and State Highway Agency and(As applicable, any other joint lead agency)

Cooperating Agencies (Include List Here, as applicable)

Date of Approval

For (State Highway Agency)

Date of Approval

For FHWA

The following persons may be contacted for additional information concerning this document:

(Name, address, and telephone number of FHWA Division Office contact)

(Name, address, and telephone number of HA contact)

A one-paragraph abstract of the statement.

Comments on this draft EIS are due by (date) and should be sent to (name and address).

The top left-hand corner of the cover sheet of all draft final and supplemental EISs contains an identification number. The following is an example:

FHWA-AZ-EIS-87-01-D(F)(S)

FHWA name of Federal agency

AZ name of State (cannot exceed four characters)

EIS environmental impact statement

87 year draft statement was prepared

01 sequential number of draft statement for each calendar year

D designates the statement as the draft statement

F designates the statement as the final statement

S designates supplemental statement and should be combined with draft (DS) or final (FS) statement designation. The year and sequential number will be the same as those used for the original draft EIS.

The EIS should be printed on 8 1/2 x 11-inch paper with any foldout sheets folded to that size. The wider sheets should be 8 1/2 inches high and should open to the right with the title or identification on the right. The standard size is needed for administrative recordkeeping.

B. Summary

The summary should include:

1. A brief description of the proposed FHWA action indicating route, termini, type of improvement, number of lanes, length, county, city, State, and other information, as appropriate.
2. A description of any major actions proposed by other governmental agencies in the same geographic area as the proposed FHWA action.
3. A summary of all reasonable alternatives considered. (The draft EIS must identify the preferred alternative or alternatives officially identified by the HA (40 CFR 1502.14(e)). The final EIS must identify the preferred alternative and should discuss the basis for its selection (23 CFR 771.125(a)(1)).
4. A summary of major environmental impacts, both beneficial and adverse.
5. Any areas of controversy (including issues raised by agencies and the public).
6. Any major unresolved issues with other agencies.
7. A list of other Federal actions required for the proposed action (i.e., permit approvals, land transfer, Section 106 agreements, etc.).

C. Table of Contents

For consistency with CEQ regulations, the following standard format should be used:

1. Cover Sheet
2. Summary
3. Table of Contents
4. Purpose of and Need for Action
5. Alternatives
6. Affected Environment
7. Environmental Consequences
8. List of Preparers
9. List of Agencies, Organizations, and Persons to Whom Copies of the Statement are Sent
10. Comments and Coordination
11. Index
12. Appendices (if any)

D. Purpose of and Need for Action

Identify and describe the proposed action and the transportation problem(s) or other needs which it is intended to address (40 CFR 1502.13). This section should clearly demonstrate that a "need" exists and should define the "need" in terms understandable to the general public. This discussion should clearly describe the problems which the proposed action is to correct. It will form the basis for the "no action" discussion in the "Alternatives" section, and assist with the identification of reasonable alternatives and the selection of the preferred alternative. Charts, tables, maps, and other illustrations (e.g.,

typical cross-section, photographs, etc.) are encouraged as useful presentation techniques.

The following is a list of items which may assist in the explanation of the need for the proposed action. It is by no means all-inclusive or applicable in every situation and is intended only as a guide.

1. Project Status - Briefly describe the project history including actions taken to date, other agencies and governmental units involved, action spending, schedules, etc.
2. System Linkage - Is the proposed project a "connecting link?" How does it fit in the transportation system?
3. Capacity - Is the capacity of the present facility inadequate for the present traffic? Projected traffic? What capacity is needed? What is the level(s) of service for existing and proposed facilities?
4. Transportation Demand - Including relationship to any statewide plan or adopted urban transportation plan together with an explanation of the project's traffic forecasts that are substantially different from those estimates from the 23 U.S.C. 134 (Section 134) planning process.
5. Legislation - Is there a Federal, State, or local governmental mandate for the action?
6. Social Demands or Economic Development - New employment, schools, land use plans, recreation, etc. What projected economic development/land use changes indicate the need to improve or add to the highway capacity?
7. Modal Interrelationships - How will the proposed facility interface with and serve to complement airports, rail and port facilities, mass transit services, etc.?
8. Safety - Is the proposed project necessary to correct an existing or potential safety hazard? Is the existing accident rate excessively high? Why? How will the proposed project improve it?
9. Roadway Deficiencies - Is the proposed project necessary to correct existing roadway deficiencies (e.g., substandard geometrics, load limits on structures, inadequate cross-section, or high maintenance costs)? How will the proposed project improve it?

E. <u>Alternatives</u>

This section of the draft EIS must discuss a range of alternatives, including all "reasonable alternatives" under consideration and those "other alternatives" which were eliminated from detailed study (23 CFR 771.123(c)). The section should begin with a concise discussion of how and why the "reasonable alternatives" were selected for detailed study and explain why "other alternatives" were eliminated. The following range of alternatives should be considered when determining reasonable alternatives:

1. "No-action" alternative: The "no-action" alternative normally includes short-term minor restoration types of activities (safety and maintenance improvements, etc.) that maintain continuing operation of the existing roadway.
2. Transportation System Management (TSM) alternative: The TSM alternative includes those activities which maximize the efficiency of the present system. Possible subject areas to include in this alternative are options such as fringe

parking, ridesharing, high-occupancy vehicle (HOV) lanes on existing roadways, and traffic signal timing optimization. This limited construction alternative is usually relevant only for major projects proposed in urbanized areas over 200,000 population.

For all major projects in these urbanized areas, HOV lanes should be considered. Consideration of this alternative may be accomplished by reference to the regional transportation plan, when that plan considers this option. Where a regional transportation plan does not reflect consideration of this option, it may be necessary to evaluate the feasibility of HOV lanes during early project development. Where a TSM alternative is identified as a reasonable alternative for a "connecting link" project, it should be evaluated to determine the effect that not building a highway link in the transportation plan will have on the remainder of the system. A similar analysis should be made where a TSM element(s) (e.g., HOV lanes) is part of a build alternative and reduces the scale of the highway link.

While the above discussion relates primarily to major projects in urbanized areas, the concept of achieving maximum utilization of existing facilities is equally important in rural areas. Before selecting an alternative on new location for major projects in rural areas, it is important to demonstrate that reconstruction and rehabilitation of the existing system will not adequately correct the identified deficiencies and meet the project need.

3. Mass Transit: This alternative includes those reasonable and feasible transit options (bus systems, rail, etc.) even though they may not be within the existing FHWA funding authority. It should be considered on all proposed major highway projects in urbanized areas over 200,000 population. Consideration of this alternative may be accomplished by reference to the regional or area transportation plan where that plan considers mass transit or by an independent analysis during early project development.

   Where urban projects are multi-modal and are proposed for Federal funding, close coordination is necessary with the Urban Mass Transportation Administration (UMTA[1]). In these situations, UMTA should be consulted early in the project-development process. Where UMTA funds are likely to be requested for portions of the proposal, UMTA must be requested to be either a joint lead agency or a cooperating agency at the earliest stages of project development (23 CFR 771.111(d)). Where applicable, cost-effectiveness studies that have been performed should be summarized in the EIS.

4. Build alternatives: Both improvement of existing highway(s) and alternatives on new location should be evaluated. A representative number of reasonable alternatives must be presented and evaluated in detail in the draft EIS (40 CFR 1502.14(a)). For most major projects, there is a potential for a large number of

[1] UMTA is now the Federal Transit Administration (FTA).

reasonable alternatives. Where there is a large number of alternatives, only a representative number of the most reasonable examples, covering the full range of alternatives, must be presented. The determination of the number of reasonable alternatives in the draft EIS, therefore, depends on the particular project and the facts and circumstances in each case.

Each alternative should be briefly described using maps or other visual aids such as photographs, drawings, or sketches to help explain the various alternatives. The material should provide a clear understanding of each alternative's termini, location, costs, and the project concept (number of lanes, right-of-way requirements, median width, access control, etc.). Where land has been or will be reserved or dedicated by local government(s), donated by individuals, or acquired through advanced or hardship acquisition for use as highway right-of-way for any alternative under consideration, the draft EIS should identify the status and extent of such property and the alternatives involved. Where such lands are reserved, the EIS should state that the reserved lands will not influence the alternative to be selected.

Development of more detailed design for some aspects (e.g., Section 4(f), COE or CG permits, noise, wetlands, etc.) of one or more alternatives may be necessary during preparation of the draft and final EIS in order to evaluate impacts or mitigation measures or to address issues raised by other agencies or the public. However, care should be taken to avoid unnecessarily specifying features which preclude cost-effective final design options.

All reasonable alternatives under consideration (including the no-build) need to be developed to a comparable level of detail in the draft EIS so that their comparative merits may be evaluated (40 CFR 1502.14(b) and (d)). In those situations where the HA has officially identified a "preferred" alternative based on its early coordination and environmental studies, the HA should so indicate in the draft EIS. In these instances, the draft EIS should include a statement indicating that the final selection of an alternative will not be made until the alternatives' impacts and comments on the draft EIS and from the public hearing (if held) have been fully evaluated. Where a preferred alternative has not been identified, the draft EIS should state that all reasonable alternatives are under consideration and that a decision will be made after the alternatives' impacts and comments on the draft EIS and from the public hearing (if held) have been fully evaluated.

The final EIS must identify the preferred alternative and should discuss the basis for its selection (23 CFR 771.125(a)(1)). The discussion should provide the information and rationale identified in Section VIII (Record of Decision), paragraph (B). If the preferred alternative is modified after the draft EIS, the final EIS should clearly identify the changes and discuss the reasons why any new impacts are not significant.

F. Affected Environment

This section provides a concise description of the existing social, economic, and environmental setting for the area affected by all alternatives presented in the EIS. Where

possible, the description should be a single description for the general project area rather than a separate one for each alternative. The general population served and/or affected (city, county, etc.) by the proposed action should be identified by race, color, national origin, and age. Demographic data should be obtained from available secondary sources (e.g., census data, planning reports) unless more detailed information is necessary to address specific concerns. All socially, economically, and environmentally sensitive locations or features in the proposed project impact area (e.g., neighborhoods, elderly/minority/ ethnic groups, parks, hazardous material sites, historic resources, wetlands, etc.), should be identified on exhibits and briefly described in the text. However, it may be desirable to exclude from environmental documents the specific location of archeological sites to prevent vandalism.

To reduce paperwork and eliminate extraneous background material, the discussion should be limited to data, information, issues, and values which will have a bearing on possible impacts, mitigation measures, and on the selection of an alternative. Data and analyses should be commensurate with the importance of the impact, with the less important material summarized or referenced rather than be reproduced. Photographs, illustrations, and other graphics should be used with the text to give a clear understanding of the area and the important issues. Other Federal activities which contribute to the significance of the proposed action's impacts should be described.

This section should also briefly describe the scope and status of the planning processes for the local jurisdictions and the project area. Maps of any adopted land use and transportation plans for these jurisdictions and the project area would be helpful in relating the proposed project to the planning processes.

G. Environmental Consequences

This section includes the probable beneficial and adverse social, economic, and environmental effects of alternatives under consideration and describes the measures proposed to mitigate adverse impacts. The information should have sufficient scientific and analytical substance to provide a basis for evaluating the comparative merits of the alternatives. The discussion of the proposed project impacts should not use the term significant in describing the level of impacts. There is no benefit to be gained from its use. If the term significant is used, however, it should be consistent with the CEQ definition and be supported by factual information.

There are two principal ways of preparing this section. One is to discuss the impacts and mitigation measures separately for each alternative with the alternatives as headings. The second (which is advantageous where there are few alternatives or where impacts are similar for the various alternatives) is to present this section with the impacts as the headings. Where appropriate, a sub-section should be included which discusses the general impacts and mitigation measures that are the same for the various alternatives under consideration. This would reduce or eliminate repetition under each of the alternative discussions. Charts, tables, maps, and other graphics illustrating comparisons between the alternatives (e.g., costs, residential displacements, noise impacts, etc.) are useful as a presentation technique.

When preparing the final EIS, the impacts and mitigation measures of the alternatives, particularly the preferred alternative, may need to be discussed in more detail to elaborate on information, firm-up commitments, or address issues raised following the draft EIS. The final EIS should also identify any new impacts (and their significance) resulting from modification of or identification of substantive new circumstances or information regarding the preferred alternative following the draft EIS circulation. Note: Where new significant impacts are identified a supplemental draft EIS is required (40 CFR 1502.9(c)).

The following information should be included in both the draft and final EIS for each reasonable alternative:

1. A summary of studies undertaken, any major assumptions made and supporting information on the validity of the methodology (where the methodology is not generally accepted as state-of-the-art).
2. Sufficient supporting information or results of analyses to establish the reasonableness of the conclusions on impacts.
3. A discussion of mitigation measures. These measures normally should be investigated in appropriate detail for each reasonable alternative so they can be identified in the draft EIS. The final EIS should identify, describe and analyze all proposed mitigation measures for the preferred alternative.

   In addition to normal FHWA program monitoring of design and construction activities, special instances may arise when a formal program for monitoring impacts or implementation of mitigation measures will be appropriate. For example, monitoring ground or surface waters that are sources for drinking water supply; monitoring noise or vibration of nearby sensitive activities (e.g., hospitals, schools); or providing on-site professional archeologist to monitor excavation activities in highly sensitive archeological areas. In these instances, the final EIS should describe the monitoring program.

4. A discussion, evaluation and resolution of important issues on each alternative. If important issues raised by other agencies on the preferred alternative remain unresolved, the final EIS must identify those issues and the consultations and other efforts made to resolve them (23 CFR 771.125(a)(2)).

Listed below are potentially significant impacts most commonly encountered by highway projects. These factors should be discussed for each reasonable alternative where a potential for impact exists. This list is not all-inclusive and on specific projects there may be other impact areas that should be included.

1. <u>Land Use Impacts</u>

   This discussion should identify the current development trends and the State and/or local government plans and policies on land use and growth in the area which will be impacted by the proposed project.

These plans and policies are normally reflected in the area's comprehensive development plan, and include land use, transportation, public facilities, housing, community services, and other areas.

The land use discussion should assess the consistency of the alternatives with the comprehensive development plans adopted for the area and (if applicable) other plans used in the development of the transportation plan required by Section 134. The secondary social, economic, and environmental impacts of any substantial, foreseeable, induced development should be presented for each alternative, including adverse effects on existing communities. Where possible, the distinction between planned and unplanned growth should be identified.

2. Farmland Impacts

Farmland includes 1) prime, 2) unique, 3) other than prime or unique that is of statewide importance, and 4) other than prime or unique that is of local importance.

The draft EIS should summarize the results of early consultation with the Soil Conservation Service (SCS) and, as appropriate, State and local agriculture agencies where any of the four specified types of farmland could be directly or indirectly impacted by any alternative under consideration. Where farmland would be impacted, the draft EIS should contain a map showing the location of all farmlands in the project impact area, discuss the impacts of the various alternatives and identify measures to avoid or reduce the impacts. Form AD 1006 (Farmland Conversion Impact Rating) should be processed, as appropriate, and a copy included in the draft EIS. Where the Land Evaluation and Site Assessment score (from Form AD 1006) is 160 points or greater, the draft EIS should discuss alternatives to avoid farmland impacts.

If avoidance is not possible, measures to minimize or reduce the impacts should be evaluated and, where appropriate, included in the proposed action.

3. Social Impacts

Where there are foreseeable impacts, the draft EIS should discuss the following items for each alternative commensurate with the level of impacts and to the extent they are distinguishable:

(a) Changes in the neighborhoods or community cohesion for the various social groups as a result of the proposed action. These changes may be beneficial or adverse, and may include splitting neighborhoods, isolating a portion of a neighborhood or an ethnic group, generating new development, changing property values, or separating residents from community facilities, etc.

(b) Changes in travel patterns and accessibility (e.g., vehicular, commuter, bicycle, or pedestrian).

(c) Impacts on school districts, recreation areas, churches, businesses, police and fire protection, etc. This should include both the direct impacts to these entities and the indirect impacts resulting from the displacement of households and businesses.

(d) Impacts of alternatives on highway and traffic safety as well as on overall public safety.

(e) General social groups specially benefitted or harmed by the proposed project. The effects of a project on the elderly, handicapped, nondrivers, transit-dependent, and minority and ethnic groups are of particular concern and should be described to the extent these effects can be reasonably predicted. Where impacts on a minority or ethnic population are likely to be an important issue, the EIS should contain the following information broken down by race, color, and national origin: the population of the study area, the number of displaced residents, the type and number of displaced businesses, and an estimate of the number of displaced employees in each business sector. Changes in ethnic or minority employment opportunities should be discussed and the relationship of the project to other Federal actions which may serve or adversely affect the ethnic or minority population should be identified.

The discussion should address whether any social group is disproportionally impacted and identify possible mitigation measures to avoid or minimize any adverse impacts. Secondary sources of information such as census and personal contact with community leaders supplemented by visual inspections normally should be used to obtain the data for this analysis. However, for projects with major community impacts, a survey of the affected area may be needed to identify the extent and severity of impacts on these social groups.

4. Relocation Impacts

The relocation information should be summarized in sufficient detail to adequately explain the relocation situation including anticipated problems and proposed solutions. Project relocation documents from which information is summarized should be referenced in the draft EIS. Secondary sources of information such as census, economic reports, and contact with community leaders, supplemented by visual inspections (and, as appropriate, contact with local officials) may be used to obtain the data for this analysis. Where a proposed project will result in displacements, the following information regarding households and businesses should be discussed for each alternative under consideration commensurate with the level of impacts and to the extent they are likely to occur:

(a) An estimate of the number of households to be displaced, including the family characteristics (e.g., minority, ethnic, handicapped, elderly, large family, income level, and owner/tenant status). However, where there are very few displacees, information on race, ethnicity and income

levels should not be included in the EIS to protect the privacy of those affected.

(b) A discussion comparing available (decent, safe, and sanitary) housing in the area with the housing needs of the displacees. The comparison should include (1) price ranges, (2) sizes (number of bedrooms), and (3) occupancy status (owner/tenant).

(c) A discussion of any affected neighborhoods, public facilities, non-profit organizations, and families having special composition (e.g., ethnic, minority, elderly, handicapped, or other factors) which may require special relocation considerations and the measures proposed to resolve these relocation concerns.

(d) A discussion of the measures to be taken where the existing housing inventory is insufficient, does not meet relocation standards, or is not within the financial capability of the displacees. A commitment to last resort housing should be included when sufficient comparable replacement housing may not be available.

(e) An estimate of the numbers, descriptions, types of occupancy (owner/tenant), and sizes (number of employees) of businesses and farms to be displaced. Additionally, the discussion should identify (1) sites available in the area to which the affected businesses may relocate, (2) likelihood of such relocation, and (3) potential impacts on individual businesses and farms caused by displacement or proximity of the proposed highway if not displaced.

(f) A discussion of the results of contacts, if any, with local governments, organizations, groups, and individuals regarding residential and business relocation impacts, including any measures or coordination needed to reduce general and/or specific impacts. These contacts are encouraged for projects with large numbers of relocatees or complex relocation requirements. Specific financial and incentive programs or opportunities (beyond those provided by the Uniform Relocation Act) to residential and business relocatees to minimize impacts may be identified, if available through other agencies or organizations.

(g) A statement that (1) the acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and (2) relocation resources are available to all residential and business relocatees without discrimination.

5. Economic Impacts

Where there are foreseeable economic impacts, the draft EIS should discuss the following for each alternative commensurate with the level of impacts:

(a) The economic impacts on the regional and/or local economy such as the effects of the project on development, tax revenues and public expenditures, employment opportunities, accessibility, and retail sales. Where substantial impacts on the economic viability of affected municipalities are likely to occur, they should also be discussed together with a summary of any efforts undertaken and agreements reached for using the transportation investment to support both public and private economic development plans. To the extent possible, this discussion should rely upon results of coordination with and views of affected State, county, and city officials and upon studies performed under Section 134.

(b) The impacts on the economic vitality of existing highway-related businesses (e.g., gasoline stations, motels, etc.) and the resultant impact, if any, on the local economy. For example, the loss of business or employment resulting from building an alternative on new location bypassing a local community.

(c) Impacts of the proposed action on established business districts, and any opportunities to minimize or reduce such impacts by the public and/or private sectors. This concern is likely to occur on a project that might lead to or support new large commercial development outside of a central business district.

6. Joint Development

Where appropriate, the draft EIS should identify and discuss those joint development measures which will preserve or enhance an affected community's social, economic, environmental, and visual values. This discussion may be presented separately or combined with the land use and/or social impacts presentations. The benefits to be derived, those who will benefit (communities, social groups, etc.), and the entities responsible for maintaining the measures should be identified.

7. Considerations Relating to Pedestrians and Bicyclists

Where current pedestrian or bicycle facilities or indications of use are identified, the draft EIS should discuss the current and anticipated use of the facilities, the potential impacts of the affected alternatives, and proposed measures, if any, to avoid or reduce adverse impacts to the facility(ies) and its users. Where new facilities are proposed as a part of the proposed highway project, the EIS should include sufficient information to explain the basis for providing the facilities (e.g., proposed bicycle facility is a link in the local plan or sidewalks will reduce project access impact to the community). The final EIS should identify those facilities to be included in the preferred alternative. Where the preferred alternative would sever an existing major route for non-motorized transportation traffic, the proposed project needs to provide a reasonably alternative route or demonstrate that such a route exists (23 U.S.C. 109(n)). To the fullest extent possible, this needs to be described in the final EIS.

8. Air Quality Impacts

The draft EIS should contain a brief discussion of the transportation-related air quality concerns in the project area and a summary of the project- related carbon monoxide (CO) analysis if such analysis is performed. The following information should be presented, as appropriate.

(a) Mesoscale Concerns: Ozone (O_3), Hydrocarbons (HC), and Nitrogen Oxide (NO_x) air quality concerns are regional in nature and as such meaningful evaluation on a project-by-project basis is not possible. Where these pollutants are an issue, the air quality emissions inventories in the State Implementation Plan (SIP) should be referenced and briefly summarized in the draft EIS. Further, the relationship of the project to the SIP should be described in the draft EIS by including one of the following statements:

1 This project is in an area where the SIP does not contain any transportation control measures. Therefore, the conformity procedures of 23 CFR 770 do not apply to this project.

2 This project is in an area which has transportation control measures in the SIP which was (conditionally) approved by the Environmental Protection Agency (EPA) on (date). The FHWA has determined that both the transportation plan and the transportation improvement program conform to the SIP. The FHWA has determined that this project is included in the transportation improvement program for the (indicate 3C planning area). Therefore, pursuant to 23 CFR 770, this project conforms to the SIP.

Under certain circumstances, neither of these statements will precisely fit the situation and may need to be modified. Additionally, if the project is a Transportation Control Measure from the SIP, this should be highlighted to emphasize the project's air quality benefits.

(b) Microscale Concerns: Carbon monoxide is a project- related concern and as such should be evaluated in the draft EIS. A microscale CO analysis is unnecessary where such impacts (project CO contribution plus background) can be judged to be well below the 1- and 8-hour National Ambient Air Quality Standards (or other applicable State or local standards). This judgment may be based on (1) previous analyses for similar projects; (2) previous general analyses for various classes of projects; or (3) simplified graphical or "look-up" table evaluations. In these cases, a brief statement stating the basis for the judgment is sufficient.

For those projects where a microscale CO analysis is performed, each reasonable alternative should be analyzed for the estimated time of

completion and design year. A brief summary of the methodologies and assumptions used should be included in the draft EIS. Lengthy discussions, if needed, should be included in a separate technical report and referenced in the EIS. Total CO concentrations (project contribution plus estimated background) at identified reasonable receptors for each alternative should be reported. A comparison should be made between alternatives and with applicable State and national standards. Use of a table for this comparison is recommended for clarity.

As long as the total predicted 1-hour CO concentration is less than 9 ppm (the 8-hour CO standard), no separate 8-hour analysis is necessary. If the 1-hour CO concentration is greater than 9 ppm, an 8-hour analysis should be performed. Where the preferred alternative would result in violations of the 1 or 8-hour CO standards, an effort should be made to develop reasonable mitigation measures through early coordination between FHWA, EPA, and appropriate State and local highway and air quality agencies. The final EIS should discuss the proposed mitigation measures and include evidence of the coordination.

9. Noise Impacts

The draft EIS should contain a summary of the noise analysis including the following for each alternative under detailed study:

(a) A brief description of noise sensitive areas (residences, businesses, schools, parks, etc.), including information on the number and types of activities which may be affected. This should include developed lands and undeveloped lands for which development is planned, designed, and programmed.

(b) The extent of the impact (in decibels) at each sensitive area. This includes a comparison of the predicted noise levels with both the FHWA noise abatement criteria and the existing noise levels. (Traffic noise impacts occur when the predicted traffic noise levels approach or exceed the noise abatement criteria or when they substantially exceed the existing noise levels). Where there is a substantial increase in noise levels, the HA should identify the criterion used for defining "substantial increase." Use of a table for this comparison is recommended for clarity.

(c) Noise abatement measures which have been considered for each impacted area and those measures that are reasonable and feasible and that would "likely" be incorporated into the proposed project. Estimated costs, decibel reductions and height and length of barriers should be shown for all abatement measures.

Where it is desirable to qualify the term "likely," the following statement or similar wording would be appropriate. "Based on the studies completed to date, the State intends to install noise abatement measures in the form of a barrier at (location(s)). These preliminary indications of

likely abatement measures are based upon preliminary design for a barrier of _____ high and _____ long and a cost of $_____ that will reduce the noise level by _____ dBA for _____ residences (businesses, schools, parks, etc.). (Where there is more than one barrier, provide information for each one.) If during final design these conditions substantially change, the abatement measures might not be provided. A final decision on the installation of abatement measure(s) will be made upon completion of the project design and the public involvement process."

(d) Noise impacts for which no prudent solution is reasonably available and the reasons why.

10. Water Quality Impacts

The draft EIS should include summaries of analyses and consultations with the State and/or local agency responsible for water quality. Coordination with the EPA under the Federal Clean Water Act may also provide assistance in this area. The discussion should include sufficient information to describe the ambient conditions of streams and water bodies which are likely to be impacted and identify the potential impacts of each alternative and proposed mitigation measures. Under normal circumstances, existing data may be used to describe ambient conditions. The inclusion of water quality data spanning several years is encouraged to reflect trends.

The draft EIS should also identify any locations where roadway runoff or other nonpoint source pollution may have an adverse impact on sensitive water resources such as water supply reservoirs, ground water recharge areas, and high quality streams. The 1981 FHWA research report entitled "Constituents of Highway Runoff," the 1985 report entitled "Management Practices for Mitigation of Highway Stormwater Runoff Pollution," and the 1987 report entitled "Effects of Highway Runoff on Receiving Waters" contain procedures for estimating pollutant loading from highway runoff and would be helpful in determining the level of potential impacts and appropriate mitigative measures. The draft EIS should identify the potential impacts of each alternative and proposed mitigation measures.

Where an area designated as principal or sole-source aquifer under Section 1424(e) of the Safe Drinking Water Act may be impacted by a proposed project, early coordination with EPA will assist in identifying potential impacts. The EPA will furnish information on whether any of the alternatives affect the aquifer. This coordination should also identify any potential impacts to the critical aquifer protection area (CAPA), if designated, within affected sole-source aquifers. If none of the alternatives affect the aquifer, the requirements of the Safe Drinking Water Act are satisfied. If an alternative is selected which affects the aquifer, a design must be developed to assure, to the satisfaction of EPA, that it will not contaminate the aquifer (40 CFR 149). The draft EIS should document coordination with EPA and identify its position on the impacts of the various

alternatives. The final EIS should show that EPA's concerns on the preferred alternative have been resolved.

Wellhead protection areas were authorized by the 1986 Amendments to the Safe Drinking Water Act. Each State will develop State wellhead protection plans with final approval by EPA. When a proposed project encroaches on a wellhead protection area, the draft EIS should identify the area, the potential impact of each alternative and proposed mitigation measures. Coordination with the State agency responsible for the protection plan will aid in identifying the areas, impacts and mitigation. If the preferred alternative impacts these areas, the final EIS should document that it complies with the approved State wellhead protection plan.

11. Permits

If a facility such as a safety rest area is proposed and it will have a point source discharge, a Section 402 permit will be required for point source discharge (40 CFR 122). The draft EIS should discuss potential adverse impacts resulting from such proposed facilities and identify proposed mitigation measures. The need for a Section 402 permit and Section 401 water quality certification should be identified in the draft EIS.

For proposed actions requiring a Section 404 or Section 10 (Corps of Engineers) permit, the draft EIS should identify by alternative the general location of each dredge or fill activity, discuss the potential adverse impacts, identify proposed mitigation measures (if not addressed elsewhere in the draft EIS), and include evidence of coordination with the Corps of Engineers (in accordance with the U.S. DOT/Corps of Engineers Memorandum of Agreement) and appropriate Federal, State and local resource agencies, and State and local water quality agencies. Where the preferred alternative requires an individual Section 404 or Section 10 permit, the final EIS should identify for each permit activity the approximate quantities of dredge or fill material, general construction grades and proposed mitigation measures.

For proposed actions requiring Section 9 (U.S. Coast Guard bridge) permits, the draft EIS should identify by alternative the location of the permit activity, potential impacts to navigation and the environment (if not addressed elsewhere in the document), proposed mitigation measures and evidence coordination with the U.S. Coast Guard (in accordance with the FHWA/U.S. Coast Guard Memorandum of Understanding). Where the preferred alternative requires a Section 9 permit, the final EIS should identify for each permit activity the proposed horizontal and vertical navigational clearances and include an exhibit showing the various dimensions.

For all permit activities the final EIS should include evidence that every reasonable effort has been made to resolve the issues raised by other agencies regarding the permit activities. If important issues remain unresolved, the final EIS must identify those issues, the positions of the respective agencies on the

issues and the consultations and other efforts made to resolve them (23 CFR 771.125(a)).

12. Wetland Impacts

When an alternative will impact wetlands the draft EIS should (1) identify the type, quality, and function of wetlands involved, (2) describe the impacts to the wetlands, (3) evaluate alternatives which would avoid these wetlands, and (4) identify practicable measures to minimize harm to the wetlands. Wetlands should be identified by using the definition of 33 CFR 328.3(b) (issued on November 13, 1986) which requires the presence of hydrophytic vegetation, hydric soils and wetland hydrology. Exhibits showing wetlands in the project impact area in relation to the alternatives, should be provided.

In evaluating the impact of the proposed project on wetlands, the following two items should be addressed: (1) the importance of the impacted wetland(s) and (2) the severity of this impact. Merely listing the number of acres taken by the various alternatives of a highway proposal does not provide sufficient information upon which to determine the degree of impact on the wetland ecosystem. The wetlands analysis should be sufficiently detailed to provide an understanding of these two elements.

In evaluating the importance of the wetlands, the analysis should consider such factors as: (1) the primary functions of the wetlands (e.g., flood control, wildlife habitat, ground water recharge, etc.), (2) the relative importance of these functions to the total wetland resource of the area, and (3) other factors such as uniqueness that may contribute to the wetlands importance.

In determining the wetland impact, the analysis should show the project's effects on the stability and quality of the wetland(s). This analysis should consider the short- and long-term effects on the wetlands and the importance of any loss such as: (1) flood control capacity, (2) shore line anchorage potential, (3) water pollution abatement capacity, and (4) fish and wildlife habitat value. The methodology developed by FHWA and described in reports numbered FHWA-IP-82-23 and FHWA IP-82-24, "A Method for Wetland Functional Assessment Volumes I and II," is recommended for use in conducting this analysis. Knowing the importance of the wetlands involved and the degree of the impact, the HA and FHWA will be in a better position to determine the mitigation efforts necessary to minimize harm to these wetlands. Mitigation measures which should be considered include preservation and improvement of existing wetlands and creation of new wetlands (consistent with 23 CFR 777).

If the preferred alternative is located in wetlands, to the fullest extent possible, the final EIS needs to contain the finding required by Executive Order 11990 that there are no practicable alternatives to construction in wetlands. Where the finding is included, approval of the final EIS will document compliance with the Executive Order 11990 requirements (23 CFR 771.125(a)(1)). The finding should be included in a separate subsection entitled "Only Practicable Alternative Finding" and should be supported by the following information:

(a) a reference to Executive Order 11990;

(b) an explanation why there are no practicable alternatives to the proposed action;

(c) an explanation why the proposed action includes all practicable measures to minimize harm to wetlands; and

(d) a concluding statement that: "Based upon the above considerations, it is 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 may result from such use."

13. Water Body Modification and Wildlife Impacts

For each alternative under detailed study the draft EIS should contain exhibits and discussions identifying the location and extent of water body modifications (e.g., impoundment, relocation, channel deepening, filling, etc.). The use of the stream or body of water for recreation, water supply, or other purposes should be identified. Impacts to fish and wildlife resulting from the loss degradation, or modification of aquatic or terrestrial habitat should also be discussed. The results of coordination with appropriate Federal, State and local agencies should be documented in the draft EIS. For example, coordination with FWS under the Fish and Wildlife Coordination Act of 1958.

14. Floodplain Impacts

National Flood Insurance Program (NFIP) maps or, if NFIP maps are not available, information developed by the highway agency should be used to determine whether an alternative will encroach on the base (100-year) floodplain. The location hydraulic studies required by 23 CFR 650, Subpart A, must include a discussion of the following items commensurate with the level of risk or environmental impact, for each alternative which encroaches on base floodplains or would support base floodplain development:

(a) The flooding risks;

(b) The impacts on natural and beneficial floodplain values;

(c) The support of probable incompatible floodplain development (i.e., any development that is not consistent with a community's floodplain development plan);

(d) The measures to minimize floodplain impacts; and

(e) The measures to restore and preserve the natural and beneficial floodplain values.

The draft EIS should briefly summarize the results of the location hydraulic studies. The summary should identify the number of encroachments and any support of incompatible floodplain developments and their potential impacts. Where an encroachment or support of incompatible floodplain development results in substantial impacts, the draft EIS should provide more detailed information on the location, impacts and appropriate mitigation measures. In addition, if any alternative (l) results in a floodplain encroachment or supports incompatible floodplain development having significant impacts, or (2) requires a commitment to a particular structure size or type, the draft EIS needs to include an evaluation and discussion of practicable alternatives to the structure or to the significant encroachment. The draft EIS should include exhibits which display the alternatives, the base floodplains and, where applicable, the regulatory floodways.

If the preferred alternative includes a floodplain encroachment having significant impacts, the final EIS must include a finding that it is the only practicable alternative as required by 23 CFR 650, Subpart A. The finding should refer to Executive Order 11988 and 23 CFR 650, Subpart A. It should be included in a separate subsection entitled "Only Practicable Alternative Finding" and must be supported by the following information.

(a) The reasons why the proposed action must be located in the floodplain;

(b) The alternatives considered and why they were not practicable; and

(c) A statement indicating whether the action conforms to applicable State or local floodplain protection standards.

For each alternative encroaching on a designated or proposed regulatory floodway, the draft EIS should provide a preliminary indication of whether the encroachment would be consistent with or require a revision to the regulatory floodway. Engineering and environmental analyses should be undertaken, commensurate with the level of encroachment, to permit the consistency evaluation and identify impacts. Coordination with the Federal Emergency Management Agency (FEMA) and appropriate State and local government agencies should be undertaken for each floodway encroachment. If the preferred alternative encroaches on a regulatory floodway, the final EIS should discuss the consistency of the action with the regulatory floodway. If a floodway revision is necessary, the EIS should include evidence from FEMA and local or State agency indicating that such revision would be acceptable.

15. Wild and Scenic Rivers

If the proposed action could have foreseeable adverse effects on a river on the National Wild and Scenic Rivers System or a river under study for designation to the National Wild and Scenic Rivers System, the draft EIS should identify early coordination undertaken with the agency responsible for managing the listed or study river (i.e., National Park Service (NPS), Fish and Wildlife Service (FWS), Bureau of Land Management (BLM), or Forest Service (FS)). For each alternative under consideration, the EIS should identify the potential adverse effects on the natural, cultural, and recreational values of the listed or study river. Adverse effects include alteration of the free-flowing nature of the river, alteration of the setting or deterioration of water quality. If it is determined that any of the alternatives could foreclose options to designate a study river under the Act, or adversely affect those qualities of a listed river for which it was designated, to the fullest extent possible, the draft EIS needs to reflect consultation with the managing agency on avoiding or mitigating the impacts (23 CFR 771.123(c)). The final EIS should identify measures that will be included in the preferred alternative to avoid or mitigate such impacts.

Publicly owned waters of designated wild and scenic rivers are protected by Section 4(f). Additionally, public lands adjacent to a Wild and Scenic River may be subject to Section 4(f) protection. An examination of any adopted or proposed management plan for a listed river should be helpful in making the determination on applicability of Section 4(f). For each alternative that takes such land, coordination with the agency responsible for managing the river (either NPS, FWS, BLM, or FS) will provide information on the management plan, specific affected land uses, and any necessary Section 4(f) coordination.

16. Coastal Barriers

The Coastal Barrier Resources Act (CBRA) establishes certain coastal areas to be protected by prohibiting the expenditure of Federal funds for new and expanded facilities within designated coastal barrier units. When a proposed project impacts a coastal barrier unit, the draft EIS should: include a map showing the relationship of each alternative to the unit(s); identify direct and indirect impacts to the unit(s), quantifying and describing the impacts as appropriate; discuss the results of early coordination with FWS, identifying any issues raised and how they were addressed, and; identify any alternative which (if selected) would require an exception under the Act. Any issues identified or exceptions required for the preferred alternative should be resolved prior to its selection. This resolution should be documented in the final EIS.

17. Coastal Zone Impacts

Where the proposed action is within, or is likely to affect land or water uses within the area covered by a State Coastal Zone Management Program (CZMP) approved by the Department of Commerce, the draft EIS should briefly describe the portion of the affected CZMP plan, identify the potential impacts, and include evidence of coordination with the State Coastal Zone Management agency or

appropriate local agency. The final EIS should include the State Coastal Zone Management agency's determination on consistency with the State CZMP plan. (In some States, an agency will make a consistency determination only after the final EIS is approved, but will provide a preliminary indication before the final EIS that the project is "not inconsistent" or "appears to be consistent" with the plan.) (For direct Federal actions, the final EIS should include the lead agency's consistency determination and agreement by the State CZM agency.) If the preferred alternative is inconsistent with the State's approved CZMP, it can be Federally funded only if the Secretary of Commerce makes a finding that the proposed action is consistent with the purpose or objectives of the CZM Act or is necessary in the interest of national security. To the fullest extent possible, such a finding needs to be included in the final EIS. If the finding is denied, the action is not eligible for Federal funding unless modified in such a manner to remove the inconsistency finding. The final EIS should document such results.

18. Threatened or Endangered Species

The HA must obtain information from the FWS of the DOI and/or the National Marine Fisheries Service (NMFS) of the Department of Commerce to determine the presence or absence of listed and proposed threatened or endangered species and designated and proposed critical habitat in the proposed project area (50 CFR 402.12(c)). The information may be (1) a published geographical list of such species or critical habitat; (2) a project-specific notification of a list of such species or critical habitat; or (3) substantiated information from other credible sources. Where the information is obtained from a published geographical list the reasons why this would satisfy the coordination with DOI should be explained. If there are no species or critical habitat in the proposed project area, the Endangered Species Act requirements have been met. The results of this coordination should be included in the draft EIS.

When a proposed species or a proposed critical habitat may be present in the proposed project area, an evaluation or, if appropriate, a biological assessment is made on the potential impacts to identify whether any such species or critical habitat are likely to be adversely affected by the project. Informal consultation with FWS and/or NMFS should be undertaken during the evaluation. The draft EIS should include exhibits showing the location of the species or habitat, summarize the evaluation and potential impacts, identify proposed mitigation measures, and evidence coordination with FWS and/or NMFS. If the project is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat, the HA in consultation with the FHWA must confer with FWS and/or NMFS to attempt to resolve potential conflicts by avoiding, minimizing, or reducing the project impacts (50 CFR 402.10(a)). If the preferred alternative is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat, a conference with FWS and/or NMFS must be held to assist in identifying and resolving potential conflicts. To the fullest extent possible, the final EIS needs to summarize the results of the conference and identify reasonable and prudent alternatives to avoid the jeopardy to such proposed species or critical habitat. If no alternatives exist, the

final EIS should explain the reasons why and identify any proposed mitigation measures to minimize adverse effects.

When a listed species or a designated critical habitat may be present in the proposed project area, a biological assessment must be prepared to identify any such species or habitat which are likely to be adversely affected by the proposed project (50 CFR 402.12). Informal consultation should be undertaken or, if desirable, a conference held with FWS and/or NMFS during preparation of the biological assessment. The draft EIS should summarize the following data from the biological assessment:

(a) The species distribution, habitat needs, and other biological requirements;

(b) The affected areas of the proposed project;

(c) Possible impacts to the species including opinions of recognized experts on the species at issue;

(d) Measures to avoid or minimize adverse impacts; and

(e) Results of consultation with FWS and/or NMFS.

In selecting an alternative, jeopardy to a listed species or the destruction or adverse modification of designated critical habitat must be avoided (50 CFR 402.01(a)). If the biological assessment indicates that there are no listed species or critical habitat present that are likely to be adversely affected by the preferred alternative, the final EIS should evidence concurrence by the FWS and/or NMFS in such a determination and identify any proposed mitigation for the preferred alternative.

If the results of the biological assessment or consultation with FWS and/or NMFS show that the preferred alternative is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of designated critical habitat, to the fullest extent possible, the final EIS needs to contain: (l) a summary of the biological assessment (see data above for draft EIS); (2) a summary of the steps taken, including alternatives or measures evaluated and conferences and consultations held, to resolve the project's conflicts with the listed species or critical habitat; (3) a copy of the biological opinion; (4) a request for an exemption from the Endangered Species Act; (5) the results of the exemption request; and (6) a statement that (if the exemption is denied) the action is not eligible for Federal funding.

19. Historic and Archeological Preservation

The draft EIS should contain a discussion demonstrating that historic and archeological resources have been identified and evaluated in accordance with

the requirements of 36 CFR 800.4 for each alternative under consideration. The information and level of effort needed to identify and evaluate historic and archeological resources will vary from project to project as determined by the FHWA after considering existing information, the views of the SHPO and the Secretary of Interior's "Standards and Guidelines for Archeology and Historic Preservation." The information for newly identified historic resources should be sufficient to determine their significance and eligibility for the National Register of Historic Places. The information for archeological resources should be sufficient to identify whether each warrants preservation in place or whether it is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. Where archeological resources are not a major factor in the selection of a preferred alternative, the determination of eligibility for the National Register of newly identified archeological resources may be deferred until after circulation of the draft EIS.

The draft EIS discussion should briefly summarize the methodologies used in identifying historic and archeological resources. Because Section 4(f) of the DOT Act applies to the use of historic resources on or eligible for the National Register and to archeological resources on or eligible for the National Register and which warrant preservation in place, the draft EIS should describe the historical resources listed in or eligible for the National Register and identify any archeological resources that warrant preservation in place. The draft EIS should summarize the impacts of each alternative on and proposed mitigation measures for each resource. The document should evidence coordination with the SHPO on the significance of newly identified historic and archeological resources, the eligibility of historic resources for the National Register, and the effects of each alternative on both listed and eligible historic resources. Where the draft EIS discusses eligibility for the National Register of archeological resources, the coordination with the SHPO on eligibility and effect should address both historic and archeological resources.

The draft EIS can serve as a vehicle for affording the Advisory Council on Historic Preservation (ACHP) an opportunity to comment pursuant to Section 106 requirements if the document contains the necessary information required by 36 CFR 800.8. The draft EIS transmittal letter to the ACHP should specifically request its comments pursuant to 36 CFR 800.6.

To the fullest extent possible, the final EIS needs to demonstrate that all the requirements of 36 CFR 800 have been met. If the preferred alternative has no effect on historic or archeological resources on or eligible for the National Register, the final EIS should indicate coordination with and agreement by the SHPO. If the preferred alternative has an effect on a resource on or eligible for the National Register, the final EIS should contain (a) a determination of no adverse effect concurred in by the Advisory Council on Historic Preservation, (b) an executed memorandum of agreement (MOA), or (c) in the case of a rare situation where FHWA is unable to conclude the MOA, a copy of comments transmitted from the ACHP to the FHWA and the FHWA response to those comments.

The proposed use of land from an historic resource on or eligible for the National Register will normally require an evaluation and approval under Section 4(f) of the DOT Act. Section 4(f) also applies to all archeological sites on or eligible for the National Register and which warrant preservation in place. (See Section IX for information on Section 4(f) evaluation.)

20. Hazardous Waste Sites

Hazardous waste sites are regulated by the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). During early planning, the location of permitted and nonregulated hazardous waste sites should be identified. Early coordination with the appropriate Regional Office of the EPA and the appropriate State agency will aid in identifying known or potential hazardous waste sites. If known or potential waste sites are identified, the locations should be clearly marked on a map showing their relationship to the alternatives under consideration. If a known or potential hazardous waste site is affected by an alternative, information about the site, the potential involvement, impacts and public health concerns of the affected alternative(s), and the proposed mitigation measures to eliminate or minimize impacts or public health concerns should be discussed in the draft EIS.

If the preferred alternative impacts a known or potential hazardous waste site, the final EIS should address and resolve the issues raised by the public and government agencies.

21. Visual Impacts

The draft EIS should state whether the project alternatives have a potential for visual quality impacts. When this potential exists, the draft EIS should identify the impacts to the existing visual resource, the relationship of the impacts to potential viewers of and from the project, as well as measures to avoid, minimize, or reduce the adverse impacts. When there is potential for visual quality impacts, the draft EIS should explain the consideration given to design quality, art, and architecture in the project planning. These values may be particularly important for facilities located in visually sensitive urban or rural settings. When a proposed project will include features associated with design quality, art or architecture, the draft EIS should be circulated to officially designated State and local arts councils and, as appropriate, other organizations with an interest in design, art, and architecture. The final EIS should identify any proposed mitigation for the preferred alternative.

22. Energy

Except for large scale projects, a detailed energy analysis including computations of BTU requirements, etc., is not needed. For most projects, the draft EIS should discuss in general terms the construction and operational energy requirements and conservation potential of various alternatives under consideration. The discussion should be reasonable and supportable. It might recognize that the

energy requirements of various construction alternatives are similar and are generally greater than the energy requirements of the no-build alternative. Additionally, the discussion could point out that the post-construction, operational energy requirements of the facility should be less with the build alternative as opposed to the no-build alternative. In such a situation, one might conclude that the savings in operational energy requirements would more than offset construction energy requirements and thus, in the long term, result in a net savings in energy usage.

For large-scale projects with potentially substantial energy impacts, the draft EIS should discuss the major direct and/or indirect energy impacts and conservation potential of each alternative. Direct energy impacts refer to the energy consumed by vehicles using the facility. Indirect impacts include construction energy and such items as the effects of any changes in automobile usage. The alternative's relationship and consistency with a State and/or regional energy plan, if one exists, should also be indicated.

The final EIS should identify any energy conservation measures that will be implemented as a part of the preferred alternative. Measures to conserve energy include the use of high-occupancy vehicle incentives and measures to improve traffic flow.

23. Construction Impacts

The draft EIS should discuss the potential adverse impacts (particularly air, noise, water, traffic congestion, detours, safety, visual, etc.) associated with construction of each alternative and identify appropriate mitigation measures. Also, where the impacts of obtaining borrow or disposal of waste material are important issues, they should be discussed in the draft EIS along with any proposed measures to minimize these impacts. The final EIS should identify any proposed mitigation for the preferred alternative.

24. The Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

The EIS should discuss in general terms the proposed action's relationship of local short-term impacts and use of resources, and the maintenance and enhancement of long-term productivity. This general discussion might recognize that the build alternatives would have similar impacts. The discussion should point out that transportation improvements are based on State and/or local comprehensive planning which consider(s) the need for present and future traffic requirements within the context of present and future land use development. In such a situation, one might then conclude that the local short-term impacts and use of resources by the proposed action is consistent with the maintenance and enhancement of long-term productivity for the local area, State, etc.

25. Any Irreversible and Irretrievable Commitments of Resources Which Would be Involved in the Proposed Action

The EIS should discuss in general terms the proposed action's irreversible and irretrievable commitment of resources. This general discussion might recognize that the build alternatives would require a similar commitment of natural, physical, human, and fiscal resources. An example of such discussion would be as follows:

"Implementation of the proposed action involves a commitment of a range of natural, physical, human, and fiscal resources. Land used in the construction of the proposed facility is considered an irreversible commitment during the time period that the land is used for a highway facility. However, if a greater need arises for use of the land or if the highway facility is no longer needed, the land can be converted to another use. At present, there is no reason to believe such a conversion will ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and highway construction materials such as cement, aggregate, and bituminous material are expended. Additionally, large amounts of labor and natural resources are used in the fabrication and preparation of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use will not have an adverse effect upon continued availability of these resources. Any construction will also require a substantial one-time expenditure of both State and Federal funds which are not retrievable.

The commitment of these resources is based on the concept that residents in the immediate area, State, and region will benefit by the improved quality of the transportation system. These benefits will consist of improved accessibility and safety, savings in time, and greater availability of quality services which are anticipated to outweigh the commitment of these resources."

H. List of Preparers

This section should include lists of:

1. State (and local agency) personnel, including consultants, who were primarily responsible for preparing the EIS or performing environmental studies, and a brief summary of their qualifications, including educational background and experience.
2. The FHWA personnel primarily responsible for preparation or review of the EIS and their qualifications.
3. The areas of EIS responsibility for each preparer.

I. List of Agencies, Organizations, and Persons to Whom Copies of the Statement are Sent

Draft EIS: List all entities from which comments are being requested (40 CFR 1502.10).
Final EIS: Identify those entities that submitted comments on the draft EIS and those receiving a copy of the final EIS (23 CFR 771.125(a) and (g)).

J. Comments and Coordination

1. The draft EIS should contain copies of pertinent correspondence with each cooperating agency, other agencies and the public and summarize: 1) the early coordination process, including scoping; 2) the meetings with community groups (including minority and non-minority interests) and individuals; and 3) the key issues and pertinent information received from the public and government agencies through these efforts.
2. The final EIS should include a copy of substantive comments from the U.S. Secretary of Transportation (OST), each cooperating agency, and other commentors on the draft EIS. Where the response is exceptionally voluminous the comments may be summarized. An appropriate response should be provided to each substantive comment. When the EIS text is revised as a result of the comments received, a copy of the comments should contain marginal references indicating where revisions were made, or the response to the comments should contain such references. The response should adequately address the issue or concern raised by the commentor or, where substantive comments do not warrant further response, explain why they do not, and provide sufficient information to support that position.

   The FHWA and the HA are not commentors within the meaning of NEPA and their comments on the draft EIS should not be included in the final EIS. However, the document should include adequate information for FHWA and the HA to ascertain the disposition of the comment(s).

3. The final EIS should (1) summarize the substantive comments on social, economic, environmental, and engineering issues made at the public hearing, if one is held, or the public involvement activities or which were otherwise considered and (2) discuss the consideration given to any substantive issue raised and provide sufficient information to support that position.
4. The final EIS should document compliance with requirements of all applicable environmental laws, Executive Orders, and other related requirements, such as Title VI of the Civil Rights Act of 1964. To the extent possible, all environmental issues should be resolved prior to the submission of the final EIS. When disagreement on project issues exists with another agency, coordination with the agency should be undertaken to resolve the issues. Where the issues cannot be resolved, the final EIS should identify any remaining unresolved issues, the steps taken to resolve the issues, and the positions of the respective parties. Where issues are resolved through this effort, the final EIS should demonstrate resolution of the concerns.

K. Index

The index should include important subjects and areas of major impacts so that a reviewer need not read the entire EIS to obtain information on a specific subject or impact.

L. Appendices

The EIS should briefly explain or summarize methodologies and results of technical analyses and research. Lengthy technical discussions should be contained in a technical report. Material prepared as appendices to the EIS should:

1. consist of material prepared specifically for the EIS;
2. consist of material which substantiates an analysis fundamental to the EIS;
3. be analytic and relevant to the decision to be made; and
4. be circulated with the EIS within FHWA, to EPA (Region), and to cooperating agencies and be readily available on request by other parties. Other reports and studies referred to in the EIS should be readily available for review or for copying at a convenient location.

VI. OPTIONS FOR PREPARING FINAL EISs

The CEQ regulations place heavy emphasis on reducing paperwork, avoiding unnecessary work, and producing documents which are useful to decisionmakers and to the public. With these objectives in mind, three different approaches to preparing final EISs are presented below. The first two approaches can be employed on any project. The third approach is restricted to the conditions specified by CEQ (40 CFR 1503.4(c)).

A. Traditional Approach

Under this approach, the final EIS incorporates the draft EIS (essentially in its entirety) with changes made as appropriate throughout the document to reflect the selection of an alternative, modifications to the project, updated information on the affected environment, changes in the assessment of impacts, the selection of mitigation measures, wetland and floodplain findings, the results of coordination, comments received on the draft EIS and responses to these comments, etc. Since so much information is carried over from the draft to the final, important changes are sometimes difficult for the reader to identify. Nevertheless, this is the approach most familiar to participants in the NEPA process.

B. Condensed Final EIS

This approach avoids repetition of material from the draft EIS by incorporating, by reference, the draft EIS. The final EIS is, thus, a much shorter document than under the traditional approach; however, it should afford the reader a complete overview of the project and its impacts on the human environment.

The crux of this approach is to briefly reference and summarize information from the draft EIS which has not changed and to focus the final EIS discussion on changes in the project, its setting, impacts, technical analysis, and mitigation that have occurred since the draft EIS was circulated. In addition, the condensed final EIS must identify the preferred alternative, explain the basis for its selection, describe coordination efforts, and include agency and public comments, responses to these comments, and any required findings or determinations (40 CFR 1502.14(e) and 23 CFR 771.125(a)).

The format of the final EIS should parallel the draft EIS. Each major section of the final EIS should briefly summarize the important information contained in the corresponding section of the draft, reference the section of the draft that provides more detailed information, and discuss any noteworthy changes that have occurred since the draft was circulated.

At the time that the final is circulated, an additional copy of the draft EIS need not be provided to those parties that received a copy of the draft EIS when it was circulated. Nevertheless, if, due to the passage of time or other reasons, it is likely that they will have disposed of their original copy of the draft EIS, then a copy of the draft EIS should be provided with the final. In any case, sufficient copies of the draft EIS should be on hand to satisfy requests for additional copies. Both the draft EIS and the condensed final EIS should be filed with EPA under a single final EIS cover sheet.

C. Abbreviated Version of Final EIS

The CEQ regulation (40 CFR 1503.4(c)) provides the opportunity to expedite the final EIS preparation where the only changes needed in the document are minor and consist of factual corrections and/or an explanation of why the comments received on the draft EIS do not warrant further response. In using this approach, care should be exercised to assure that the draft EIS contains sufficient information to make the findings in (2) below and that the number of errata sheets used to make required changes is small and that these errata sheets together with the draft EIS constitute a readable, understandable, full disclosure document. The final EIS should consist of the draft EIS and an attachment containing the following:

1. Errata sheets making any necessary corrections to the draft EIS;
2. A section identifying the preferred alternative and a discussion of the reasons it was selected. The following should also be included in this section where applicable:

   (a) final Section 4(f) evaluations containing the information described in Section IX of these guidelines;

   (b) wetland and finding(s);

   (c) floodplain finding(s);

   (d) a list of commitments for mitigation measures for the preferred alternative; and

3. Copies (or summaries) of comments received from circulation of the draft EIS and public hearing and responses thereto.

   Only the attachment need be provided to parties who received a copy of the draft EIS, unless it is likely that they will have disposed of their original copy, in which case both the draft EIS and the attachment should be provided (40 CFR

1503.4(c)). Both the draft EIS and the attachment must be filed with EPA under a single final EIS cover sheet(40 CFR 1503.4(c)).

VII. DISTRIBUTION OF EISs AND SECTION 4(f) EVALUATIONS

A. Environmental Impact Statement

1. After clearance by FHWA, copies of all draft EISs must be made available to the public and circulated for comments by the HA to: all public officials, private interest groups, and members of the public known to have an interest in the proposed action or the draft EIS; all Federal, State, and local government agencies expected to have jurisdiction, responsibility, interest, or expertise in the proposed action; and States and Federal land management entities which may be affected by the proposed action or any of the alternatives (40 CFR 1502.19 and 1503.1). Distribution must be made no later than the time the document is filed with EPA for Federal Register publication and must allow for a minimum 45-day review period (40 CFR 1506.9 and 1506.10). Internal FHWA distribution of draft and final EISs is subject to change and is noted in memorandums to the Regional Administrators as requirements change.
2. Copies of all approved final EISs must be distributed to all Federal, State, and local agencies and private organizations, and members of the public who provided substantive comments on the draft EIS or who requested a copy (40 CFR 1502.19). Distribution must be made no later than the time the document is filed with EPA for Federal Register publication and must allow for a minimum 30-day review period before the Record of Decision is approved (40 CFR 1506.9 and 1506.10). Two copies of all approved EISs should be forwarded to the FHWA Washington Headquarters (HEV-11) for recordkeeping purposes.
3. Copies of all EISs should normally be distributed to EPA and DOI as follows, unless the agency has indicated to the FHWA offices the need for a different number of copies:

(a) The EPA Headquarters: five copies of the draft EIS and five copies of the final EIS (This is the "filing requirement" in Section 1506.9 of the CEQ regulation.) to the following address:

Environmental Protection Agency
Office of Federal Activities
(A-104), 401 M Street, SW
Washington, D.C. 20460

(b) The appropriate EPA Regional Office responsible for EPA's review pursuant to Section 309 of the Clean Air Act: five copies of the draft EIS and five copies of the final EIS.

(c) The DOI Headquarters to the following address:

U.S. Department of the Interior
Office of Environmental Project Review
Room 4239

18th and C Streets, NW
Washington, DC 20240

(i) All States in FHWA Regions 1, 3, 4, and 5, plus Hawaii, Guam, American Samoa, Virgin Islands, Arkansas, Iowa, Louisiana, and Missouri: 12 copies of the draft EIS and 7 copies of the final EIS.

(ii) Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, and Texas: 13 copies of the draft EIS and 8 copies of the final EIS.

(iii) New Mexico and all States in FHWA Regions 8, 9, and 10,except Hawaii, North Dakota, and South Dakota: 14 copies of the draft EIS and 9 copies of the final EIS.

Note: DOI Headquarters will make distribution within its Department. While not required, advance distribution to DOI field offices may be helpful to expedite their review.

B. Section 4(f) Evaluation

If the Section 4(f) evaluation is included in a draft EIS, the DOI Headquarters does not need additional copies of the draft or final EIS/Section 4(f) evaluation. If the Section 4(f) evaluation is processed separately or as part of an EA, the DOI should receive seven copies of the draft Section 4(f) evaluation for coordination and seven copies of the final Section 4(f) evaluation for information. In addition to coordination with DOI, draft Section 4(f) evaluations must be coordinated with the officials having jurisdiction over the Section 4(f) property and the Department of Housing and Urban Development (HUD) and the United States Department of Agriculture (USDA) where these agencies have an interest in or jurisdiction over the affected Section 4(f) resource (23 CFR 771.135(i)). The point of coordination for HUD is the appropriate Regional Office and for USDA, the Forest Supervisor of the affected National Forest. One copy should be provided to the officials with jurisdiction and two copies should be submitted to HUD and USDA when coordination is required.

VIII. RECORD OF DECISION--FORMAT AND CONTENT

The Record of Decision (ROD) will explain the reasons for the project decision, summarize any mitigation measures that will be incorporated in the project, and document any required Section 4(f) approval. While cross-referencing and incorporation by reference of the final EIS (or final EIS supplement) and other documents are appropriate, the ROD must explain the basis for the project decision as completely as possible, based on the information contained in the EIS (40 CFR 1502.2). A draft ROD should be prepared by the HA and submitted to the Division Office with the final EIS. The following key items need to be addressed in the ROD:

A. Decision.

Identify the selected alternative. Reference to the final EIS (or final EIS supplement) may be used to reduce detail and repetition.

B. Alternatives Considered.

This information can be most clearly organized by briefly describing each alternative and explaining the balancing of values which formed the basis for the decision. This discussion must identify the environmentally preferred alternative(s) (i.e., the alternative(s) that causes the least damage to the biological and physical environment) (40 CFR 1505.2(b)). Where the selected alternative is other than the environmentally preferable alternative, the ROD should clearly state the reasons for not selecting the environmentally preferred alternative. If lands protected by Section 4(f) were a factor in the selection of the preferred alternative, the ROD should explain how the Section 4(f) lands influenced the selection.

The values (social, economic, environmental, cost-effectiveness, safety, traffic, service, community planning, etc.) which were important factors in the decisionmaking process should be clearly identified along with the reasons some values were considered more important than others. The Federal-aid highway program mandate to provide safe and efficient transportation in the context of all other Federal requirements and the beneficial impacts of the proposed transportation improvements should be included in this balancing. While any decision represents a balancing of the values, the ROD should reflect the manner in which these values were considered in arriving at the decision.

C. Section 4(f).

Summarize the basis for any Section 4(f) approval when applicable (23 CFR 771.127(a)). The discussion should include the key information supporting such approval. Where appropriate, this information may be included in the alternatives discussion above and referenced in this paragraph to reduce repetition.

D. Measures to Minimize Harm.

Describe the specific measures adopted to minimize environmental harm and identify those standard measures (e.g., erosion control, appropriate for the proposed action). State whether all practicable measures to minimize environmental harm have been incorporated into the decision and, if not, why they were not (40 CFR 1505.2(c)).

E. Monitoring or Enforcement Program.

Describe any monitoring or enforcement program which has been adopted for specific mitigation measures, as outlined in the final EIS.

F. Comments on Final EIS.

All substantive comments received on the final EIS should be identified and given appropriate responses. Other comments should be summarized and responses provided where appropriate.

For recordkeeping purposes, a copy of the signed ROD should be provided to the Washington Headquarters (HEV-11). For a ROD approved by the Division Office, copies should be sent to both the Washington Headquarters and the Regional Office.

IX. SECTION 4(f) EVALUATIONS--FORMAT AND CONTENT

A Section 4(f) evaluation must be prepared for each location within a proposed project before the use of Section 4(f) land is approved (23 CFR 771.135(a)). For projects processed with an EIS or an EA/FONSI, the individual Section 4(f) evaluation should be included as a separate section of the document, and for projects processed as categorical exclusions, as a separate Section 4(f) evaluation document. Pertinent information from various sections of the EIS or EA/FONSI may be summarized in the Section 4(f) evaluation to reduce repetition. Where an issue on constructive use Section 4(f) arises and FHWA decides that Section 4(f) does not apply, the environmental document should contain sufficient analysis and information to demonstrate that the resource(s) is not substantially impaired.

The use of Section 4(f) land may involve concurrent requirements of other Federal agencies. Examples include consistency determinations for the use of public lands managed by the Bureau of Land Management, compatibility determinations for the use of land in the National Wildlife Refuge System and the National Park System, determinations of direct and adverse effects for Wild and Scenic Rivers, and approval of land conversions under Section 6(f) of the Land and Water Conservation Fund Act. The mitigation plan developed for the project should include measures which would satisfy the various requirements. For example, Section 6(f) directs the Department of the Interior (National Park Service) to assure that replacement lands of equal value, location, and usefulness are provided as conditions to approval of land conversions. Therefore, where a Section 6(f) land conversion is proposed for a highway project, replacement land will be necessary. Regardless of the mitigation proposed, the draft and final Section 4(f) evaluations should discuss the results of coordination with the public official having jurisdiction over the Section 4(f) land and document the National Park Service's position on the Section 6(f) land transfer, respectively.

A. Draft Section 4(f) Evaluation

The following format and content are suggested. The listed information should be included in the Section 4(f) evaluation, as applicable.

1. Proposed Action.

Where a separate Section 4(f) evaluation is prepared, describe the proposed project and explain the purpose and need for the project.

2. Section 4(f) Property.

Describe each Section 4(f) resource which would be used by any alternative under consideration. The following information should be provided:

(a) A detailed map or drawing of sufficient scale to identify the relationship of the alternatives to the Section 4(f) property.

(b) Size (acres or square feet) and location (maps or other exhibits such as photographs, sketches, etc.) of the affected Section 4(f) property.

(c) Ownership (city, county, State, etc.) and type of Section 4(f) property (park, recreation, historic, etc.).

(d) Function of or available activities on the property (ball playing, swimming, golfing, etc.).

(e) Description and location of all existing and planned facilities (ball diamonds, tennis courts, etc.).

(f) Access (pedestrian, vehicular) and usage (approximate number of users/visitors, etc.).

(g) Relationship to other similarly used lands in the vicinity.

(h) Applicable clauses affecting the ownership, such as lease, easement, covenants, restrictions, or conditions, including forfeiture.

(i) Unusual characteristics of the Section 4(f) property (flooding problems, terrain conditions, or other features) that either reduce or enhance the value of all or part of the property.

3. Impacts on the Section 4(f) Property(ies).

Discuss the impacts on the Section 4(f) property for each alternative (e.g., amount of land to be used, facilities and functions affected, noise, air pollution, visual, etc.). Where an alternative (or alternatives) uses land from more than one Section 4(f) property, a summary table would be useful in comparing the various impacts of the alternative(s). Impacts (such as facilities and functions affected, noise, etc.) which can be quantified should be quantified. Other impacts (such as visual intrusion) which cannot be quantified should be described.

4. Avoidance Alternatives.

Identify and evaluate location and design alternatives which would avoid the Section 4(f) property. Generally, this would include alternatives to either side of the property. Where an alternative would use land from more than one Section 4(f) property, the analysis needs to evaluate alternatives which avoid each and all properties (23 CFR 771.135(i)). The design alternatives should be in the immediate area of the property and consider minor alignment shifts, a reduced facility, retaining structures, etc. individually or in combination, as appropriate. Detailed discussions of alternatives in an EIS or EA need not be repeated in the Section 4(f) portion of the document, but should be referenced and summarized. However, when alternatives (avoiding Section 4(f) resources) have been eliminated from detailed study the discussion should also explain whether these alternatives are feasible and prudent and, if not, the reasons why.

5. Measures to Minimize Harm.

Discuss all possible measures which are available to minimize the impacts of the proposed action on the Section 4(f) property(ies). Detailed discussions of mitigation measures in the EIS or EA may be referenced and appropriately summarized, rather than repeated.

6. Coordination.

Discuss the results of preliminary coordination with the public official having jurisdiction over the Section 4(f) property and with regional (or local) offices of DOI and, as appropriate, the Regional Office of HUD and the Forest Supervisor of the affected National Forest. Generally, the coordination should include discussion of avoidance alternatives, impacts to the property, and measures to minimize harm. In addition, the coordination with the public official having jurisdiction should include, where necessary, a discussion of significance and primary use of the property.

Note: The conclusion that there are no feasible and prudent alternatives is not normally addressed at the draft Section 4(f) evaluation stage. Such conclusion is made only after the draft Section 4(f) evaluation has been circulated and coordinated and any identified issues adequately evaluated.

B. Final Section 4(f) Evaluation

When the preferred alternative uses Section 4(f) land, the final Section 4(f) evaluation must contain (23 CFR 771.135(i) and (j)):

1. All the above information for a draft evaluation.
2. A discussion of the basis for concluding that there are no feasible and prudent alternatives to the use of the Section 4(f) land. The supporting information must demonstrate that "there are unique problems or unusual factors involved in the use of alternatives that avoid these properties or that the cost, social, economic, and environmental impacts, or community disruption resulting from such alternatives reach extraordinary magnitudes" (23 CFR 771.135(a)(2)). This language should appear in the document together with the supporting information.
3. A discussion of the basis for concluding that the proposed action includes all possible planning to minimize harm to the Section 4(f) property. When there are no feasible and prudent alternatives which avoid the use of Section 4(f) land, the final Section 4(f) evaluation must demonstrate that the preferred alternative is a feasible and prudent alternative with the least harm on the Section 4(f) resources after considering mitigation to the Section 4(f) resources.
4. A summary of the appropriate formal coordination with the Headquarters Offices of DOI (and/or appropriate agency under that Department) and, as appropriate, the involved offices of USDA and HUD.
5. Copies of all formal coordination comments and a summary of other relevant Section 4(f) comments received an analysis and response to any questions

raised. Where new alternatives or modifications to existing alternatives are identified and will not be given further consideration, the basis for dismissing these alternatives should be provided and supported by factual information. Where Section 6(f) land is involved, the National Park Service's position on the land transfer should be documented.

6. Concluding statement as follows: "Based upon the above considerations, there is no feasible and prudent alternative to the use of land from the (identify Section 4(f) property) and the proposed action includes all possible planning to minimize harm to the (Section 4(f) property) resulting from such use."

X. OTHER AGENCY STATEMENTS

A. The FHWA review of statements prepared by other agencies will consider the environmental impact of the proposal on areas within FHWA's functional area of responsibility or special expertise (40 CFR 1503.2).

B. Agencies requesting comments on highway impacts usually forward the draft EIS to the FHWA Washington Headquarters for comment. The FHWA Washington Headquarters will normally distribute these EISs to the appropriate Regional or Division Office (per Regional Office request) and will indicate where the comments should be sent. The Regional Office may elect to forward the draft statement to the Division Office for response.

C. When a field office has received a draft EIS directly from another agency, it may comment directly to that agency if the proposal does not fall within the types indicated in item (d) of this section. If more than one DOT Administration is commenting at the Regional level, the comments should be coordinated by the DOT Regional Representative to the Secretary or designee. Copies of the FHWA comments should be distributed as follows:

1. Requesting agency--original and one copy.
2. P-14--one copy.
3. DOT Secretarial Representative--one copy.
4. HEV-11--one copy.

D. The following types of actions contained in the draft EIS require FHWA Washington Headquarters review and such EISs should be forwarded to the Director, Office of Environmental Policy, along with Regional comments, for processing:

1. actions with national implications, and
2. legislation or regulations having national impacts or national program proposals.

XI. REEVALUATIONS

A. <u>Draft EIS Reevaluation</u>

If an acceptable final EIS is not received by FHWA within 3 years from the date of the draft EIS circulation, then a written evaluation is required to determine whether there have been changes in the project or its surroundings or new information which would

require a supplement to the draft EIS or a new draft EIS (23 CFR 771.129(a)). The written evaluation should be prepared by the HA in consultation with FHWA and should address all current environmental requirements. The entire project should be revisited to assess any changes that have occurred and their effect on the adequacy of the draft EIS.

There is no required format for the written evaluation. It should focus on the changes in the project, its surroundings and impacts, and any new issues identified since the draft EIS. Field reviews, additional studies (as necessary), and coordination (as appropriate) with other agencies should be undertaken and the results included in the written evaluation. If, after reviewing the written evaluation, the FHWA concludes that a supplemental EIS or a new draft EIS is not required, the decision should be appropriately documented. Since the next major step in the project development process is preparation of a final EIS, the final EIS may document the decision. A statement to this fact, the conclusions reached, and supporting information should be briefly summarized in the Summary Section of the final EIS.

B. Final EIS Reevaluation

There are two types of reevaluations required for a final EIS: consultation and written evaluation (23 CFR 771.129(b) and (c)). For the first, consultation, the final EIS is reevaluated prior to proceeding with major project approval (e.g., right-of-way acquisition, final design, and plans, specifications, and estimates (PS&E)) to determine whether the final EIS is still valid. The level of analysis and documentation, if any, should be agreed upon by the FHWA and HA. The analysis and documentation should focus on and be commensurate with the changes in the project and its surroundings, potential for controversy, and length of time since the last environmental action. For example, when the consultation occurs shortly after final EIS approval, an analysis usually should not be necessary. However, when it occurs nearly 3 years after final EIS approval, but before a written evaluation is required, the level of analysis should be similar to what normally would be undertaken for a written evaluation. Although written documentation is left to the discretion of the Division Administrator, it is suggested that each consultation be appropriately documented in order to have a record to show the requirement was met.

The second type of reevaluation is a written evaluation. It is required if the HA has not taken additional major steps to advance the project (i.e., has not received from FHWA authority to undertake final design, authority to acquire a significant portion of the right-of-way, or approval of the PS&E) within any 3-year time period after approval of the final EIS, the final supplemental EIS, or the last major FHWA approval action.

The written evaluation should be prepared by the HA in consultation with FHWA and should address all current environmental requirements. The entire project should be revisited to assess any changes that have occurred and their effect on the adequacy of the final EIS.

There is no required format for the written evaluation. It should focus on the changes in the project, its surroundings and impacts, and any new issues identified since the final EIS was approved. Field reviews, additional environmental studies (as necessary), and coordination with other agencies should be undertaken (as appropriate to address any new impacts or issues) and the results included in the written evaluation. The FHWA

Division Office is the action office for the written evaluation. If it is determined that a supplemental EIS is not needed, the project files should be documented appropriately. In those rare cases where an EA is prepared to serve as the written evaluation, the files should clearly document whether new significant impacts were identified during the reevaluation process.

XII. SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENTS (EISs)

Whenever there are changes, new information, or further developments on a project which result in significant environmental impacts not identified in the most recently distributed version of the draft or final EIS, a supplemental EIS is necessary (40 CFR 1502.9(c)). If it is determined that the changes or new information do not result in new or different significant environmental impacts, the FHWA Division Administrator should document the determination. (After final EIS approval, this documentation could take the form of notation to the files; for a draft EIS, this documentation could be a discussion in the final EIS.)

A. Format and Content of a Supplemental EIS

There is no required format for a supplemental EIS. The supplemental EIS should provide sufficient information to briefly describe the proposed action, the reason(s) why a supplement is being prepared, and the status of the previous draft or final EIS. The supplemental EIS needs to address only those changes or new information that are the basis for preparing the supplement and were not addressed in the previous EIS (23 CFR 771.130(a)). Reference to and summarizing the previous EIS is preferable to repeating unchanged, but still valid, portions of the original document. For example, some items such as affected environment, alternatives, or impacts which are unchanged may be briefly summarized and referenced. New environmental requirements which became effective after the previous EIS was prepared need to be addressed in the supplemental EIS to the extent they apply to the portion of the project being evaluated and are relevant to the subject of the supplement (23 CFR 771.130(a)). Additionally, to provide an up-to-date status of compliance with NEPA, it is recommended that the supplement summarize the results of any reevaluations that have been performed for portions of or the entire proposed action. By this inclusion, the supplement will reflect an up-to-date consideration of the proposed action and its effects on the human environment. When a previous EIS is referenced, the supplemental EIS transmittal letter should indicate that copies of the original (draft or final) EIS are available and will be provided to all requesting parties.

B. Distribution of a Supplemental EIS

A supplemental EIS will be reviewed and distributed in the same manner as a draft and final EIS (23 CFR 771.130(d)). (See Section VII for additional information.)

XIII. APPENDICES of Technical Advisory

Two appendices to the Technical Advisory are included as follows:

TA Appendix A: Environmental Laws, Authority, and Related Statutes and Orders

TA Appendix B: Preparation and Processing of Notices of Intent.

TA APPENDIX A: Environmental Laws, Authority, And Related Statutes And Orders

AUTHORITY:

42 United States Code (U.S.C.) 4321 et seq., National Environmental Policy Act of 1969, as amended.

23 U.S.C. 138 and 49 U.S.C. 303, Section 4(f) of the Department of Transportation (DOT) Act of 1966.

23 U.S.C. 109(h), (i), and (j) standards.

23 U.S.C. 128, Public Hearings.

23 U.S.C. 315, Rules, Regulations, and Recommendations.

23 Code of Federal Regulations (CFR), Part 771, Environmental Impact and Related Procedures.

40 CFR 1500 et seq., Council on Environmental Quality, Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act.

49 CFR 1.48(b), DOT Delegations of Authority to the Federal Highway Administration.

DOT Order 5610.1c, Procedures for Considering Environmental Impacts, September 18, 1979, and subsequent revisions.

RELATED STATUTES AND ORDERS: The following is a list of major statutes and orders on the preparation of environmental documents.

7 U.S.C. 4201 et seq., Farmland Protection Policy Act of 1981.

16 U.S.C. 461 et seq., Archaeological and Historic Preservation Act; and 23 U.S.C. 305.

16 U.S.C. 470f, Sections 106, 110(d), and 110(f) of the National Historic Preservation Act of 1966.

16 U.S.C. 662, Section 2 of the Fish and Wildlife Coordination Act.

16 U.S.C. 1452, 1456, Sections 303 and 307 of the Coastal Zone Management Act of 1972.

16 U.S.C. 1271 et. seq., Wild and Scenic Rivers Act.

16 U.S.C. 1536, Section 7 of the Endangered Species Act of 1973.

33 U.S.C. 1251 et seq., Clean Water Act of 1977.

33 U.S.C 1241 et seq., Resource Conservation and Recovery Act.

42 U.S.C. 300(f) et seq., Safe Drinking Water Act.

42 U.S.C. 4371 et seq., Environmental Quality Improvement Act of 1970.

42 U.S.C. 4601 et seq., Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

42 U.S.C. 4901 et seq., Noise Control Act of 1972.

42 U.S.C. 9601 et seq., Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

42 U.S.C. 7401 et seq., Clean Air Act.

42 U.S.C. 2000d-d4, Title VI of the Civil Rights Act of 1964.

43 U.S.C. Coastal Barriers Resources Act of 1982.

Executive Order 11514, Protection and Enhancement of Environmental Quality, as amended by Executive Order 11991, dated May 24, 1977.

Executive Order 11593, Protection and Enhancement of the Cultural Environment, dated May 13, 1971, implemented by DOT Order 5650.1, dated, November 20, 1972.

Executive Order 11988, Floodplain Management, dated May 24, 1977, implemented by DOT Order 5650.2, dated April 23, 1979.

Executive Order 11990, Protection of Wetlands, dated May 24, 1977, implemented by DOT Order 5660.1A, dated August 24, 1978.

TA APPENDIX B: Preparation and Processing of Notices of Intent

The CEQ regulations and Title 23, Code of Federal Regulations, Part 771, Environmental Impact and Related Procedures, require the Administration to publish a notice of intent in the Federal Register as soon as practicable after the decision is made to prepare an environmental impact statement (EIS) and before the scoping process (40 CFR 1501.7). A notice of intent will also be published when a decision is made to supplement a final EIS, but will not be necessary when preparing a supplement to a draft EIS (23 CFR 771.130(d)). The responsibility for preparing notices of intent has been delegated to Regional Federal Highway Administrators and subsequently redelegated to Division Administrators. The notice should be sent directly to the Federal Register at the address provided in Attachment 1 and a copy provided to the Project Development Branch (HEV-11), Office of Environmental Policy, and the appropriate Region Office.

In cases where a notice of intent is published in the Federal Register and a decision is made not to prepare the draft EIS or, when the draft EIS has been prepared, a decision is made not to prepare a final EIS, a revised notice of intent should be published in the Federal Register advising of the decision and the reasons for not preparing the EIS. This applies to future and current actions being processed.

Notices of intent should be prepared and processed in strict conformance with the guidelines in Attachment 1 in order to ensure acceptance for publication by the Office of the Federal Register. A sample of each notice of intent for preparation of an EIS and a supplemental EIS is provided as Attachment 2.

The Project Development Branch (HEV-11) will serve as the Federal Register contact point for notice of intent. All inquiries should be directed to that office.

GUIDELINES FOR PREPARATION AND PROCESSING OF NOTICES OF INTENT

FORMAT

1. Typed in black on white bond paper.
2. Paper size: 8 1/2" x 11".
3. Margins: Left at least 1 1/2", all others 1".
4. Spacing: All material double spaced (except title in heading).
5. Heading: Four items on first page at head of document (see Attachment 2):
    - Billing Code No. 4910-22 typed in brackets or parentheses
    - DEPARTMENT OF TRANSPORTATION (all upper case)
    - Federal Highway Administration
    - ENVIRONMENTAL IMPACT STATEMENT; COUNTY OR CITY, STATE (all upper case; single space)
6. Text: Five sections - AGENCY, ACTION, SUMMARY, FOR FURTHER INFORMATION CONTACT, AND SUPPLEMENTARY INFORMATION; each section title in upper case followed by colon (see Content (below) and Samples 1 and 2).
7. Closing:
    - Include the Catalog of Federal Domestic Assistance number and title
    - Issued on:

      (indent 5 spaces and type or stamp in date when document is signed)

- Signature line

  (begin in middle of page; type name, title, and city under the signature; use name and title of the official actually signing the document (e.g., "John Doe, District Engineer," not "John Doe, for the Division Administrator"))

8. Document should be neat and in form suitable for public inspection. Two or more notices of intent can be included in a single document by making appropriate revisions to the heading and text of the document.

CONTENT

1. AGENCY: Federal Highway Administration (FHWA), DOT.
2. ACTION: Notice of Intent.
3. SUMMARY: The FHWA is issuing this notice to advise the public that an environmental impact statement will be prepared for a proposed highway project in . . . .
4. FOR FURTHER INFORMATION CONTACT: This section should state the name and address of a person or persons within the FHWA Division Office who can answer questions about the proposed action and the EIS as it is being developed. The listing of a telephone number is optional. State and/or local officials may also be listed, but always following the FHWA contact person.
5. SUPPLEMENTARY INFORMATION: This section should contain:
   a. a brief narrative description of the proposed action (e.g., location of the action, type of construction, length of the project, needs which will be fulfilled by the action);

      For a supplement to a final EIS add: the original EIS number and approval date, and the reason(s) for preparing the supplement;

   b. a brief description of possible alternatives to accomplish the goals of the proposed action (e.g., upgrade existing facility, do nothing (should always be listed), construction on new alignment, mass transit, multi-modal design); and
   c. a brief description of the proposed scoping process for the particular action including whether, when, and where any scoping meeting will be held.

      For a supplement to a final EIS: the scoping process is not required for a supplement; however, scoping should be discussed to the extent anticipated for the development of the supplement;

      In drafting this section -

      - use plain English
      - avoid technical terms and jargon
      - always refer to the proposed action or proposed project (e.g., the proposed action would . . .)
      - identify all abbreviations
      - list FHWA first when other agencies (State or local) are listed as being involved in the preparation of the EIS

PROCESSING

1. There must be three original signed copies, signed by the official whose name appears in the signature block
2. The date the document is signed must appear near the signature block (no post-date or pre-date of these documents);
3. An electronic copy on a disk of the document exactly as it appears on the paper copy, must be submitted along with the three original signed copies;
4. If you need to request an emergency publication, you must provide a reason for your request; and
5. The address to which you must send the documents (including via Fed Ex or overnight mail) is as follows:

   Director, Office of the Federal Register

   800 North Capital Street, Northwest

   7th Floor, Suite 700

   Washington, D.C. 20408

6. A cover letter must be sent along with the documents, certifying that the enclosed diskette contains a true and accurate copy of the three signed paper copies of the notice of intent.
7. Send one (1) copy each to the Project Development Branch (HEV-11) and the Regional office.

NOTE: The Federal Register has produced a document entitled, *Federal Register Document Drafting Handbook* (October 1998 revision) that is available on the web at http://www.archives.gov/federal-register/write/handbook/ddh.pdf. This handbook provides federal agencies with guidance and examples for complying with the Office of the Federal Register's format and editorial requirements for Federal Register documents.

S A M P L E 1

[4910-22]
DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

ENVIRONMENTAL IMPACT STATEMENT: WASHINGTON COUNTY, WASHINGTON

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of Intent.

SUMMARY: The FHWA is issuing this notice to advise the public that an environmental impact statement will be prepared for a proposed highway project in Washington County, Washington.

FOR FURTHER INFORMATION CONTACT: James West, District Engineer, Federal Highway Administration, 400 Market Street, State Capital, Washington 98507, Telephone: (206) 222-2222.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the Washington Department of Transportation and the Washington County Highway Department, will prepare an environmental impact statement (EIS) on a proposal to improve U.S. Route 10 (U.S. 10) in Washington County, Washington. The proposed improvement would involve the reconstruction of the existing U.S. 10 between the towns of Eastern and Western for a distance of about 20 miles.

Improvements to the corridor are considered necessary to provide for the existing and projected traffic demand. Also, included in this proposal is the replacement of the existing East End Bridge and a new interchange with Washington Highway 20 (W.H. 20) west of Eastern. Alternatives under consideration include (1) taking no action; (2) using alternate travel modes; (3) widening the existing two-lane highway to four lanes; and (4) constructing a four-lane, limited access highway on new location. Incorporated into and studied with the various build alternatives will be design variations of grade and alignment.

Letters describing the proposed action and soliciting comments will be sent to appropriate Federal, State, and local agencies, and to private organizations and citizens who have previously expressed or are known to have interest in this proposal. A series of public meetings will be held in Eastern and Western between May and June 1985. In addition, a public hearing will be held. Public notice will be given of the time and place of the meetings and hearing. The draft EIS will be available for public and agency review and comment prior to the public hearing. No formal scoping meeting is planned at this time.

To ensure that the full range of issues related to this proposed action are addressed and all significant issues identified, comments, and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be directed to the FHWA at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

Issued on: March 26, 1985.

John Doe
Division Administrator
Capital

S A M P L E 2

[4910-22]

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

ENVIRONMENTAL IMPACT STATEMENT: WASHINGTON COUNTY, WASHINGTON

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Notice of Intent.

SUMMARY: The FHWA is issuing this notice to advise the public that a supplement to a final environmental impact statement will be prepared for a proposed highway project in Washington County, Washington.

FOR FURTHER INFORMATION CONTACT: James West, District Engineer, Federal Highway Administration, 400 Market Street, State Capital, Washington 98507, Telephone: (206) 222-2222.

SUPPLEMENTARY INFORMATION: The FHWA, in cooperation with the Washington Department of Transportation and the Washington County Highway Department, will prepare a supplement to the final environmental impact statement (EIS) on a proposal to improve U.S. Route 10 (U.S. 10) in Washington County, Washington. The original EIS for the improvements (FHWA-WA-EIS-85-06-F) was approved on December 21, 1985. The proposed improvements to U.S. 10 provide a divided four-lane, limited access highway on new location between the towns of Western and Eastern for a distance of about 20 miles. Improvements to the corridor are considered necessary to provide for existing and projected traffic demand.

The location and preliminary design of the western 15 miles portion of the proposed facility, from Western to U.S. 20, have been approved. However, substantial changes in the local street system and land use development in Eastern have reduced the suitability of the approved location east of U.S. 20. The portion of the proposed facility east of U.S. 20 is now to be restudied to determine if a new route location and connection to I-90 would be appropriate.

Alternatives under consideration include (1) taking no action and terminating the facility at U.S. 20; (2) constructing a four-lane, limited access highway on the approved location; (3) widening the existing two-lane U.S. 10 to four lanes with a connection to U.S. 20; and (4) constructing a four-lane, limited access highway on new location and connecting to I-90. Incorporated into and studied with the various build alternatives will be design variations of grade and alignment.

Letters describing the proposed action and soliciting comments will be sent to appropriate Federal, State, and local agencies, and to private organizations and citizens who have previously expressed or are known to have interest in this proposal. A public meeting will be held in Eastern in August 1987. In addition, a public hearing will be held. Public notice will be given of the time and place of the meeting and

hearing. The draft supplemental EIS will be available for public and agency review and comment prior to the public hearing. No formal scoping meeting will be held.

To ensure that the full range of issues related to this proposed action are addressed and all significant issues identified, comments and suggestions are invited from all interested parties. Comments or questions concerning this proposed action and the EIS should be directed to the FHWA at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Research, Planning, and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

Issued on: April 23, 1987.

John Doe
Division Administrator
Capital

Appendix E
SAMPLE FORMS, LETTERS AND NOTICES

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E.0 SAMPLE FORMS, LETTERS AND NOTICES

The following forms, letters and notices are provided as examples for use in preparing environmental evaluations. Wording or format may be different for specific projects. The preparer should always confirm updated language or requirements with the Environmental Division's NEPA Documentation Office staff.

Figure E.1 Sample Initial Coordination Letter for Nonparticipating Agencies, Organizations and the Public

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334

Date

Name, Title
Agency or Organization
Street Address
City, State, Zip

Subject: Initial Coordination Request for State Route (SR) 311 (APD-40) (US-74) Interchange between Interstate 75 (Exit 20) and South Lee Highway (SR-2) (US-11/64) in Cleveland, Bradley County, Tennessee
TDOT PIN # 107386.00

Dear Name:

The Tennessee Department of Transportation (TDOT), in cooperation with the Federal Highway Administration (FHWA), is initiating an Environmental Assessment (EA) for a proposed new interchange on State Route (SR) 311 (APD-40) (US-74) in Cleveland, Bradley County, Tennessee. The construction of the new interchange along SR-311 (APD-40) would improve access to support economic development and regional growth projections, improve traffic operational efficiency, and support future development patterns within the study area. A project data summary is attached along with a map showing the project location that is under study.

TDOT is in the early stages of planning for this project and would like to know if the proposed project will have any effect, either favorable or adverse, on any programs being planned or executed by your agency. We request that you review the enclosed material and advise us with your comments on potential environmental impacts. Areas of specific concern to your agency will be addressed during the development of our environmental and location studies. The EA will assess a wide range of concerns including impacts on the social, economic and ecological environment. Your input will assist us in the preparation of the EA.

If there are areas that you feel require special consideration, we will be glad to cooperate with you in any way to avoid possible adverse effects or conflicts with any of your proposed programs.

September 1, 2009
Page 2

We would appreciate receiving your comments, suggestions, and information on this proposal within 45 days of the date of this letter. If you have any questions, please contact me at 615-741-5364.

Thank you for your cooperation and interest in this project.

Sincerely,

Tom Love
Transportation Manager 1

Enclosures: Project Vicinity Map
Project Summary

Figure E.2 Sample Initial Coordination Letter for Local Government

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334

Date

Mayor D. Gary Davis
County Mayor
Bradley County Government
155 Broad Street NW
Cleveland, TN 37311-5000

Subject: Coordination Package and Invitation to be a Participating Agency for State Route (SR) 311 (APD-40) (US-74) Interchange between Interstate 75 (Exit 20) and South Lee Highway (SR-2) (US-11/64) in Cleveland, Bradley County, Tennessee TDOT PIN # 107386.00

Dear Mayor Davis:

The Tennessee Department of Transportation (TDOT), in cooperation with the Federal Highway Administration (FHWA), is initiating an Environmental Assessment (EA) for a proposed new interchange on State Route (SR) 311 (APD-40) (US-74) in Cleveland, Bradley County. The construction of the new interchange along SR-311 (APD-40) would improve access to support economic development and regional growth projections, improve traffic operational efficiency, and support future development patterns within the study area. A project data summary is attached along with a map showing the project location that is under study. We are asking that you: agree/disagree on Participating agency status, comment on the Project Coordination Plan, and comment on the proposed project as to potential environmental impacts or areas of concern to you or your agency.

Your agency has been identified as an agency that may have an interest in the project because of your jurisdictional authority, special expertise and/or statewide interest. With this letter, we extend your agency an invitation to become a participating agency with TDOT and FHWA in the development of the EA for this project. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

September 1, 2009
Page 2

Pursuant to Section 6002 of the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU), *participating agencies* are responsible for assisting in the identification of, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. We suggest that your agency's role in the development of the SR-311 project should include the following activities as they relate to your area of expertise:

1) Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in alternatives analysis; and
2) Participate in coordination meetings and joint field reviews as appropriate.

In order for your agency to be designated as a participating agency for this project, you must respond in writing with an acceptance of this invitation October 27, 2009. If your agency chooses not to be a participating agency for this project, your response should state your reason for declining the invitation.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of this EA, please contact me at 615-741-5364.

Thank you for your cooperation and interest in this project.

Sincerely,

Tom Love
Transportation Manager 1

Enclosures: Project Vicinity Map
Project Summary
Project Coordination Plan

Figure E.3 Sample Initial Coordination Letter for Inviting Cooperating Agencies

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334

Date

Mrs. Leigh Ann Tribble
Environmental Program Engineer
Federal Highway Administration
640 Grassmere Park, Suite 112
Nashville, TN 37211

Subject: Coordination Package and Invitation to be a Participating Agency for State Route (SR) 311 (APD-40) (US-74) Interchange Between Interstate 75 (Exit 20) and South Lee Highway (SR-2) (US-11/ 64) in Cleveland, Bradley County, Tennessee
TDOT PIN # 107386.00

Dear Mrs. Tribble:

The Tennessee Department of Transportation (TDOT), in cooperation with the Federal Highway Administration (FHWA), is initiating an Environmental Assessment (EA) for a proposed new interchange on State Route (SR) 311 (APD-40) (US-74) in Cleveland, Bradley County. The construction of the new interchange along SR-311 (APD-40) would improve access to support economic development and regional growth projections, improve traffic operational efficiency, and support future development patterns within the study area. A project data summary is attached along with a map showing the project location that is under study. We are asking your agency to: accept the invitation to be both a Cooperating and a Participating agency for this project, comment on the Project Coordination Plan, and comment on the proposed project as to potential environmental impacts or areas of concern to you or your agency.

The Tennessee Valley Authority (TVA) has been identified as an agency that has an interest in this project because of its jurisdictional authority, special expertise, and regional interest. With this letter, we extend TVA an invitation to become a participating agency with TDOT and FHWA in the development of the EA for the subject property. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to the evaluation of the project.

FHWA and TDOT also request the participation of TVA as a cooperating agency in the preparation of the EA, in accordance with 40 CFR 1501.6 of the Council on Environmental Quality's CEQ Regulations for Implementing the Procedural Provision of the National Environmental Policy Act (NEPA).

September 1, 2009
Page 2

Pursuant to Section 6002 of the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU), *participating agencies* are responsible to identify, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent the agency from granting a permit or other approval that is needed for this project.

We suggest that your agency's role in the development of the SR-311 project should include the following as they relate to your area of expertise:

1. Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in alternative analysis.

2. Participate in coordination meetings and joint field reviews as appropriate; and

3. Timely review and comment on the pre-draft and pre-final environmental documents to reflect the views and concerns of your agency on the adequacy of the document, alternatives considered, and the anticipated impacts and mitigation.

Please respond to me in writing with an acceptance or denial of the invitation by October 16, 2009. If your agency chooses not to be a participating agency for this project, your response should state your reason for declining the invitation. Pursuant to SAFETEA-LU Section 6002, any Federal Agency that chooses to decline the invitation must specifically state that your agency:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

By this letter, TDOT requests that you review the enclosed material and advise us with your comments on potential environmental impacts.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of this EA, please contact me at 615-741-5364.

Thank you for your cooperation and interest in this project.

Sincerely,

Tom Love
Transportation Manager 1

Enclosures: Project Vicinity Map
Project Summary
Project Coordination Plan

Figure E.4 Sample Initial Coordination Letter For Inviting Participating Agencies

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334

Date

Mayor D. Gary Davis
County Mayor
Bradley County Government

155 Broad Street NW

Cleveland, TN 37311-5000

Subject: Coordination Package and Invitation to be a Participating Agency for State Route (SR) 311 (APD-40) (US-74) Interchange between Interstate 75 (Exit 20) and South Lee Highway (SR-2) (US-11/64) in Cleveland, Bradley County, Tennessee TDOT PIN # 107386.00

Dear Mayor Davis:

The Tennessee Department of Transportation (TDOT), in cooperation with the Federal Highway Administration (FHWA), is initiating an Environmental Assessment (EA) for a proposed new interchange on State Route (SR) 311 (APD-40) (US-74) in Cleveland, Bradley County. The construction of the new interchange along SR-311 (APD-40) would improve access to support economic development and regional growth projections, improve traffic operational efficiency, and support future development patterns within the study area. A project data summary is attached along with a map showing the project location that is under study. We are asking that you: agree/disagree on Participating agency status, comment on the Project Coordination Plan, and comment on the proposed project as to potential environmental impacts or areas of concern to you or your agency.

Your agency has been identified as an agency that may have an interest in the project because of your jurisdictional authority, special expertise and/or statewide interest. With this letter, we extend your agency an invitation to become a participating agency with TDOT and FHWA in the development of the EA for this project. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

September 1, 2009
Page 2

Pursuant to Section 6002 of the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU), *participating agencies* are responsible for assisting in the identification of, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. We suggest that your agency's role in the development of the SR-311 project should include the following activities as they relate to your area of expertise:

1) Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in alternatives analysis; and
2) Participate in coordination meetings and joint field reviews as appropriate.

In order for your agency to be designated as a participating agency for this project, you must respond in writing with an acceptance of this invitation October 27, 2009. If your agency chooses not to be a participating agency for this project, your response should state your reason for declining the invitation.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of this EA, please contact me at 615-741-5364.

Thank you for your cooperation and interest in this project.

Sincerely,

Tom Love
Transportation Manager 1

Enclosures: Project Vicinity Map
Project Summary
Project Coordination Plan

Figure E.5 Sample Initial Coordination Letter for Section 106, Invite Local Government to be Section 106 Consulting Party

Initial coordination for Section 106 is handled by the TDOT Historic and Archaeology Sections. The consultant or NEPA planner should provide maps and project descriptions to the Historic and Archaeology Sections during the earliest stages of the project so that the letters can be prepared and sent out.

Figure E.6 Sample Initial Coordination Letter for 106, To Historic Groups/Interested Parties

Initial coordination for Section 106 is handled by the TDOT Historic and Archaeology Sections. The consultant or NEPA planner should provide maps and project descriptions to the Historic and Archaeology Sections during the earliest stages of the project so that the letters can be prepared and sent out.

Figure E.7 Sample Initial Coordination Letter For Section 106 Native American Coordination

Initial coordination for Section 106 is handled by the TDOT Historic and Archaeology Sections. The consultant or NEPA planner should provide maps and project descriptions to the Historic and Archaeology Sections during the earliest stages of the project so that the letters can be prepared and sent out.

Figure E.8 Sample Farmland Initial Coordination Letter

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334

Date

Mr. Kevin Brown
State Conservationist
U.S. Department of Agriculture
Natural Resource Conservation Service
U.S. Courthouse, Room 675
801 Broadway
Nashville, TN 37203

Subject: Coordination Package and Invitation to be a Participating Agency for State Route (SR) 311 (APD-40) (US-74) Interchange Between Interstate 75 (Exit 20) and South Lee Highway (SR-2) (US-11/64) in Cleveland, Bradley County, Tennessee
TDOT PIN # 107386.00

Dear Mr. Brown:

The Tennessee Department of Transportation (TDOT), in cooperation with the Federal Highway Administration (FHWA), is initiating an Environmental Assessment (EA) for a proposed new interchange on State Route (SR) 311 (APD-40) (US-74) in Cleveland, Bradley County. The construction of the new interchange along SR-311 (APD-40) would improve access to support economic development and regional growth projections, improve traffic operational efficiency, and support future development patterns within the study area. A project data summary is attached along with a map showing the project location that is under study. We are asking that you; agree/disagree on Participating status, comment on the Project Coordination Plan, and comment on the proposed project as to potential environmental impacts or areas of concern to you or your agency.

Your agency has been identified as an agency that may have an interest in the project because of your jurisdictional authority, special expertise and/or statewide interest. With this letter, we extend your agency an invitation to become a participating agency with TDOT and FHWA in the development of the EA for this project. This designation does not imply that your agency either supports the proposal or has any special expertise with respect to evaluation of the project.

September 1, 2009
Page 2

Pursuant to Section 6002 of the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU), *participating agencies* are responsible for assisting in the identification of, as early as practicable, any issues of concern regarding the project's potential environmental or socioeconomic impacts that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project. We suggest that your agency's role in the development of the SR-311 project should include the following activities as they relate to your area of expertise:

1) Provide meaningful and early input on defining the purpose and need, determining the range of alternatives to be considered, and the methodologies and level of detail required in alternatives analysis; and
2) Participate in coordination meetings and joint field reviews as appropriate.

Please respond to me in writing with an acceptance or denial of the invitation by October 27, 2009. If your agency chooses not to be a participating agency for this project, your response should state your reason for declining the invitation. Pursuant to SAFETEA-LU Section 6002, any Federal Agency that chooses to decline the invitation must specifically state that your agency:

- Has no jurisdiction or authority with respect to the project;
- Has no expertise or information relevant to the project; and
- Does not intend to submit comments on the project.

In accordance with the Farmland Protection Policy Act of 1981, Title 7 C. F. R. 658.4, when alternative corridors are identified, we will prepare and send to you a Farmland Conversion Impact Rating, Corridor form (NRCS-CPA-106) for your determination of whether this project contains farmland subject to the above act.

If you have any questions or would like to discuss in more detail the project or our agencies' respective roles and responsibilities during the preparation of this EA, please contact me at 615-741-5364.

Thank you for your cooperation and interest in this project.

Sincerely,

Tom Love
Transportation Manager I

Enclosures: Project Vicinity Map
Project Summary
Project Coordination Plan

Figure E.9 Sample AD-1006 Farmland Form for Initial Coordination

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 7/26/10
Name Of Project SR-311/APD-40 Interchange Project	Federal Agency Involved FHWA
Proposed Land Use Transportation	County And State Bradley County, TN
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 7/29/10

Does the site contain prime, unique, statewide or local important farmland? *(If no, the FPPA does not apply -- do not complete additional parts of this form).* Yes ☑ No ☐ | Acres Irrigated - | Average Farm Size 103

Major Crop(s) Corn (Indicator Crop)	Farmable Land In Govt. Jurisdiction Acres: 160,500 % 75	Amount Of Farmland As Defined in FPPA Acres: 48,700 % 23
Name Of Land Evaluation System Used LESA	Name Of Local Site Assessment System --	Date Land Evaluation Returned By NRCS 8/5/10

PART III *(To be completed by Federal Agency)*	Alternative Site Rating			
	Build Alt.	Site B	Site C	Site D
A. Total Acres To Be Converted Directly * See Note Below	33.0			
B. Total Acres To Be Converted Indirectly	0.0			
C. Total Acres In Site * See Note Below	33.0	0.0	0.0	0.0
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	10.1			
B. Total Acres Statewide And Local Important Farmland	0.0			
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	0.			
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	70.0			
PART V *(To be completed by NRCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*	50	0	0	0

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points				
1. Area In Nonurban Use	15	8			
2. Perimeter In Nonurban Use	10	3			
3. Percent Of Site Being Farmed	20	5			
4. Protection Provided By State And Local Government	20	0			
5. Distance From Urban Builtup Area	15	0			
6. Distance To Urban Support Services	15	0			
7. Size Of Present Farm Unit Compared To Average	10	0			
8. Creation Of Nonfarmable Farmland	10	10			
9. Availability Of Farm Support Services	5	3			
10. On-Farm Investments	20	10			
11. Effects Of Conversion On Farm Support Services	10	1			
12. Compatibility With Existing Agricultural Use	10	10			
TOTAL SITE ASSESSMENT POINTS	160	50	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	50	0	0	0
Total Site Assessment *(From Part VI above or a local site assessment)*	160	50	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	100	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection:

* The actual acreage amount provided to the NRCS in July 2010 was 48.0 acres of land to be converted directly by the proposed project.

This number has since been reduced by TDOT in their Conceptual Stage Relocation Report (Dated 08/2010) to 33 acres.

Part IV as provided by the NRCS on 7/29/10 remains unchanged.

(See Instructions on reverse side) Form AD-1006 (10-83)

This form was electronically produced by National Production Services Staff

Clear Form

Figure E.10 Sample Project Data Summary For Initial Coordination

PROJECT DATA SUMMARY

State Route (SR) 311 (APD 40) (US 74) Interchange
Between Interstate 75 (Exit 20) and South Lee Highway (SR-2) (US-11/64)
CLEVELAND, BRADLEY COUNTY, TENNESSEE
TDOT PIN # 107386.00

PROJECT DESCRIPTION

The Tennessee Department of Transportation (TDOT) proposes to construct a new interchange that would improve access to property between Interstate 75 and South Lee Highway (SR-2) (US-11/64) in Cleveland, Bradley County, Tennessee. The completion of this project would provide a new interchange and auxiliary lanes along SR-311 (APD-40) (US 74). This new interchange would lie on SR-311 approximately 0.6 miles east of Interstate 75 (Exit 20) and 0.9 miles west of South Lee Highway (SR-2) (US-11/64). Auxiliary lanes along SR-311 would connect the interchange to the two adjoining interchanges. The total project length is approximately 1.5 miles. The project vicinity is illustrated on the attached map. TDOT is preparing an Environmental Assessment (EA) under the *National Environmental Policy Act* (NEPA) to identify and evaluate the environmental effects of the proposed project and to identify measures to minimize harm.

PROJECT PURPOSE

The construction of the new interchange along SR-311 (APD-40) would improve access to support economic development and regional growth projections, improve traffic operational efficiency, and support future development patterns within the study area.

DESCRIPTION OF STUDY AREA

The study area is located in the southwest of Cleveland, Bradley County, Tennessee. The western terminus of the project is the existing Interstate 75 interchange (Exit 20) at SR-311 (APD-40). The eastern terminus of the project is the existing interchange at South Lee Highway (SR-2) (US-11/64). The study area has a variety of land uses, including natural forested areas adjacent to SR-311, pockets of residential, isolated commercial, institutional and industrial parcels. The project area includes a small lake on the west near the Interstate 75 Exit 20.

ALTERNATIVES

Alternatives under consideration include: (1) No-Build; and (2) Build Alternative.

The No-Build Alternative examines what would happen if the proposed roadway is not built, and serves as a baseline that the build alternative is compared against.

The Build Alternative includes a new interchange on SR-311 (APD-40) between the existing interchanges of Exit 20 on Interstate 75 and South Lee Highway (SR-2) (US-11/64). The proposed interchange will need auxiliary lanes connecting the two adjoining interchanges.

As outlined by NEPA and the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU), the public will be encouraged to offer suggestions regarding alternatives to be considered through public meetings.

TRAFFIC

Recent traffic analysis for the existing transportation system in the study area shows that the traffic volume in 2008 on SR-311 (APD-40) in the study area was approximately 17,200 AADT (annual average daily traffic), and the existing level of service is acceptable. By 2013, the traffic is expected to be about 26,050 and by 2032, the AADT is expected to be 38,880, with no improvement in level of service. Detailed traffic studies will be conducted to determine current and future traffic volumes and levels of service on roadways in the study area, with and without the proposed project. Crash data will be examined to identify areas of safety concerns.

SUMMARY OF ENVIRONMENTAL CONCERNS

Land Use and Displacements

Acquiring additional right-of-way on existing roadways or construction of a new road on new location may displace residences, but the project would be planned to minimize displacements. A conceptual stage relocation plan will be prepared and those relocated will be fully assisted through procedures provided in the *Federal Uniform Relocation Assistance and Land Acquisition Policies Act of 1970*, as amended, and the *Tennessee Uniform Relocation Assistance Act of 1972*.

Social and Economic Factors

This project will be developed consistent with Executive Order 12898, Environmental Justice, which requires federal agencies to develop a strategy for its programs, policies and activities to avoid disproportionately high and adverse impacts on minority and low-income populations with respect to human health and the environment.

Air Quality

Bradley County is in an area that has been designated as in attainment for all criteria pollutants. Based on analyses of highway projects with similar meteorological conditions and traffic volumes, the carbon monoxide levels of the subject project will be well below the National Ambient Air Quality Standard. A mobile source air toxics (MSAT) analysis will be prepared following FHWA's recently released guidance to determine the impact of the project on air quality within the study area.

Noise
Noise studies will be conducted on the project and the results of these studies will be analyzed to determine the impact of the project on noise sensitive receptors.

Cultural Resources
Architectural and historic resources in the SR-311 (APD-40) Interchange project area will be investigated. Potentially historic properties or districts will be investigated for registration or eligibility in the National Register of Historic Places.

Phase I Archaeological Surveys will be conducted covering this project area. Any identified archaeological sites will be investigated for listing or eligibility for listing in the National Register of Historic Places.

Ecological Impacts
Detailed terrestrial and aquatic studies will be conducted to ascertain the project's impact on ecological resources. The ecological study will identify streams, wet weather conveyances, springs, seeps and farm ponds in the study area. The determination as to whether these waters are designated as State and/or of the U.S. waters will be confirmed by the Tennessee Department of Environment and Conservation (TDEC) or the U.S. Army Corps of Engineers (USACE).

Wetlands will be identified during the field reconnaissance. The total wetland impact of the proposed project will be determined. In an effort to minimize sedimentation and runoff impacts, erosion and sediment control plans will be included in the project construction plans. TDOT will implement its *Standard Specifications for Road and Bridge Construction*, which includes erosion and sediment control standards for use during construction. The State of Tennessee sets water quality criteria for waters of the state; these standards must be met during the construction of the highway improvement.

Information will be sought from TDEC regarding whether federally or state listed plants or animals are known to occur within a one and four mile radius of the project area.

Floodplains
The construction of the project could require the crossing of streams in the area. The location and design of the project will consider impacts on the floodplains in the area and will be constructed in accordance with Executive Order 11988, Floodplain Management, and all local and federal regulations. The project will be designed and constructed to minimize harm to the environment. During design and construction, all applicable provisions of the Tennessee *Standard Specifications for Road and Bridge Construction* will be observed to minimize construction impacts.

Farmland
The study area includes active agriculture lands and farms. In accordance with 7 CFR, Part 658 of the *National Farmland Protection Policy Act*, criteria will be applied to determine effects to farmland. This will be coordinated with the Natural Resources Conservation Agency (NRCS).

Hazardous Materials
An environmental site assessment of the study area will be conducted to identify known or potential hazardous material sites. In the event that hazardous materials are encountered within the proposed right-of-way, their disposition shall be subject to the applicable sections of the *Federal Resource Conservation and Recovery Act (RCRA)*, as amended, and the *Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)*, as amended; and the *Tennessee Hazardous Waste Management Act of 1983*.

Indirect and Cumulative Impacts
In addition to identifying the direct effects of the project alternatives, the environmental evaluation will consider the indirect impacts resulting from the project. These indirect effects would occur later in time or farther removed in distance; they may include growth-inducing effects or other effects related to changes in the pattern of land use, population density, or growth rate, and related effects on air, water, and ecosystems. The evaluation will also consider cumulative impacts on the study area's resources that would result from this project in combination with other past, present and reasonably foreseeable future actions by public and private entities.

Construction Impacts
In order to minimize as many possible detrimental effects as is practicable, the construction contractor will be required to comply with all applicable rules and provisions of the Tennessee Department of Transportation's *Standard Specifications for Road and Bridge Construction*. These provisions implement the requirements of the Federal Highway Administration's Federal-Aid Policy Guide: Chapter 1, Subchapter G, Part 650, Subpart B.

Figure E.11 Sample Initial Coordination Map—Note Inset Boxes Containing Additional Location Information

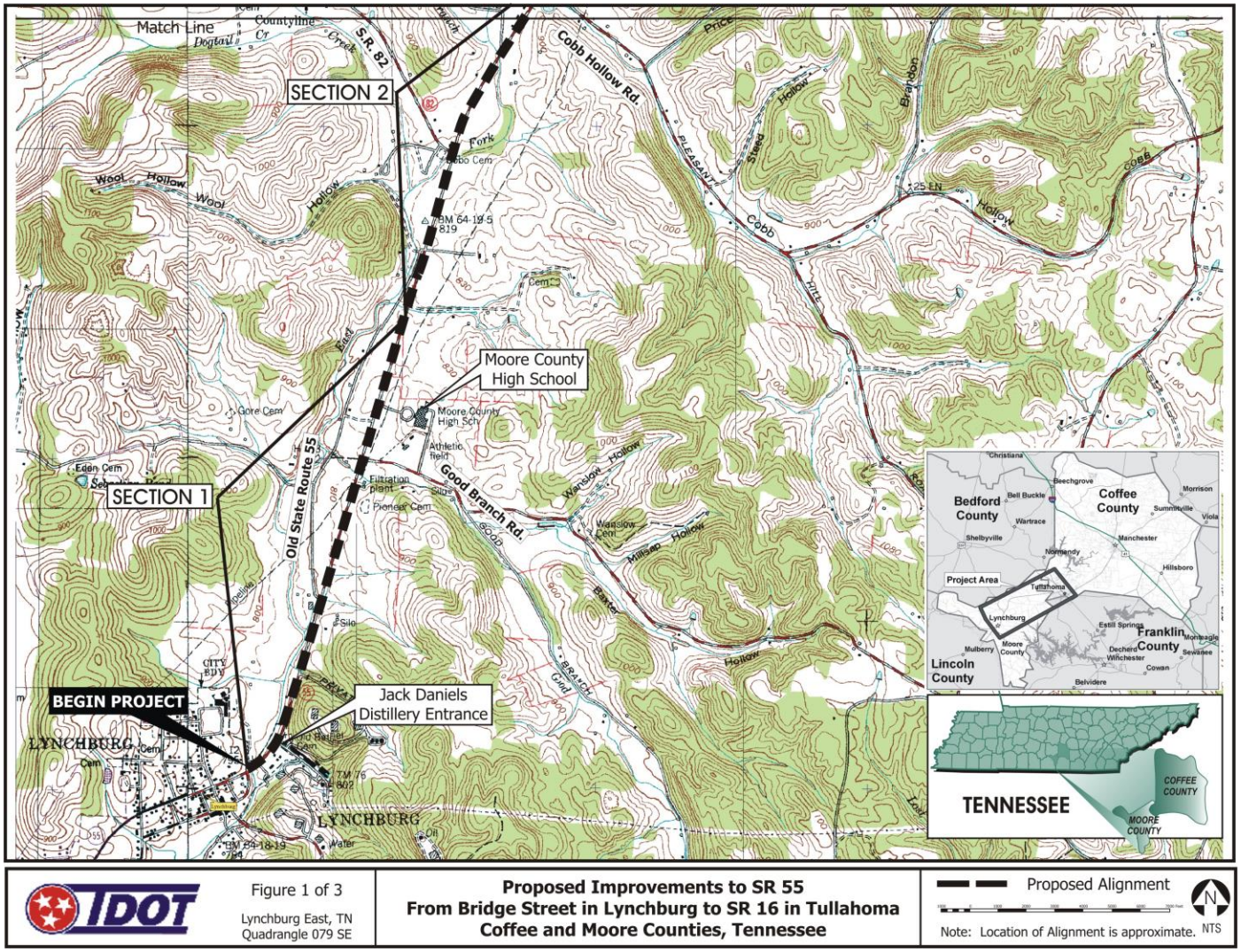


Figure E.12 EA Cover Sheet

ENVIRONMENTAL ASSESSMENT

State Route 311 (Appalachian Development Highway 40) (U.S. Highway 74)
Proposed Interchange

Between Interstate 75 (Exit 20) and
South Lee Highway (State Route 2) (U. S. Highway 11/64)
Bradley County, Tennessee

Submitted Pursuant to the
National Environmental Policy Act of 1969
42 USC 4332(2)(c)

U.S. Department of Transportation
Federal Highway Administration,
and the Tennessee Department of Transportation

Cooperating Agencies
Tennessee Valley Authority
U.S. Army Corps of Engineers

MARCH 2011

Figure E.13 Sample EA Title/Signature Page

State Route 311 (Appalachian Development Highway 40) (U.S. Highway 74)
Proposed Interchange

Between Interstate 75 (Exit 20) and
South Lee Highway (State Route 2) (U. S. Highway 11/64)
Bradley County, Tennessee

Environmental Assessment

Submitted Pursuant to the
National Environmental Policy Act of 1969
42 USC 4332(2) (c)

U.S. Department of Transportation
Federal Highway Administration,
and the Tennessee Department of Transportation

Cooperating Agencies
Tennessee Valley Authority
U.S. Army Corps of Engineers

Date of Approval	Federal Highway Administration, Tennessee Division Administrator
Date of Approval	Tennessee Department of Transportation Suzanne B. Herron, P.E., CPESC Director, Environmental Division

The following persons may be contacted for additional information concerning this document:

Mr. Charles J. O'Neill
Planning and Program Management
Team Leader
Federal Highway Administration
Tennessee Division
404 BNA Drive, Suite 508
Nashville, TN 37217
615-781-5770

Mrs. Ann Andrews
Transportation Manager II
Tennessee Department of Transportation
Environmental Division
505 Deaderick Street, Suite 900
Nashville, TN 37243
615-532-7120

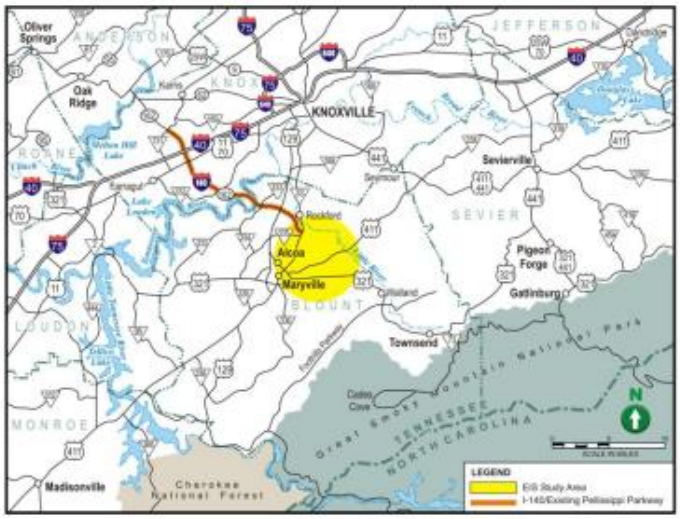
Figure E.14 Sample EIS Cover

DRAFT ENVIRONMENTAL IMPACT STATEMENT

PELLISSIPPI PARKWAY EXTENSION (SR 162)

From SR 33 (Old Knoxville Highway) to
US 321/SR 73/Lamar Alexander Parkway

BLOUNT COUNTY, TENNESSEE



Submitted Pursuant To 42 U.S.C. 4332 (2) (c)

U.S. Department of Transportation, Federal Highway Administration
Tennessee Department of Transportation

Cooperating Agencies:
US Army Corps of Engineers
Tennessee Valley Authority

Figure E.15 Sample EIS Title / Signature Page

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Pellissippi Parkway Extension (SR 162)

From SR 33 (Old Knoxville Highway) to
US 321/SR 73/Lamar Alexander Parkway
Blount County, Tennessee

Submitted Pursuant to the National Environmental Policy Act of 1969
42 USC 4332 (2) (c)

U.S. Department of Transportation, Federal Highway Administration,
Tennessee Department of Transportation

Cooperating Agencies
U.S. Army Corps of Engineers
Tennessee Valley Authority

_____	_____
Date	Federal Highway Administration
_____	_____
Date	Tennessee Department of Transportation

For additional information concerning this document, contact:

Mr. Charles J. O'Neill
Planning and Program Management Team Leader
Federal Highway Administration
Tennessee Division
404 BNA Drive, Suite 508
Nashville, TN 37217
(615) 781-5770

Ms. Suzanne Herron
Director
Environmental Division
TN Department of Transportation
505 Deaderick Street, Suite 900
Nashville, Tennessee 37243
(615) 741-2612

Tennessee Department of Transportation proposes to extend Pellissippi Parkway (SR 162) on new location from SR 33 to US 321/SR 73 in Blount County, Tennessee, a distance of approximately 4.5 miles.

Figure E.16 Sample DEIS Mail Out Letter-May be Revised for EA

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL PLANNING AND PERMITS DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334
(615) 741-3653

May 10, 2010

Mr. Thomas M. Hunter, Executive Director
Appalachian Regional Commission
1666 Connecticut Avenue, NW
Washington, DC 20235

Subject: Request for Comments, Draft Environmental Impact Statement, Pellissippi Parkway Extension (SR 162) from SR 33 (Old Knoxville Highway) to US 321/SR 73/Lamar Alexander Parkway
Blount County, Tennessee

Dear Mr. Hunter,

The Tennessee Department of Transportation is proposing the above-listed highway improvements. In accordance with Section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969, the Department has prepared a Draft Environmental Impact Statement (DEIS) for the subject project.

The DEIS was approved by the Federal Highway Administration (FHWA) on April 14, 2010. Enclose is the copy of the DEIS that your agency has requested. We would appreciate receiving any comments that you may have regarding environmental impacts so that full consideration can be given to environmental issues. A final EIS will be prepared for this proposal giving full consideration to comments received through this coordination. We request that you submit your comments on the DEIS on or before August 10, 2010.

The NEPA Public Hearing for this project is scheduled for Tuesday, July 20, 2010 at Heritage High School, 3741 E. Lamar Alexander Parkway, Maryville TN 37804, from 5:00 to 7:00 PM.

Sincerely,

Tom Love
Transportation Manager I

Figure E.17 Sample Transmittal Letter for Draft NEPA Document

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL DIVISION
SUITE 900, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-0334

November 6, 2009

Mrs. Leigh Ann Tribble
Environmental Program Engineer
Federal Highway Administration
404 BNA Drive, Suite 508
Nashville, Tennessee 37217

Subject: Transmittal of TESA Concurrence Point #3, Preliminary Draft Environmental Impact Statement
Pellissippi Parkway Extension, From SR 33 (Old Knoxville Highway) to SR 73 (US 321/Lamar Alexander Parkway), Blount County, TN
TDOT Pin # 101423.00, TDOT Project #05097-1226-04

Dear Mrs. Tribble:

Enclosed please find 4 copies of *TESA Concurrence Point #3* materials that were sent to governmental agencies for the above-listed project. The package includes:

1. *TESA Concurrence Point #3 Package*
2. Example letters mailed to governmental agencies
3. Conceptual Stage Relocation Plan
4. List of agencies receiving the *TESA Concurrence Point #3*

Sincerely,

Tom Love
Transportation Manager I

Enclosures

Tennessee Environmental Streamlining Agreement Concurrence Form
Concurrence Point 3
Pellissippi Parkway Extension (From State Route 33 (Old Knoxville Highway) to State Route 73 (US 321/Lamar Alexander Parkway))
Blount County, Tennessee
TDOT Pin # 101423.00, TDOT Project # 05097-1226-04

The Tennessee Department of Transportation (TDOT) is preparing an *Environmental Impact Statement* (*EIS*) for the Pellissippi Parkway Extension from State Route 33 (Old Knoxville Highway) to State Route 73 (US 321/Lamar Alexander Parkway), Blount County, Tennessee. The *EIS* is being developed by TDOT to document the impacts of the subject project, in accordance with the National Environmental Policy Act (NEPA) and the *Tennessee Environmental Streamlining Agreement* (*TESA*). In accordance with *TESA*, we are requesting your review and concurrence on Concurrence Point 3, *Draft Environmental Impact Statement*.

The *Preliminary Draft Environmental Impact Statement* was sent to you on November 6, 2009 for a 45-day review period. Once you have had the opportunity to review the above referenced document, please sign the attached form. In signing this document, you are indicating your concurrence on the sufficiency of the draft environmental document.

Please sign and return this form to Tom Love at the address below by December 22, 2009.

Mr. Tom Love
TDOT Environmental Division
Suite 900
James K. Polk Building
505 Deaderick Street
Nashville, TN 37243-0334

If you feel all provisions of Concurrence Point 3 have been satisfied, please acknowledge concurrence with the adequacy of the ***Preliminary Draft Environmental Impact Statement.***

AGENCY:_____

CONCURRENCE:_____

DATE:_____

Figure E.18 Sample Public Hearing Flyer

Announcement of Public Hearing

State Route 28/U.S. Highway 127 Improvements from State Route 62 in Clarkrange to the Improved Four-Lane Section Approximately Three Miles North of Grimsley in Fentress County, Tennessee

Tuesday, March 15, 2011
5:00 to 7:00 PM
South Fentress Elementary School
5018 Wilder Road
Grimsley, TN 38565

This meeting is being held to provide the public with an opportunity to provide input on the Environmental Assessment. The Environmental Assessment is currently available for public review at the Fentress County Public Library, the TDOT Construction Office in Crossville or online at the project website (www.tn.gov/TDOT/US127nFentress/).

Anyone with questions regarding the Public Hearing, should contact Ralph Barnes, the TDOT Project Manager, at 615-253-1387 or by email at Ralph.Barnes@Tn.Gov

Persons having a disability that requires aids or services to participate at the meeting may contact Ms. Margaret Mahler by telephone at (615) 741-4984, fax (615) 532-5995, TTY Relay (615) 253-8311 or e-mail Margaret.Z.Mahler@Tn.Gov no less than ten (10) days prior to the date of the meeting.

TDOT is an equal opportunity employer and does not discriminate on the basis of race, age, sex, religion, color, disability or national origin.

Figure E.19 Public Hearing Handout

PUBLIC HEARING

State Route 28/U.S. Highway Route 127
Proposed Improvements Project

From State Route 62 in Clarkrange to the Improved Four-Lane
Section Approximately Three Miles North of Grimsley
Fentress County, Tennessee

TDOT PIN # 107774.00

March 15, 2011

5:00 p.m. to 7:00 p.m.
South Fentress Elementary School
5018 Wilder Road
Grimsley, Tennessee 38565

TDOT Project Manager
Mr. Ralph Barnes, PE
(615) 253-1387
Ralph.Barnes@tn.gov

TDOT

Tennessee Department of Transportation

WELCOME!

Thank you for attending this hearing. This handout package provides information on the hearing format as well as a summary of the need and purpose of the project, a description of the project's design features, potential environmental impacts of the project, the relocation assistance program, and the next steps in the environmental review process. It also explains how to make your comments about this project known to TDOT.

The agenda for this evening is as follows:

5:00 to 5:45 PM – View Displays and Talk with TDOT Project Team

5:45 to 6:30 PM – Formal Presentation on the findings presented in the EA and Formal Comment/Question Session

6:30 to 7:00 PM – View Displays and Talk with TDOT Project Team

During the first 45 minutes of the hearing, you will be able to view displays illustrating the alternatives that were evaluated in the EA. These displays will be set up in the cafeteria as you enter the hearing site and sign-in. Representatives from the TDOT Project Team will also be available to discuss the project with you individually.

At 5:45 PM, the formal portion of the hearing will commence in the cafeteria. During this time, there will be a brief presentation on the project and its potential impacts. Following the presentation, there will be a Comment/Question Session. In the interest of time, TDOT Project Team members will provide a brief response to your question or comment– more in-depth responses may be available both before and after the formal Comment/Question Session has ended.

After the formal portion of the hearing ends at 6:30, TDOT Project Team members will be available in the cafeteria to talk with you individually. The hearing will be concluded at promptly at 7 PM.

You will have several opportunities to make known your comments about this project and have them included in the official transcript:

- Court reporters will record the hearing's formal Comment/Question session and will be available during the entire hearing to record your individual oral comments.
- A comment form is included in this handout for your use. You may deposit your completed form in the box by the door before you leave the hearing or you may submit written comments to:

  Project Comments
  Tennessee Department of Transportation
  Suite 700, James K. Polk Building
  505 Deaderick Street
  Nashville, Tennessee 37243

*Written comments must be postmarked no later than **April 5, 2011** (and include your name and address) in order to be included in the official transcript of this hearing.

2

PROJECT BACKGROUND

The Tennessee Department of Transportation (TDOT), in cooperation with the Federal Highway Administration (FHWA), has prepared an Environmental Assessment (EA) to improve SR-28/US-127 from SR-62 in Clarkrange to the improved four-lane section of roadway approximately three miles north of Grimsley in Fentress County, Tennessee. The project would widen SR-28/US-127 from a two-lane facility to a four- or five-lane roadway. The total length of the project is approximately 9.3 miles. FHWA approved the EA on December 22, 2010.

WHERE TO VIEW THE EA

Printed copies of the EA are available for public review at:

- Fentress County Public Library, 306 South Main Street, Jamestown, TN
- TDOT Construction Office, 218 Genesis Road, Suite 101, Crossville, TN

The EA, along with other project materials, are also available on the web.

www.tdot.state.tn.us/us127nfentress/

REQUIREMENTS FOR ENVIRONMENTAL REVIEW

The National Environmental Policy Act (NEPA) requires that projects receiving federal funding or requiring major federal actions (e.g., permits) undergo an environmental review process. Design, right-of-way acquisition, and construction of a project cannot proceed until this requirement has been successfully completed.

NEED AND PURPOSE OF THE PROJECT

The purpose of the proposed project is to:

- Provide a direct link between Jamestown and Interstate 40 in Crossville to the south as part of the Tennessee County Seat Connector Program;
- Improve operational efficiency; and
- Enhance economic development opportunities.

Although safety is not a primary transportation objective of the project, it could be assumed that roadway safety would be improved by the construction of the proposed project.

The proposed project is intended to address the following transportation needs in Fentress County:

- A direct link between Jamestown, TN, and I-40;
- Operational efficiency; and
- Traffic safety.

ALTERNATIVES EVALUATED IN EA

During field reviews held early in the project development process, easily identifiable sensitive areas were noted and avoided to the extent possible. Comments received in response to scoping from federal, state, and local agencies were also taken into consideration.

In addition, a Public Information Meeting was held in June 2008. At this meeting, participants had the opportunity to discuss project needs and to make suggestions for possible alignments.

These comments and suggestions, in addition to those received from federal, state, and local agencies and community groups were used to identify the project's alternatives, resulting in the following:

- **No-Build Alternative** - Examines what would happen if the proposed roadway were not built, and serves as a baseline against which a Build Alternative is compared to. This alternative would not meet the project's purpose and need.
- **Alternative A (Build Alternative)** - Utilizes the existing SR-28/US-127 alignment. There are two proposed typical sections for Alternative A (see Figure 1):
    - In the vicinity of SR-62 to Banner Roslin Road, the proposed typical section would have four 12-foot travel lanes, a 12-foot continuous center turn lane, 10-foot shoulders, 2-foot gutters and 10-foot utility strips within approximately 104 feet of right-of-way.

The shoulders would be adequate for use by pedestrians and bicyclists.

- The second typical section would begin at Banner Roslin Road and end at the northern terminus of the project at Wright Frogge Farm Road. It would consist of a four-lane divided highway with 12-foot lanes, 12-foot shoulders, and approximately 52 feet of median within approximately 300 feet of right-of-way. The shoulders would be adequate for use by pedestrians and bicyclists.

ENVIRONMENTAL EFFECTS

The No-Build Alternative would leave SR-28/US-127 between SR-62 in Clarkrange to approximately three miles north of Grimsley, Tennessee, as it currently exists in the project area.

The roadway would not be widened. It would continue to be a two-lane roadway with no improvements. The No-Build Alternative would not result in any residential or business relocations, ecology impacts, community impacts, traffic disruptions, and/or construction impacts.

The primary adverse impacts of Alternative A would be:

- Direct conversion of land to highway right-of-way;
- Potential residential, business and non-profit relocations;
- Noise impacts;
- Impacts to streams, ponds and wetlands; and
- Temporary construction impacts.

Table 1 summarizes the potential impacts of Alternative A.

UNRESOLVED ISSUES

There are no major areas of controversy or any substantial unresolved issues related to the proposed project.

NEXT STEPS

Once comments from the public hearing have been received and analyzed, TDOT will review the public input and the project impacts as reported in the EA. The TDOT Commissioner will select the alternative to be implemented based on the results of this analysis.

After the preferred alternative has been selected, TDOT will begin preparing the Final Environmental Document. Once FHWA approves the Final Environmental Document, FHWA will issue a Finding of No Significant Impact (FONSI). Only after this point can final design and right-of-way acquisition begin.

RIGHT-OF-WAY ACQUISITION AND RELOCATION

In order to minimize unavoidable effects of right-of-way acquisition and the displacements of people, TDOT will carry out a right-of-way relocation program in accordance with Federal Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (P.L. 91646), and the Tennessee's Uniform Relocation Assistance Act of 1972.

An information pamphlet "*Relocation Assistance Program*" is available and outlines the services offered and any payments for which you may be eligible, such as moving expenses and replacement housing benefits for owners and tenants. The brochure also outlines the eligibility requirements for receiving these payments.

TDOT will provide advance notification of impending right-of-way acquisition. The Right-of-Way Office has the responsibility, once a project is approved, of appraising, purchasing and, if required, assisting individuals, families or businesses in relocating.

Before acquiring property, all properties are appraised on the basis of comparable sales and land use values in the areas. In some instances, for values of $10,000 or less, this process might not be done. The value will be established by using real estate appraisers who will prepare, for TDOT's use, written appraisals using actual sales data in the surrounding community.

When an appraisal is necessary, the appraiser will contact each property owner and offer the owner the opportunity to accompany him on an inspection of the property. After the appraisal is complete, the Right-of-Way Appraisal staff will review and field check the findings for accuracy to insure that everything relating to value has been considered in establishing the amount to be offered.

Owners of property will be offered fair market value for their property rights, as it is TDOT's desire to pay fair market value for the necessary property.

A relocation study is prepared during the development of the EA to estimate the number of characteristics of persons who may be dislocated by the project.

This data has been correlated with an inventory of available rental and sales housing locations. Based on the number of housing units currently available in the area, and the number of such resources likely to become available over a one-year period, TDOT foresees no difficulty in satisfactorily relocating all persons likely to be displaced.

The relocation study also identified available relocation opportunities for the displaced Clarkrange Baptist Church.

REGISTER YOUR COMMENTS

You are encouraged to make a formal comment that will be incorporated into the official project summary in one of four ways:

1) Make an oral statement to the court reporter.
2) Submit your written comments tonight before you leave.
3) Make a comment and/or ask questions tonight during the formal portion of the hearing.
4) Mail your comments to the Department (postmarked by April 5, 2011) to:

Project Comments
Tennessee Department of Transportation
505 Deaderick Street
Suite 600, James K. Polk Building
Nashville, TN 37243-0332

* Please make sure to include **your name and address** on your submitted comment form or letter so that it will be included in the official record.

For more information on the project, please contact:
Mr. Ralph Barnes, PE
TDOT Project Manager
(615) 253-1387
Ralph.Barnes@ tn.gov

Figure 1: Alternative A- Project Location Map

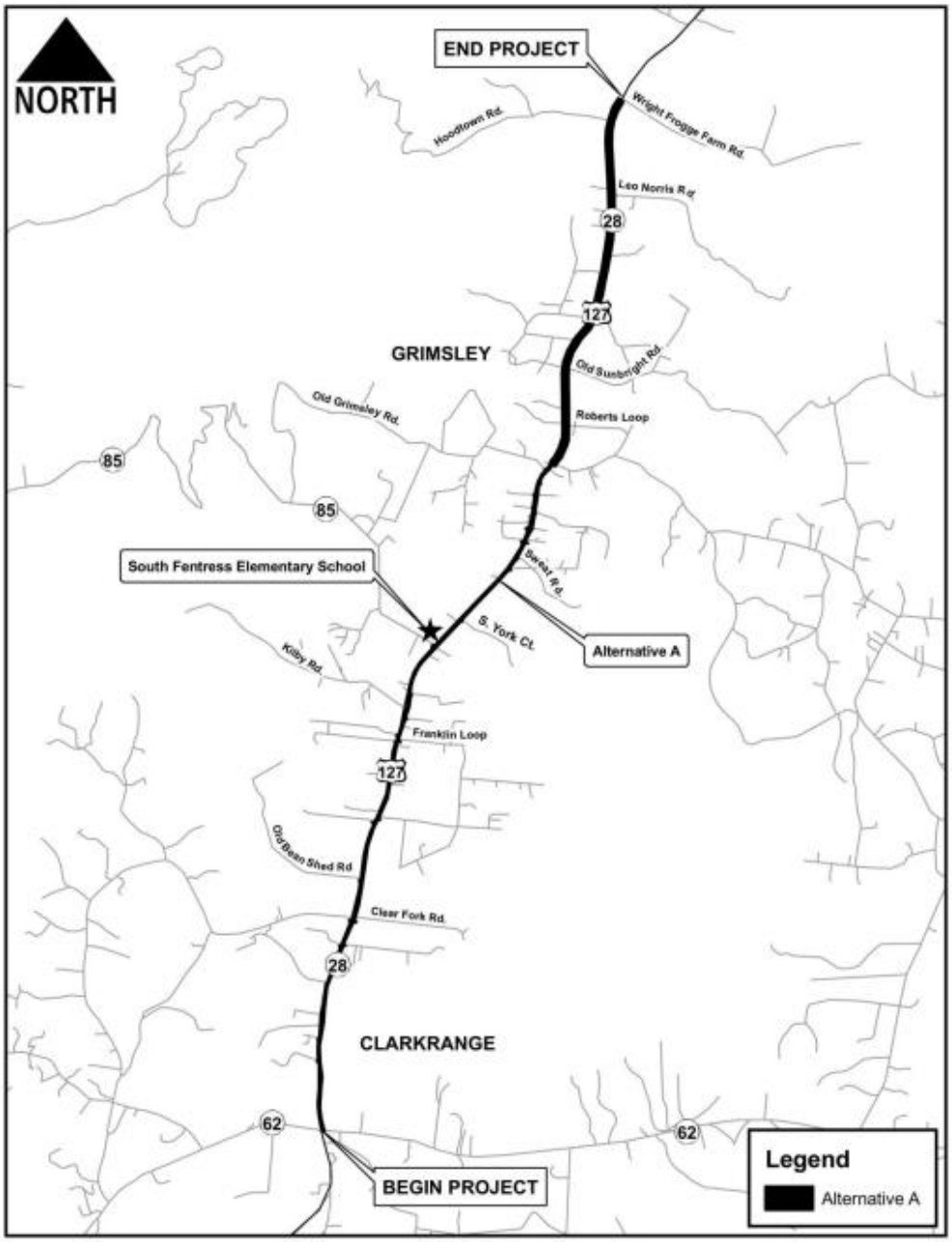


Table 1: Summary of Effects		
Impact Category	**No-Build Alternative**	**Alternative A**
PROJECT FEATURES		
Total Project Length (Miles)	Not Applicable	9.3
Estimated Cost	Not Applicable	$124,799,232
Estimated new ROW (acres)	Not Applicable	82
TRANSPORTATION		
Impacts	No Improvement	• Improved mobility and safety of traffic traveling throughout the project area; and • Improved access for traffic traveling from Jamestown to I-40.
Traffic Operational Efficiency	Roadway would continue to deteriorate to an unacceptable level of traffic given the anticipated traffic volume in 2011 and 2031.	Roadway would improve to an acceptable level of traffic given the anticipated traffic volume in 2011 and 2031.
LAND USE		
Impacts	No effect	Direct conversion of land to highway right-of-way.
Consistency with local plans	Not consistent	Consistent with regional and state planning efforts.
SOCIAL AND ECONOMIC		
Social/Community Cohesion	No effect	No effect
Community Services	No effect	Would require right-of-way from Clarkrange Head Start, Kids Land Child Care Center, Clarkrange Baptist Church, Mount Carmel Freewill Baptist Church, Clarkrange Volunteer Fire Department. Would also displace a building associated with Clarkrange Baptist Church.
Environmental Justice	No effect	No disproportionate effects on minority or low-income communities/persons.
Residential Relocations	No effect	39 plus, 9 vacant
Business Displacements	No effect	11
Non-profit Displacements	No effect	1

Table 1: Summary of Effects		
Impact Category	**No-Build Alternative**	**Alternative A**
Economic	No effect	• Possible increase in taxable property in the project area; • Increased opportunities to attract new businesses and industries to the area; and • Possible increase in number of job opportunities in the area.
FARMLAND		
Acres of prime farmland in ROW	No effect	77
CULTURAL RESOURCES		
Architectural/Historic	No adverse effect	No adverse effect
Archaeological	No adverse effect	No adverse effect
Recreational Resources	No effect	No effect
Section 4(f) and Section (f) Resources	No effect	No effect
Aesthetics and Visual	No adverse effect	No adverse effect
AIR QUALITY		
Change in Pollutant Emissions Burden over No-Build	No effect	No measurable change in MSAT emissions.
Violations of NAAQS	No effect	No effect
NOISE		
Noise Level	51 to 71 dBA	54 to 73 dBA
PHYSICAL ENVIRONMENT		
Geology	No effect	No effect
Hazardous Materials	No effect	• Right-of-way required from 15 potentially contaminated sites. • A Phase II Contamination Assessment is recommended at seven of these sites.
Floodplains	No effect	No effect
Energy	No effect	No effect

Table 1: Summary of Effects		
Impact Category	**No-Build Alternative**	**Alternative A**
NATURAL RESOURCES		
Perennial Streams	No effect	1,700 Linear Feet(1 stream crossing)
Intermittent Streams	No effect	1,565 Linear Feet (9 stream crossings)
Wet Weather Conveyances	No effect	614 Linear Feet (4 WWC crossings)
Ponds	No effect	0.47 acre (3 ponds)
303(d) Listed Streams	No effect	No effect
Wetlands	No effect	4.41 acres(21 wetlands)
Federally Listed Threatened or Endangered Species	No effect	• May affect, but not likely to adversely affect, the Cumberland Elktoe, Indiana Bat, Gray Bat; and • No-Effect determination for the Green Pitcherplant.
State-Listed Species	No effect	• May affect, but not likely to adversely affect, the Obey Crayfish, Eastern Big-Eared Bat and Eastern Small-Footed Bat; and • No-Effect determination on all other state listed species.
Construction	No effect	• Temporary traffic detours may be necessary. • Temporary utility disruptions could occur. • The use of best management practices could avoid or minimize air/noise and sedimentation/erosion impacts.
Permits	None required	• National Pollutant Discharge Elimination System Permit, U.S. Environmental Protection Agency, • Class V Inject ion Well Permit, Tennessee Department of Environment and Conservation; • Aquatic Resources Alterations Permit, State of Tennessee; and • Section 404 Permit from the U.S. Army Corps of Engineers.

Figure E.20 Sample Environmental Action Report (EAR) for Environmental Commitments

The Environmental Action Report (EAR) for Environmental Commitments is currently being updated.

Figure E.21 Sample Determination of Section 4(f) De Minimis Finding

Tennessee Department of Transportation
On Behalf of the Federal Highway Administration – Tennessee Division Office

Determination of
Section 4(f) De Minimis Finding

PUBLIC PARKS ☐
RECREATION AREAS ☐
WILDLIFE AND/OR ☐
WATERFOWL REFUGE

County:_____ City: _____ Route: _____

Termini: _____

_____

Project Numbers: Federal #: _____ State #: _____

Pin Number: _____

Document Type: EIS: ☐ EA: ☐ CE: ☐

IDENTIFICATION OF SECTION 4(F) RESOURCE (S):

Maps/Graphics:

Text:

BRIEF DESCRIPTION OF PROJECT SCOPE:

APPLICABILITY DETERMINATION:
(to be applicable answers to all questions must be "yes")

For Public Parks, recreation areas, wildlife and/or waterfowl refuge:

1. Does the project involve a minor take of land from the resources? ☐ Yes ☐ No
   Identify the total acreage of the resource: _____

   Describe the use of land from the resource (identify amount of the resource to be used):

2. Does the project not adversely affect the qualities, activities, features, or attributes of the resource that qualify it for protection under Section 4(f).
   ☐ Yes No ☐

TN De minimis Determation.doc
September 1, 2006

Tennessee Department of Transportation
On Behalf of the Federal Highway Administration – Tennessee Division Office

Determination of
Section 4(f) De minimis Use

County: _____ City: _____ Route: _____
Termini: _____

_____

Document Type: EIS: ☐ EA: ☐ CE: ☐

3. Has the agency with jurisdiction over the resource concurred in writing with FHWA's and/or TDOT's determination that the project will not adversely affect the resources? ☐ Yes ☐ No

   If yes, identify agency with jurisdiction and date of concurrence and attach written concurrence: _____

4. Has the agency with jurisdiction over the resource been informed of FHWA's and/or TDOT's intent to make a de minimis finding? ☐ Yes ☐ No

   If yes, attach correspondence.

5. Will the public be informed or afforded an opportunity to review and comment on the effects of the project on the protected activities, features, and attributes of the resource? ☐ Yes ☐ No

   a. Describe how the public will be notified.

ALTERNATIVES ANALYSIS

1. Summarize why the use of property from the resources cannot be avoided.

☐ Project Needs would not be met Explain.

☐ Substantial impacts to other environmental/cultural/social resources would result. Explain.

☐ Project complexity would increase resulting in greater construction and maintenance cost.
Explain.

☐ Other. Explain.

2. Summarize the measures taken to minimize harm. This would include, if applicable, design shifts to minimize impacts, use of a retaining walls, and other mitigation measures.

TN De minimis Determation.doc
September 1, 2006

Tennessee Department of Transportation
On Behalf of the Federal Highway Administration – Tennessee Division Office

Determination of
Section 4(f) De minimis Use

County:_____ City: _____ Route: _____
Termini: _____

_____

Document Type: EIS: ☐ EA: ☐ CE: ☐

SUMMARY AND DETERMINATION

The project involves a de minimis impact on the Section 4(f) property as evidence through the discussion on the no adverse impact to a park, recreation land, or wildlife and waterfowl refuge, historic and as a result of mitigation to or avoidance of impacts to the qualifying characteristics and/or the functions of the resource.

Based on the scope of the undertaking; the fact that the undertaking does not adversely affect the functions/qualities of Section 4(f) resource on a permanent or temporary basis; and with agreement from the official with jurisdiction, the proposed action constitutes a De Minimis finding.

Environmental Director: _____ Date: _____
FHWA: _____ Date: _____

TN De minimis Determation.doc
September 1, 2006

Appendix F
EXAMPLES OF CE DOCUMENTS AND CHECKLISTS FOR EA AND EIS DOCUMENTS

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F.0 EXAMPLES OF CE TEMPLATES AND CHECKLISTS FOR EA AND EIS DOCUMENTS

F.1. Example CE Documents and Templates

The Categorical Exclusion (CE) templates are currently being updated.

F.2. Environmental Assessment (EA) Checklist

Table F-1 is a checklist to be used in preparing and reviewing EA documents. Instructions for completing the checklists are included on page 1 of the checklist.

Table F-1 EA Checklist – Page 1 of 11

Environmental Assessment Checklist

Environmental Assessment (EA) Prepared by:	
Name of Principal Author	
Name of Firm (if consultant)	
County	
Route Number	
Project Number	
Description	
Approval Date	

Instructions:
Prepared by: Name of principal author of the document; or name of consultant firm responsible for the study
County: Name of county(ies) within which the project is located.
Route: Name of highway (route designation and number) for which the project is intended.
Project Number: TDOT's project number.
Description: Description of the project.
Date of Submittal/Submittal Draft Number: Date of submittal and draft being submitted (1st, 2nd, 3rd) in appropriate sections.
Approval Date: Date EA is approved by FHWA for circulation (***TDOT use only***).

For "Page Number(s)" column: Identify page numbers where information from all applicable areas of focus can be found.
For "Completed" column: use **Y** for yes and **NA** for not applicable as necessary ***(Responsibility of document preparer)***.
For "Reviewer" Column: Reviewer will use √ for all areas that adequately address concerns, and **"I"** for those that are insufficient in coverage.
For "Planner" Column: Document Preparer will use √ for all areas that adequately address concerns, and **"I"** for those that are insufficient in coverage.
"Comment" page: Discuss supplemental information, guidance or instructions, if any, that required deviation from the checklist. Discuss all

Completed form is to be delivered to the Environmental Division NEPA Documentation Office Planner with the document. Previous checklists for the document, or a copy thereof, shall be attached to the current checklist.

Table F-1 EA Checklist – Page 2 of 11

Environmental Assessment Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Title Page
				Identify level of Environmental Documentation (EA)
				Adequate project description (route, termini, city, county, and state)
				Statement: "Submitted Pursuant To 42 U.S.C. 4332 (2)(c) by the U.S. Department of Transportation, Federal Highway Administration and Tennessee Department of Transportation, Environmental Division
				Identify Cooperating Agency(s)
				Signature Page
				Identify level of Environmental Documentation (EA)
				Include adequate project description (route, termini, city, county, and state)
				Statement: "Submitted Pursuant To 42 U.S.C. 4332 (2)(c) by the U.S. Department of Transportation, Federal Highway Administration and Tennessee Department of Transportation, Environmental Division
				Identify Cooperating Agency(s)
				Lines for FHWA signature and approval date
				Summary
				General Project Description (purpose and need, termini, length, cross section)
				A description of any major actions proposed by other government agencies in the same area as the proposed action
				Discuss all reasonable alternatives considered, including the No-Build alternative
				Discuss all major environmental impacts, both beneficial and adverse
				Discuss any areas of controversy, including those raised by agencies and the public
				Permits and/or Major Actions required
				Include paragraph of Statute of Limitations on Claims - SAFTEA-LU
				Environmental Mitigation Commitments printed on green paper
				Table of Contents
				List areas of focus and appropriate page numbers where the information can be found
				Listing of appendices, tables, figures, and exhibits

Table F-1 EA Checklist – Page 3 of 11

Environmental Assessment Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Purpose and Need
				Discuss project description and setting
				Identify the Purpose and Need of the project
				Description of existing facility
				Briefly describe the project history including actions taken to date (intermediate planning, scoping etc.)
				Identify and provide discussion on the following, as it pertains to the Purpose and Need
				Logical termini/independent utility
				System Linkage
				Safety/accident analysis data
				Roadway deficiencies
				Modal Interrelationships – How will the proposed facility interface with and serve to complement airports, rail road facilities, mass transit services, etc.
				Level of service/capacity/congestion mitigation
				Status of the project relative to the LRP, STIP, and TIP
				Economic development enhancement
				Project mandated by legislation, if applicable
				Provide a figure/exhibit showing the project area
				Alternatives
				Alternatives considered and dismissed
				Briefly summarize basis for eliminating any alternative previously considered but rejected during the project development process
				No-Build Alternative
				Describe the No-Build Alternative
				Discuss whether or not the No Build Alternative will satisfy the Purpose and Need
				Discuss safety and maintenance improvements, both beneficial and adverse

Table F-1 EA Checklist – Page 4 of 11

Environmental Assessment Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Build Alternatives
				Describe each alternative and its respective termini
				Discuss typical sections/design features for each alternative. Include interchanges, additional collector roads, shoulder and pavement widths, access control, grade, turn lanes, etc.
				Discuss design speeds, anticipated level of service (LOS), traffic data and crash data.
				Include comparative table of estimated project cost (design, right-of-way, utilities, construction) for each alternative
				Discuss opportunities for providing pedestrian and bicycle facilities
				Discuss congestion management, mass transit, and light rail options for the project (if applicable)
				Statement that the final selection of an alternative will be made only after consideration of impacts and public hearing comments
				Sufficient (legible, understandable) figures showing alternatives and typical sections as needed.
				Discuss 4(f) avoidance alternative(s), if applicable
				Include comparative table to identify the environmental impacts of each alternative (alternatively, summary table may be placed in Environmental Impacts chapter)
				Environmental Impacts
				Air Quality
				Discuss current conditions and attainment status of the project area (identify which pollutants are of concern for the area, and identify the area)
				Discuss studies that have been conducted and which air quality model was used
				Place Air Quality Conformity statement in document. Project must be in conforming TIP or STIP
				Discuss regional compliance with National Ambient Air Quality Standards (NAAQS)
				Discuss MSAT in Document and in an appendix
				Discuss current and anticipated carbon monoxide levels for each alternative

Table F-1 EA Checklist – Page 5 of 11

Environmental Assessment Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Discuss PM 2.5 and hot spot determination process if project is in a non-attainment area for particulate matter (include PM 7.5 Counties)
				Provide figures/tables/exhibits showing results of air quality analysis
				Discuss indirect and cumulative impacts
				Noise
				Discuss current conditions, including existing ambient noise levels
				Identify sensitive receptors (schools, churches, hospitals, residences)
				Compare existing and predicted noise levels with noise abatement criteria for each alternative
				Discuss noise impacts for each alternative
				Discuss reasonable and feasible noise abatement measures that likely be incorporated into the project (i.e., noise barrier walls, berms, truck restrictions, vertical or horizontal alterations, speed limits), if necessary
				Statement that the final decision on implementation of abatement measures will be made during the project design phase and consideration of input from the public involvement process
				Statement regarding contractor requirements to restrict or reduce transmission of noise during construction activities
				Discuss indirect and cumulative impacts
				Provide tables/figures/exhibits/maps showing sensitive noise receptors and listing existing and predicted noise levels
				Water Quality and Stream Impacts
				Establish baseline conditions for streams, and aquatic and riparian habitat
				Discuss studies that have been conducted
				Discuss potential impacts for each alternative (channel changes, culverts, bridges)
				Discuss consultation with TDEC, USACOE, TVA, and any other appropriate agency
				Discuss efforts to avoid, minimize, and mitigate impacts
				Discuss permits that may be required
				Discuss indirect and cumulative impacts
				Provide tables/figures/exhibits to illustrate resources and effects

Table F-1 EA Checklist – Page 6 of 11

Environmental Assessment Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Floodplains
				Identify 100 year floodplains using National Flood Insurance Program maps
				Identify encroachments (floodplain and/or floodway) of project alternatives onto floodplains/floodways
				Discuss efforts to avoid, minimize, and mitigate impacts
				Discuss indirect and cumulative impacts
				Provide tables/figures/exhibits to illustrate resources and effects
				Wetlands
				Establish baseline conditions and locations of jurisdictional wetlands and other waters of the U. S.
				Discuss results of the National Wetland Inventory maps
				Discuss potential wetland impacts for build alternatives
				Discuss agency coordination and permits that may be required
				Discuss efforts to avoid, minimize, and mitigate impacts
				Include table identifying wetland type, size, function, and appropriate area of impact for each alternative
				Discuss indirect and cumulative impacts
				Provide tables/figures/exhibits to illustrate resources and effects
				Wild and Scenic Rivers
				Identify any wild and scenic rivers
				Discuss involvement with any stream designated as "wild and scenic"
				Discuss indirect and cumulative impacts
				Provide figures/exhibits showing location and impact of wild and scenic river, if applicable
				Federally Threatened and Endangered Species
				Establish baseline conditions
				Discuss coordination with USFWS, TDEC-NHP
				Identify any federally threatened or endangered species and /or designated or proposed habitat that may be impacted
				Provide necessary tables to describe species under consideration

Table F-1 EA Checklist – Page 7 of 11

Environmental Assessment Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Discuss Biological Assessment (BA) requirements and, if applicable, Section 7 Consultation requirements
				Discuss indirect and cumulative impacts
				Discuss mitigation of impacts to Threatened & Endangered species or critical habitat, if necessary
				Section 106
				Identify consulting parties, including federally recognized Native American tribes
				Discuss efforts to consult with Native American tribes, local government agencies, and other interested parties. Note any comments by Tribes
				Discuss any involvement that other agencies/organization (public groups, citizen advisory groups, resource agencies,, etc.) may have had throughout the project process
				Historic Structures or Districts
				Discuss studies that were conducted in determining potential effects to historic properties in the area
				Describe the Area of Potential Effect
				Identify properties eligible for or determined eligible for the National Register
				Discuss potential effects on each historic property for each alternative
				Discuss coordination with the SHPO and consulting parties regarding eligibility and effects (include letters in a technical appendix)
				Discuss adverse effects and avoidance, minimization and mitigation
				Reference MOA in Appendix, if applicable
				Discuss indirect and cumulative impacts
				Provide tables/figures/exhibits/maps describe historic resources and impacts
				Archaeology
				Discuss Area of Potential Effect
				Discuss archaeological investigations that were conducted for each alternative
				Describe all archaeological sites identified
				Identify sites recommended for additional work (Phase II)

Table F-1 EA Checklist – Page 8 of 11

Environmental Assessment Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Identify any sites eligible or determined to be eligible for the National Register (locations of sites will not be identified in the text or on graphics in the document)
				Reference coordination with SHPO, Native Americans, Consultating Parties, and include letters in appendix
				Include MOA in appendix, if applicable
				Discuss indirect and cumulative impacts
				Land Use
				Discuss existing and future land use planning
				Discuss project compatibility with land use planning
				Discuss growth inducement (current development trends; indirect effects on the proposed land use patterns, population density and growth rate
				Provide tables/figures/exhibits showing existing and future land use and impacts
				Discuss indirect and cumulative impacts
				Community Impacts
				Establish baseline conditions (existing neighborhoods and communities)
				Discuss population (past, present, and future trends)
				Discuss age distribution
				Discuss employment and labor force
				Discuss community cohesion
				Identify community resources (parks, churches, shopping, schools, hospitals, libraries, etc.)
				Discuss impacts on travel patterns, accessibility, community facilities, economic vitality, established business districts, and overall public safety
				Discuss social and cultural loss to the community by those displaced, if applicable
				Discuss impacts on economic vitality in the project area and on established business districts
				Discuss coordination with community, city, and county officials
				Prepare tables showing socio-economic data and figures showing demographic patterns as appropriate
				Discuss indirect and cumulative impacts

Table F-1 EA Checklist – Page 9 of 11

Environmental Assessment Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Relocations and Displacements
				Identify number and type of relocations (residential, commercial, non-profit, etc.) for each alternative
				Discuss availability of comparable replacement housing, price ranges, sanitary, safe, decent, etc.
				Discuss Relocation Assistance Program, Title V1 of the Civil Rights Act of 1964
				List the Uniform Relocation Assistance Laws and Regulations
				Prepare tables showing relocation impacts by alternative
				Discuss indirect and cumulative impacts
				Environmental Justice
				Establish baseline conditions
				Include statement that project complies with Executive Order 12898
				Identify impacts to minorities and low-income populations
				Provide background demographic data (tables and figures with census tract, block, and block group level information as appropriate)
				Discuss avoidance, minimization and mitigation, if applicable
				Pedestrians and Bicycle Facilities
				Identify existing and planned facilities and their use for recreational or transportation
				Discuss opportunities for providing pedestrian and bicycle facilities with the build alternative(s)
				Discuss indirect and cumulative impacts
				Farmland
				Establish baseline conditions
				Discuss impacts on farmland, using tables as necessary
				Complete Farmland Conversion Impact Rating Form (AD-1006), include in appendix
				Discuss alternatives, if AD-1006 Form results are over 160
				Discuss indirect and cumulative impacts

Table F-1 EA Checklist – Page 10 of 11

Environmental Assessment Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Hazardous Materials
				Identify known and potential sites
				Identify sites recommended for remediation, If necessary
				Discuss the process for remediation, if remediation if necessary
				Include summary table of sites and identify associated alternatives
				Provide tables/figures/exhibits/pictures to show hazardous materials sites as appropriate
				Discuss indirect and cumulative impacts
				Visual Impacts
				Describe existing viewshed (s) and sensitive visual resources/views
				Discuss view of the road and view from the road
				Describe impacts of alternatives on visually sensitive resources
				Discuss indirect and cumulative impacts
				Construction Impacts
				Discuss potential adverse impacts (noise, detour, dust, air impacts, etc.)
				Discuss mitigation measures (Standard Specification for Road and Bridge Construction and other applicable laws and regulations)
				Indirect and Cumulative Impacts
				Indirect and Cumulative Impacts can be discussed here or under each impact discussed in the Environmental Impact chapter
				Discuss indirect impacts
				Discuss cumulative impacts
				Comments, Coordination, and Public Involvement
				Provide a list of agencies, officials, and organizations to whom the Initial coordination was sent
				Provide comments and dispositions to letters received
				Discuss public involvement activities (meetings, hearings)
				Provide comments from public hearing and disposition of comments

Table F-1 EA Checklist – Page 11 of 11

Environmental Assessment Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Section 4(f)/Programmatic 4(f) and 6(f)
				Identify and describe 4(f) resources
				Identify impacts to resources
				Discuss avoidance alternatives
				Application of *DeMinimus* Impact Requirements
				Discuss measures to minimize harm
				Discuss feasible and prudent alternative requirements
				Identify and discuss 6 (f) requirements

Comments: Discuss supplemental information, guidance or instructions that required deviation from the checklist. Discuss all categories that contain "NA" in the "Complete" columns of this format. Comments regarding the content and format of this form and/or its applicability may also be submitted through this section.

F.3. Environmental Impact Statement (EIS) Checklist

Table F-2 is a checklist to be used in preparing and reviewing EIS documents. Instructions for completing the checklists are included on page 1 of the checklist.

Table F-2 EIS Checklist – Page 1 of 11

Environmental Impact Statement Checklist

Type of Document (DEIS or FEIS)	
Document Prepared by:	
Name of Principal Author	
Name of Firm	
County	
Route Number	
Project Number	
Description	
Approval Date	

Instructions:

Type of Document: State whether the document is a DEIS or FEIS.
Prepared by: Name of principal author of the document; name of consultant firm responsible for the study
County: Name of county(ies) within which the project is located.
Route: Name of highway (route designation and number) for which the project is intended.
Project Number: TDOT's project number.
Description: Description of the project.
Date of Submittal/Submittal Draft Number: Date of submittal and draft being submitted (1st, 2nd, 3rd) in appropriate sections.
Approval Date: Date DEIS or FEIS is approved by FHWA (***TDOT use only***).

For "Page Number(s)" column: Identify page numbers where information from all applicable areas of focus can be found.
For "Completed" column: use **Y** for yes and **NA** for not applicable as necessary ***(Responsibility of document preparer)***.
For "Reviewer" Column: Reviewer will use √ for all areas that adequately address concerns, and **"I"** for those that are insufficient in coverage.
For "Planner" Column: Document Preparer will use √ for all areas that adequately address concerns, and **"I"** for those that are insufficient in coverage.
"Comment" page: Discuss supplemental information, guidance or instructions, if any, that required deviation from the checklist. Discuss all

Completed form is to be delivered to the Environmental Division NEPA Documentation Office Planner with the document. Previous checklists for the document, or a copy thereof, shall be attached to the current checklist.

Table F-2 EIS Checklist – Page 2 of 11

Environmental Impact Statement Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Title Page
				Identify level of Environmental Documentation (DEIS or FEIS)
				Adequate project description (route, termini, city, county, and state)
				Statement: "Submitted Pursuant To 42 U.S.C. 4332 (2)(c) by the U.S. Department of Transportation, Federal Highway Administration and Tennessee Department of Transportation, Environmental Division
				Include State and Federal Project Item Number
				Identify Cooperating Agency(s)
				Signature Page
				Identify level of Environmental Documentation (DEIS or FEIS)
				Include adequate project description (route, termini, city, county, and state)
				Statement: "Submitted Pursuant To 42 U.S.C. 4332 (2)(c) by the U.S. Department of Transportation, Federal Highway Administration and Tennessee Department of Transportation, Environmental Division
				Identify Cooperating Agency(s)
				One paragraph abstract of the EIS
				Signature lines for FHWA and TDOT and Date lines
				Summary
				General Project Description (purpose and need, termini, length, cross section)
				A description of any major actions proposed by other government agencies in the same area as the proposed action
				Discuss all reasonable alternatives considered, including the No-Build alternative
				Discuss all major environmental impacts, both beneficial and adverse
				Discuss any areas of controversy, including those raised by agencies and the public
				Include paragraph of Statute of Limitations on Claims
				Permits required
				Environmental Mitigation Commitments on printed on green paper
				Table of Contents

Table F-2 EIS Checklist – Page 3 of 11

Environmental Impact Statement Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				List areas of focus and appropriate page numbers where the information can be found
				Listing of appendices, tables, figures, and exhibits
				Purpose and Need
				Discuss project description and setting
				Identify the Purpose and Need of the project
				Description of existing facility
				Briefly describe the project history including actions taken to date (intermediate planning, scoping etc.)
				Identify and provide discussion on the following, as it pertains to the Purpose and Need
				Logical termini/independent utility
				System Linkage
				Safety/accident analysis data
				Roadway deficiencies
				Modal Interrelationships – How will the proposed facility interface with and serve to complement airports, rail road facilities, mass transit services, etc.
				Level of service/capacity/congestion mitigation
				Status of the project relative to the LRP, STIP, and TIP
				Economic development enhancement
				Project mandated by legislation, if applicable
				Provide a figure/exhibit showing the project area

Table F-2 EIS Checklist – Page 4 of 11

Environmental Impact Statement Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Alternatives
				Alternatives considered and dismissed
				Briefly summarize basis for eliminating any alternative previously considered but rejected during the project development process
				No-Build Alternative
				Describe what is the No-Build Alternative
				Discuss whether or not the No Build Alternative will satisfy the Purpose and Need
				Discuss safety and maintenance improvements, both beneficial and adverse
				Build Alternatives
				Describe each alternative and its respective termini
				Discuss typical sections/design features for each alternative. Include interchanges, additional collector roads, shoulder and pavement widths, access control, grade, turn lanes, etc.
				Discuss design speeds, anticipated level of service (LOS), traffic data and crash data.
				Include comparative table of estimated project cost (design, right-of-way, utilities, construction) for each alternative
				Discuss opportunities for providing pedestrian and bicycle facilities
				Discuss congestion management, mass transit, and light rail options for the project (if applicable)
				Statement that the final selection of an alternative will be made only after consideration of impacts and public hearing comments
				Sufficient (legible, understandable) figures showing alternatives and typical sections as needed.
				Discuss 4(f) avoidance alternative(s), if applicable
				Include comparative table to identify the environmental impacts of each alternative (alternatively, summary table may be placed in Environmental Impacts chapter)

Table F-2 EIS Checklist – Page 5 of 11

Environmental Impact Statement Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Environmental Impacts
				Air Quality
				Discuss current conditions and attainment status of the project area (identify which pollutants are of concern for the area, and identify the area)
				Discuss studies that have been conducted and which air quality model was used
				Place Air Quality Conformity statement in document. Project must be in conforming TIP or STIP
				Discuss regional compliance with National Ambient Air Quality Standards (NAAQS)
				Discuss current and anticipated carbon monoxide levels for each alternative
				Discuss PM 2.5 and hot spot determination process if project is in a non-attainment area for particulate matter
				Discuss MSAT in document and in an appendix
				Provide figures/tables/exhibits showing results of air quality analysis
				Discuss indirect and cumulative impacts
				Noise
				Discuss current conditions, including existing ambient noise levels
				Identify sensitive receptors (schools, churches, hospitals, residences)
				Compare existing and predicted noise levels with noise abatement criteria for each alternative
				Discuss noise impacts for each alternative
				Discuss reasonable and feasible noise abatement measures that likely be incorporated into the project (i.e., noise barrier walls, berms, truck restrictions, vertical or horizontal alterations, speed limits), if necessary
				Statement that the final decision on implementation of abatement measures will be made during the project design phase and consideration of input from the public involvement process
				Statement regarding contractor requirements to restrict or reduce transmission of noise during construction activities
				Discuss indirect and cumulative impacts

Table F-2 EIS Checklist – Page 6 of 11

Environmental Impact Statement Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Provide tables/figures/exhibits showing sensitive noise receptors and listing existing and predicted noise levels
				Water Quality and Stream Impacts
				Establish baseline conditions for streams, and aquatic and riparian habitat
				Discuss studies that have been conducted
				Discuss potential impacts for each alternative (channel changes, culverts, bridges)
				Discuss consultation with TDEC, USACOE, TVA, and any other appropriate agency
				Discuss efforts to avoid, minimize, and mitigate impacts
				Discuss permits that may be required
				Discuss indirect and cumulative impacts
				Provide tables/figures/exhibits to illustrate resources and effects
				Floodplains
				Identify 100 year floodplains using National Flood Insurance Program maps
				Identify encroachments (floodplain and/or floodway) of project alternatives onto floodplains/floodways
				Discuss efforts to avoid, minimize, and mitigate impacts
				Discuss indirect and cumulative impacts
				Provide tables/figures/exhibits to illustrate resources and effects
				Wetlands
				Establish baseline conditions and locations of jurisdictional wetlands and other waters of the U. S.
				Discuss results of the National Wetland Inventory maps
				Discuss potential wetland impacts for build alternatives
				Discuss agency coordination and permits that may be required
				Discuss efforts to avoid, minimize, and mitigate impacts
				Table identifying wetland type, size, function, and appropriate area of impact for each alternative
				Discuss indirect and cumulative impacts
				Provide tables/figures/exhibits to illustrate resources and effects

Table F-2 EIS Checklist – Page 7 of 11

Environmental Impact Statement Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Wild and Scenic Rivers
				Identify any wild and scenic rivers
				Discuss involvement with any stream designated as "wild and scenic"
				Discuss indirect and cumulative impacts
				Provide figures/exhibits showing location and impact of wild and scenic river, if applicable
				Federally Threatened and Endangered Species
				Establish baseline conditions
				Discuss coordination with USFWS, TDEC-NHP
				Identify any federally threatened or endangered species and /or designated or proposed habitat that may be impacted
				Provide necessary tables to describe species under consideration
				Discuss Biological Assessment (BA) requirements and, if applicable, Section 7 Consultation requirements
				Discuss indirect and cumulative impacts
				Discuss mitigation of impacts to Threatened & Endangered species or critical habitat, if necessary
				Section 106
				Identify consulting parties, including federally recognized Native American tribes
				Discuss efforts to consult with Native American tribes, local government agencies, and other interested parties
				Discuss any involvement that other agencies/organization (public groups, citizen advisory groups, resource agencies,, etc.) may have had throughout the project process
				Historic Structures or Districts
				Discuss studies that were conducted in determining potential effects to historic properties in the area
				Describe the Area of Potential Effect
				Identify properties eligible for or determined eligible for the National Register
				Discuss potential effects on each historic property for each alternative
				Discuss coordination with the SHPO and consulting parties regarding eligibility and effects (include letters in a technical appendix)

Table F-2 EIS Checklist – Page 8 of 11

Environmental Impact Statement Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Discuss adverse effects and avoidance, minimization and mitigation
				Reference MOA in Appendix, if applicable
				Discuss indirect and cumulative impacts
				Provide tables/figures/exhibits describe historic resources and impacts
				Archaeology
				Discuss Area of Potential Effect
				Discuss archaeological investigations that were conducted for each alternative
				Describe all archaeological sites identified
				Identify sites recommended for additional work (Phase II)
				Identify any sites eligible or determined to be eligible for the National Register (locations of sites will not be identified in the text or on graphics in the document)
				Reference coordination with SHPO, Native Americans, Consultating Parties, and include letters in appendix
				Include MOA in appendix, if applicable
				Discuss indirect and cumulative impacts
				Land Use
				Discuss existing and future land use planning
				Discuss project compatibility with land use planning
				Discuss growth inducement (current development trends; indirect effects on the proposed land use patterns, population density and growth rate
				Provide tables/figures/exhibits showing existing and future land use and impacts
				Discuss indirect and cumulative impacts
				Community Impacts
				Establish baseline conditions (existing neighborhoods and communities)
				Discuss population (past, present, and future trends)
				Discuss age distribution
				Discuss employment and labor force
				Discuss community cohesion

Table F-2 EIS Checklist – Page 9 of 11

Environmental Impact Statement Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Identify community resources (parks, churches, shopping, schools, hospitals, libraries, etc.)
				Discuss impacts on travel patterns, accessibility, community facilities, economic vitality, established business districts, and overall public safety
				Discuss social and cultural loss to the community by those displaced, if applicable
				Discuss impacts on economic vitality in the project area and on established business districts
				Discuss coordination with community, city, and county officials
				Prepare tables showing socio-economic data and figures showing demographic patterns as appropriate
				Discuss indirect and cumulative impacts
				Relocations and Displacements
				Identify number and type of relocations (residential, commercial, non-profit, etc.) for each alternative
				Discuss availability of comparable replacement housing, price ranges, sanitary, safe, decent, etc.
				Discuss Relocation Assistance Program, Title V1 of the Civil Rights Act of 1964
				List the Uniform Relocation Assistance Laws and Regulations
				Prepare tables showing relocation impacts by alternative
				Discuss indirect and cumulative impacts
				Environmental Justice
				Establish baseline conditions
				Include statement that project complies with Executive Order 12898
				Identify impacts to minorities and low-income populations
				Provide background demographic data (tables and figures with census tract, block, and block group level information as appropriate)
				Discuss avoidance, minimization and mitigation, if applicable
				Pedestrians and Bicycle Facilities
				Identify existing and planned facilities and their use for recreational or transportation
				Discuss opportunities for providing pedestrian and bicycle facilities with the build alternative(s)

Table F-2 EIS Checklist – Page 10 of 11

Environmental Impact Statement Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Discuss indirect and cumulative impacts
				Farmland
				Establish baseline conditions
				Discuss impacts on farmland, using tables as necessary
				Complete Farmland Conversion Impact Rating Form (AD-1006), include in appendix
				Discuss alternatives, if AD-1006 Form results are over 160
				Discuss indirect and cumulative impacts
				Hazardous Materials
				Identify known and potential sites
				Identify sites recommended for remediation, If necessary
				Discuss the process for remediation, if remediation if necessary
				Include summary table of sites and identify associated alternatives
				Provide tables/figures/exhibits to show hazardous materials sites as appropriate
				Discuss indirect and cumulative impacts
				Visual Impacts
				Describe existing viewshed (s) and sensitive visual resources/views
				Discuss view of the road and view from the road
				Describe impacts of alternatives on visually sensitive resources
				Discuss indirect and cumulative impacts
				Construction Impacts
				Discuss potential adverse impacts (noise, detour, dust, air impacts, etc.)
				Discuss mitigation measures (Standard Specification for Road and Bridge Construction and other applicable laws and regulations)
				Indirect and Cumulative Impacts
				Indirect and Cumulative Impacts can be discussed here or under each impact discussed in the Environmental Impact chapter
				Discuss indirect impacts
				Discuss cumulative impacts

Table F-2 EIS Checklist – Page 11 of 11

Environmental Impact Statement Checklist

Page Number(s)	Completed	Reviewer	Planner	Category
Insert check mark and page number(s) as appropriate				
				Comments, Coordination, and Public Involvement
				Provide a list agencies, officials, and organizations to whom the Initial coordination was sent.
				Provide list of agencies, organizations, and persons to whom copies of the approved document are sent (may be included in an appendix)
				Provide comments and dispositions to letters received
				Discuss public involvement activities (meetings, hearings)
				Provide comments and dispositions to comments raised during public involvement activities
				Section 4(f)/Programmatic 4(f) and 6(f)
				Identify and describe 4(f) resources
				Identify impacts to resources
				Discuss avoidance alternatives
				Application of *DeMinimus* Impact Requirements
				Discuss measures to minimize harm
				Discuss feasible and prudent alternative requirements
				Identify and discuss 6 (f) requirements
				Appendices
				Include list of persons responsible for preparation of EIS, including FHWA, and their qualifications
				Include coordination and concurrence letters

Comments: Discuss supplemental information, guidance or instructions that required deviation from the checklist. Discuss all categories that