

APPENDIX A

Annotated Bibliography

NEPA Project Management

American Association of State Highways and Transportation Officials (AASHTO). *Practitioner's Handbooks.*

- [**Maintaining a Project File and Preparing an Administrative Record for a NEPA Study**](#)
Practical tips for project managers include what documents to prepare; the process for compiling the record for the court; advice for building a strong record; judgment calls about what documents to include; and submitting the record to the court.
- [**Responding to Comments on an Environmental Impact Statement**](#)
Practical tips address developing responses to comments, ensuring accuracy and consistency, and formats for presenting DEIS comments and responses in the FEIS
- [**Managing the NEPA Process for Toll Lanes and Toll Roads \(July 2006\)**](#)
This Handbook provides recommendations for conducting National Environmental Policy Act (NEPA) studies for projects involving toll lanes and toll roads. It covers issues associated with the NEPA process itself, as well as a range of related issues, such as developing tolling policies in the transportation planning process and coordinating NEPA studies with a competitive procurement for a public-private partnership. It provides an overview of the key issues and offers suggestions for consideration in preparing a NEPA study for a project that includes tolled alternatives.
- [**Tracking Compliance with Environmental Commitments/Use of Environmental Monitors**](#)
Practical tips address making environmental commitments, creating commitments tracking database and its use during design and construction, organizing the environmental monitoring team and procedures, special considerations for design-build projects, and tracking compliance with environmental commitments.
- [**Utilizing Community Advisory Committees for NEPA Studies**](#)
Practical tips include deciding whether to establish a CAC, defining the role of the CAC, selecting CAC members and organizing the CAC, preparing for and facilitating CAC meetings, and providing for public access to CAC meetings.
- [**Consulting under Section 106 of the National Historic Preservation Act**](#)
Practical tips include preparing for Section 106 consultation, defining an area of potential effects (APE), inviting consulting parties and public involvement; evaluating eligibility for the National Register of Historic Places; determining and resolving adverse effects, developing memoranda of agreement (MOAs) and programmatic agreements (PAs), and using alternative procedures to satisfy Section 106 requirements.
- [**Defining the Purpose and Need and Determining the Range of Alternatives for Transportation Projects**](#)
Issues covered include understanding the legislative and planning context; determining the needs; defining the project purpose; screening alternatives; and involving agencies and the public.

- **[Developing and Implementing and Environmental Management System in a Department of Transportation](#)**

Issues covered include: understanding what constitutes an EMS, using Plan–Do–Check–Act, providing environmental and business value to your organization, using AASHTO’s EMS roadmap, applying an EMS to any activity or facility, deciding upon a focus for initial efforts, identifying expectations and objectives, building upon existing successes, measuring performance, and continually improving performance.

- **[Using the SAFETEA-LU Environmental Review Process \(23 U.S.C. 139\)](#)**

SAFETEA-LU established an environmental review process for highway and transit projects that must be followed for highway and transit projects that require the approval of the U.S. Department of Transportation and involve preparation of an environmental impact statement (EIS). The process was intended to make environmental reviews more efficient and timely by clarifying agency roles and responsibilities, improving coordination, setting deadlines, and improving dispute resolution. The Handbook helps practitioners ensure compliance with Section 139 and use the new opportunities in Section 139 to achieve the underlying goal of this process.

- **[Practitioner’s Handbook #10: Using the Transportation Planning Process to Support the NEPA Process](#)**

The Practitioners Handbook improves linkages between the planning and NEPA processes, while also complying with recent legislative changes that require increased consideration of environmental issues in the planning process. It covers Establishing Organizational Linkages; Establishing a Vision for the State or Region’s Transportation System; Defining Corridor-Level Goals and/or the Purpose and Need; Eliminating Alternatives’ Identifying the Affected Environment and Potential Environmental Impacts; and Considering Environmental Mitigation Activities.

Caltrans. [Guide to Project Delivery Workplan Standards](#), Release 9.1. (Adopted July 1, 2007 and Amended September 4, 2007).

This guide includes the Work Breakdown Structure (WBS), Standard Cost Centers, Standard Milestones and their use to plan and control work content of capital projects. Also provides guidelines for preparing, understanding, and presenting a WBS for a given capital project.

Appendix D only ([Excel](#))

Appendix D Outline only ([Excel](#))

Milestones ([Excel](#))

Caltrans. [Implementing Agency Responsibilities on State Highway Projects](#). (Revised July 2007)

This document outlines the responsibilities of “Implementing Agencies” that administer State Highway projects in California. It is an aid to Implementing Agencies to assist them to find the Federal Laws and Regulations, State Laws and Regulations and

Department of Transportation (“The Department”) Manuals and Policies that they will need to understand in order to carry out their responsibilities.

Caltrans. [Project Communication Handbook](#) 1st. ed. (February 2003).

Project management demands a free flow of communication with and among project team members, and internal and external project stakeholders. The project team needs frequent information from each of its team members to complete and improve the project and to understand the needs and expectations of the project's customers. Project communication management involves project communication planning, information distribution, reporting performance and formal project close-out.

Appendix A Stakeholders Analysis - [Excel](#)

Appendix B Communication Matrix - [Excel](#)

Sample Communication Plan - Part 1 - [Word](#)

Sample Communication Plan - Part 2 Stakeholders Analysis - [Excel](#)

Sample Communication Plan - Part 3 Communication Matrix - [Excel](#)

Project Communication Planning Presentation - [Powerpoint](#)

Caltrans, *Project Management Improvement Process*. (Revised April 22, 2006).

The Caltrans Project Management Improvement Process is described in this document along with the standard outline for a project management improvement charter. The document provides tools to ensure that the project manager understands what the sponsor wants, and once the project manager is confident that he understands the sponsor's written expectations, the project team can proceed with project planning and execution. The result is a project specific Work Breakdown Structure that would ensure that the project includes all the work needed and does not include unnecessary work. Specific tools for the development and implementation of the above process are provided in the document.

Caltrans. Office of Project Management Process Improvement. *Project Communications Handbook*, First Edition, Revision 0. (February 14, 2003).

The handbook provides an overview of the basic concepts and processes that guide project communication at the California Department of Transportation (Department). The purpose of the handbook is to assist the project team in identifying internal and external stakeholders, and to enhance communication among all parties involved. Processes involved in Department project communication are described followed by tools and methods used by the project team to accomplish the communication task at hand. Samples and templates for various parts of the communication plan, such as sample conflict management strategies, stakeholder analysis and a communication matrix are also included.

Caltrans. Office of Project Management Process Improvement. *Project Management Handbook*, 4th Edition, Revision 1. (September 19, 2002).

The Caltrans Project Management Handbook provides an overview of the basic concepts that guide project management at Caltrans. The handbook describes Caltrans Project Management mission- Deliver projects that satisfy customer needs; Improve project delivery performance related to quality, scope, schedule, and cost; Anticipate and respond to issues before they become problems; Communicate effectively with stakeholders; Manage change and Manage risk, amongst others, and then identifies five knowledge and skill sets that are required to be understood and used by the Caltrans project team for effective state highway project management. These include Project management knowledge and practices, State highway project standards and procedures, Understanding of the project context, General management knowledge and practices and Human relations skills. Following this, the handbook organizes the project lifecycle into five components- Projects Initiation Documents, Permits & Environmental Studies, Plans, Specifications and Estimates, Construction and Right of Way, and specifies deliverables for each component of the lifecycle. Various project management processes and product oriented processes that form part of the project lifecycle components are described followed by the organizational structure, roles, and responsibilities of the people involved in Caltrans projects. Lastly, tools and information systems used to accomplish Caltrans Project Management mission are described.

Caltrans, Office of Project Management Process Improvement. [Project Management Handbook](#), 5th ed. (October 2007).

This document defines project specifications and project management objectives, while clarifying the difference between project and program management at Caltrans. The handbook argues that effective management of California state highway projects requires that the project team understand and use project management knowledge and practices; state highway knowledge standards and regulations; the project environment; general management knowledge and practices; and interpersonal skills. It describes the project lifecycle from the project initiation, through permits and environmental studies, specifications planning, right-of-way development, and construction. For each level, it describes the people, internal processes, and potential tools involved to make projects successful.

Caltrans. Office of Statewide Project Management Improvements. *Guide to Capital Project Delivery Work Plan Standards*, Release 9.1. (July 1, 2007 and Amended September 4, 2007).

The guide provides a statewide standard, information regarding the Project Delivery Work plan Standards, Release 9.0 and its use to plan and control the work content of capital projects. The guide also provides guidelines for preparing, understanding and presenting a Work Breakdown Structure (WBS) for a given capital project. The guide defines a WBS as a product-oriented grouping of project elements that organizes and defines the total scope of the project. Each descending level represents an increasingly detailed definition of a project component which may be a service or a product. Part two of the guide is a dictionary that provides the Project Delivery Standard WBS work element definitions. The WBS elements are organized by code structure and the definition for each WBS element is a generic description of work represented by the element and is not inclusive of every work activity that must be accomplished. Part three

includes appendices associated with the guide, followed by Part four which states the Milestones Associated with WBS 9.1 Elements, and finally Part five which is a Standard Cost Center Guide 9.0.

Caltrans. Office of Statewide Project Management Improvement. *Project Risk Management Handbook Threats and Opportunities* (May 2007).

The Capital Project Risk Management Process, described in this handbook aims to aid in the effective management of project risks, both threats and opportunities. As stated in the plan, the project risk management process helps project sponsors and project teams make informed decisions regarding alternative approaches to achieving their objectives and the relative risk involved in each, in order to increase the likelihood of success in meeting or exceeding the most important objectives (e.g. time) sometimes at the expense of other objectives (e.g. cost). According to the handbook, risk management encourages the project team to take appropriate measures to: minimize adverse impacts to project scope, cost, and schedule (and quality, as a result), maximize opportunities to improve the project's objectives with lower cost, shorter schedules, enhanced scope and higher quality and minimize management by crisis.

Colorado Department of Transportation. [National Environmental Policy Act Manual](#). (July 2007).

The manual provides guidance on preparing and processing documents to comply with the National Environmental Policy Act of 1969 and other applicable state and federal environmental laws affecting transportation projects in Colorado. The manual provides references and links to related federal and state laws, executive orders, regulations and policies as well as "best of" examples for various compliance processes where appropriate. The manual discusses CDOT's Transportation Development Process and integrating project development and NEPA. It addresses implementation of the NEPA process and documentation, resource considerations, NEPA document review procedures and co-ordination, public involvement, and permits, regulations, and policies. The manual is intended to help CDOT staff implement NEPA in a highly effective manner to produce better environmental documents that decision makers may use to make well-informed transportation decisions.

Council on Environmental Quality. [A Citizen's Guide to the NEPA: Having Your Voice Heard](#). (December 2007).

This guide has been developed to help citizens and organizations who are concerned about the environmental effects of federal decisionmaking to effectively participate in Federal agencies' environmental reviews under the National Environmental Policy Act (NEPA). The environmental review process under NEPA provides an opportunity for you to be involved in the Federal agency decisionmaking process. It will help you understand what the Federal agency is proposing, to offer your thoughts on alternative ways for the agency to accomplish what it is proposing, and to offer your comments on the agency's analysis of the environmental effects of the proposed action and possible mitigation of potential harmful effects of such actions.

Council on Environmental Quality. [Collaboration in NEPA: A Handbook for NEPA Practitioners.](#)

The handbook assists Federal agencies NEPA practitioners responsible for conducting environmental reviews to expand the effective use of collaboration as part of the NEPA process. The NEPA Task Force found that collaborative approaches to engaging the public and assessing federal action impacts can improve the quality of decision-making and increase public trust and confidence in agency decisions. It also helps identify opportunities to collaborate, particularly with other Federal agencies or as part of state and local long range transportation and land use planning processes, during the Environmental Impact Statement (EIS) or Environmental Assessment (EA) process. The handbook is also useful for citizens and citizen groups.

CTC and Associates LLC, WisDOT (Wisconsin Department of Transportation) Research and Communicaitons Services Section. *State DOT Environmental Programs, Evaluation and Performance Measures.* (January 17, 2007).

The Transportation Synthesis Report by WisDOT includes information on operations and performance measurement for the environmental offices of seven state DOTs as of January 17, 2007. The seven states are Arizona, California, Florida, New York, Oregon, Vermont, and Washington.

Federal Highway Administration and Minnesota Department of Transportation. *St. Croix River Crossing Risk Assessment Workshop Report.* (April 2006).

The St. Croix Funding Workshop was a partnering effort between FHWA, Mn/DOT and Wis/DOT that addressed options for alternate forms of project funding outside of traditional sources. The workshop's speakers presented funding alternative pros and cons that facilitated risk assessment discussions. The workshop was broken into three "think-tank" groups. The "think-tank" topics included Public Private Partnerships (PPP), Tolls and Innovative Debt. Each group rotated to all three "think-tanks" to identify and analyze future events. Statistical analysis was completed to evaluate the scope, intensity and statistical relevancy of identified risks. Statistics concluded a generalized idea about the global group's vision for the future of highway funding. The group's vision included more opportunities in tolling than any other funding alternative as the relative intensity levels of threat was lowest for tolling. Also, the intensity of identified opportunities compared to the intensity of identified threats within tolling was the highest. The risk assessment was conducted at a strategic level to focus and communicate risk areas and promote allocation of resources to High Risk Areas so that it becomes more likely that the St. Croix project may be delivered on time and within budget.

Florida Department of Transportation. [Construction Management at Risk.](#) (As of September 25, 2007).

Construction Management at Risk is defined as an integrated team approach applying modern management techniques to the planning, design and construction of a project in order to control time and cost, and to assure quality for the project owner. The team consists of the owner, the architect/engineer and the construction manager (CM). Construction Management at Risk includes pre-construction and construction services. The CM is selected about the same time as the architect/engineer and in his role as owner's agent; his task is to represent the interests of the owner in all phases of the

project. The CM is selected using the standard Consultant selection process. The CM performs “value engineering or construct ability reviews” for the owner during the pre-construction phase. Pre-construction services include CM cost estimates and budget recommendations, which may pay a major role in cost containment, and requires CM review of contract documentation preparation for construct ability. The owner still has complete approval of all changes or design decisions. The CM, using the budget of the Owner, provides suggestions for alternatives for design, construction materials, and processes. His experience and skill provide a clearer picture to the owner of the cost of different alternatives/methods/materials. At about 50% contract documents phase, the CM submits a Guaranteed Maximum Price (GMP) for acceptance to the owner. The CM warrants to the owner that the project will be built at a price not to exceed the GMP. The CM assumes the risk of meeting the GMP by holding all of the subcontracts.

Florida Department of Transportation, Federal Highway Administration, U.S. Coast Guard, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Northwest Florida Water Management District, and URS Corporation. *ETDM Performance Management Plan. (April 2005).*

Phase I of the Efficient Transportation Decision Making (ETDM) Performance Management Plan includes tools and methods to effectively evaluate and monitor the ETDM process. Examples include Current and Future Data Collection-Environmental Screening Tools queries, PD&E surveys and Agency Performance Measures; Current and Future Monitoring Needs- Project Report Forms, Program Review Forms, and Annual Program Review Meetings; and a Reporting System- Future electronic system which is automated and web-based. Phase II of the ETDM Performance Management Plan consists of developing an electronic database called the “Environmental Management System” that incorporates the major data collection elements, monitoring components and reporting mechanisms identified in Phase I of the ETDM Performance Management Plan to evaluate, monitor and enhance the ETDM process. One of the objectives of the Task Work Group was to establish a baseline against which to assess future ETDM efforts by identifying what component of the time and cost of the overall project delivery process is attributed to National Environmental Policy Act (NEPA) and also identify a wide variety of factors and conditions that may have a direct or indirect impact upon the NEPA process and the project delivery process. In addition the Task Work Group used NEPA principles as guiding principles when identifying performance measures.

Florida Department of Transportation, Central Environmental Management Office. *Florida’s ETDM Process Dispute Resolution.*

In December 2001, 23 agencies signed the Effective Transportation Decision Making Memorandum of Understanding agreeing to help the FDOT and FHWA to develop a process that would result in improvements to transportation decisions. They also agreed to develop a mutually agreeable dispute resolution process. The Dispute Resolution brochure identifies the goals of the dispute resolution process- identify and begin to address disputes at the earliest possible phase of project planning – “Planning Screen Phase”; initiate dispute resolution on a project at the "Programming Screen" to resolve significant issues before advancing a project into the Five-Year Work Program beyond technical studies; and resolve conflicts locally at agency staff level. The Dispute Resolution Process involves two steps- Step One at Planning Phase: Identification of potential disputes and consultation among District and Metropolitan Planning

Organization (MPO) ETDM Coordinators and Environmental Technical Advisory Teams (ETAT) to begin resolving disputes, and Step Two at Programming Phase: Informal and/or formal Dispute Resolution Process is initiated before project advances to Project Development Phase.

Florida Department of Transportation. [State Project Management Office.](#)

FDOTs the website provides links to on-line project management training, the project management tool box for a risk-based graded approach analysis, standard scope and staff hour estimation guidelines as well as the Project Management Handbook. (As of September 25, 2007).

Indiana Department of Transportation. [Risk Management Planning in Project Development.](#)

The Capital Project Risk Management Process and Project Risk Management Handbook, 2nd ed., May 2007 is intended to result in the effective management of project risks (threats and opportunities). The objective of the project risk management process is to help project sponsors and project teams to make informed decisions regarding project alternatives. The project manager, project sponsor, and project team members jointly develop a written plan that enables them to identify, assess, quantify, prepare a response to, monitor, and control capital project risks.

Risk Management Plan (RMP) Sample Template ([Word](#))

Risk Register - Sample ([Excel](#))

Risk List – Sample ([Excel](#))

Minnesota Department of Transportation. [Guidebook for Minnesota Public Transit Providers, a Resource for Delivering Transit Service.](#) (As of September 25, 2007).

The guidebook is a resource for effectively managing and operating a successful transit service. Chapter 8 of this guide discusses Risk Management and its importance to transit systems. According to the chapter, risk management can benefit transit systems in several ways including prevent injuries and losses before they occur, educate employees, board members and customers about safety and increase public confidence in the transit system, and help transit systems qualify for insurance on more favorable terms. It then describes the risk management process in seven steps- Risk Identification, Risk Measurement and Evaluation, Risk Control, Risk Transfer, Risk Retention, Program Development and Implementation, and Program Monitoring and Review.

Minnesota Department of Transportation. [Risk Management in Transit Services \(1995\).](#)

This document defines risk management and identifies its importance in bringing together safety measures, actions to reduce injuries and accidents and the strategic use of insurance or other forms of risk financing. Risk management helps exercise more control over the likelihood of losses and reduce the impact of these losses on transit operations. It outlines the steps of risk management, including risk identification, risk measurement and evaluation, risk control, risk transfer, risk retention, program development and implementation, and program monitoring and review.

Minnesota Department of Transportation. [St. Croix River Crossing Risk Assessment Project Report](#). (April 2006).

The St. Croix Funding Workshop was a partnering workshop between FHWA, Mn/DOT and Wis/DOT that addressed options for alternative forms of project funding outside of traditional sources. The workshop's expert speakers presented funding alternative pros and cons that facilitated risk assessment discussions. Topics included Public Private Partnerships (PPP), Tolls, and Innovative Debt. Statistical analysis was completed to evaluate the intensity, scope and statistical relevancy of identified risks. In continuing the Minnesota and Wisconsin partnering effort, the next steps include making a decision as to what type of funding alternative government stakeholders will pursue and creating a project management and financial plan.

North Carolina Department of Transportation, Environmental Planning and Policy Committee. *Environmental Streamlining, Powerpoint Presentation*. (July 11, 2001).

The presentation describes the NCDOT pre-construction process and its major activities and milestones with the aim of transportation improvement meeting needs in the least environmentally damaging and practical way. It then defines environmental streamlining as effective and timely project decision-making without compromising environmental quality followed by the challenges of the process and a list of various initiatives to address the challenges. The last part defines environmental streamlining in more detail and defines the goals of NCDOT of combining environmental stewardship with transportation needs to make environmentally sound transportation improvements.

North Carolina Department of Transportation, Project Development and Environmental Analysis Branch. [Section 404/NEPA Merger 01 Process](#). (As of October 2, 2007).

Merger 01 is a process to streamline the project development and permitting processes, agreed to by the USACE, NCDENR (DWQ, DCM), FHWA and NCDOT and supported by other stakeholder agencies and local units of government. To this effect, the Merger 01 process provides a forum for appropriate agency representatives to discuss and reach consensus on ways to facilitate meeting the regulatory requirements of Section 404 of the Clean Water Act during the NEPA/SEPA decision-making phase of transportation projects. The Merger 01 process allows agency representatives to work more efficiently (quicker and comprehensive evaluation and resolution of issues) by providing a common forum for them to discuss and find ways to comply with key elements of their agency's mission. The merger process helps to document how competing agency mandates are balanced during a shared decision-making process, which results in agency representatives reaching a "compromise based decision" to the regulatory and individual agency mandates.

The website provides further information on the following- Merger Project Information with project team members and project status and history; Guidance Documents on Process Info Document, Conflict Resolution Process, Issue Briefing Format; Training Courses for practitioners, technical participants and executives.

[EIS Guidance](#). (As of October 2, 2007)

The link provides detailed information on the format of information in each chapter of the EIS.

[ICI Guidance \(Indirect and Cumulative Impact\)](#). (As of October 2, 2007)

The link provides two volumes of ICI guidance, NEPA 401 Guidance and Pre-Screening projects for applying Impact Assessments.

[Natural Environment Procedures](#). (As of October 2, 2007)

Ohio Department of Transportation. [Project Development Manual](#). (November 2004).

Ohio DOT has developed and implemented a Project Development Process (PDP) that includes regular communication among technical disciplines, results in quality plans and minimizes cost overruns during right-of-way acquisition and project construction. The PDP consists of various steps depending on the project category which could be minimal, minor or major, depending on its size, complexity, and/or impact to the environment. As stated in the manual, the PDP transportation decision-making approach provides a seamless process from planning through construction and encourages open communication for making informed decisions during all stages of project development. By involving all disciplines at the earliest stages of the process, issues affecting project type, scope, preliminary development, and cost, are identified early.

Oregon Department of Transportation. *A User's Guide to PS&E Delivery*. (July 2007).

The User's Guide aims to clearly define the deliverable items required for an ODOT construction project before advertisement and competitive bid. The guide answers questions such as: What does ODOT mean by Plans, Specifications and Estimate aka PS&E? What manuals, guides and forms and publications are available and where can you get them (internet links to references documents are provided in this guide)? When is the PS&E submittal due? What are the required deliverables at the PS&E milestone? Who can help me and who is responsible for doing what? The forms, lists, procedures and other documents referenced in the guide are expected to continually evolve with the most current version being available on the ODOT website.

Oregon Department of Transportation. [Constructability Reviews](#). (As of September 24, 2007).

ODOT has a Constructability Review process to review selected design projects as a method to improve overall quality and cost effectiveness of construction projects. The reviewers include both internal staff and external members of the contracting community. The website provides access to pre-construction reviews, post-construction reviews, constructability review dates for specific projects and the 2006 constructability report.

Oregon Department of Transportation. *Context Sensitive and Sustainable Solutions Guidebook.*

The guidebook is ODOT's next evolutionary step to project delivery. The guidebook aims to explain how the CS³ process used in the Oregon Transportation Investment Act III State Bridge Delivery Program evolved from ODOT's project delivery system, and how it can be applied to other projects. The guidebook is divided into three main sections- The Background section provides a brief history of OTIA III, the evolution of context-sensitive design, and how ODOT combined Context Sensitive Solutions with Sustainability to create the CS³ concept; The Program Implementation section describes how CS³ enhances traditional transportation project management, and how the bridge program was developed and organized using CS³ as a framework; The Project Delivery section gives step by step explanation of the specific processes and tools used to implement the bridge delivery program. It describes processes used for design-bid-build and design-build projects.

Oregon Department of Transportation. *Enterprise Content Management Program, Powerpoint presentation. (April 3, 2007).*

Enterprise Content Management (ECM) is the technology used to capture, manage, store, preserve, and deliver content and documents related to organizational processes, regardless of document type or media. ECM manages unstructured information regardless of where the information exists. ECM benefits for ODT include the following- improves content access and retrieval; Does more with less -provides platform for automated workflow to speed up business processes and applications, Helps to prevent delays related to "snail mail" and waiting for approvals from individuals who are "missing in action", Supports a collaborative workplace; Enhances compliance programs and reduces risk - Reduces risks or costs associated with litigation; and Manages content throughout lifecycle. The presentation describes ECM program goals which include develop a governance structure including defining roles and responsibilities, and management structure; Establish a common approach to information organization including a standard taxonomy structure, and creation of document and content policies, procedures, and guidelines; and Create a services and support delivery model that standardizes on a framework process and roll out for multiple, replicable ECM applications. Then current and future projects utilizing ECM are described.

Oregon Department of Transportation. *Project Delivery Handbook. (January 2005).*

The ODOT is responsible for managing the lifecycle of transportation projects including planning, design and development, construction, and maintenance. This guidebook provides key information about project delivery at a high level, for those who only need a general overview of project selection, project scoping, development and construction. Details for project development and delivery activities and products are included in Program Development, Project Development, Award Construction Contract and Construction Management. Additional information in the guidebook includes Project Delivery Methods, Project Types; ODOT's Regions/Areas/Districts/Divisions/Sectors/Units; Stakeholders, including Local and Regional Jurisdictions, Elected Officials and the General Public; Regulation and the

Resource Agencies; and Links to References and Other General Information.

Oregon Department of Transportation. *Project Management Information Systems.*

Oregon DOT's Project Control System (PCS) is primarily a mainframe database used for project identification, STIP development and overall project tracking. It provides information on project location, scope, design alternatives, scheduling (limited), cost estimates and funding. The system is a communication tool used among work units involved in project development and construction. It is also used by ODOT regions, managers and staff to communicate with the Oregon Transportation Commission, FHWA, legislators and the public about upcoming projects. The system interacts with Microsoft Project, TEAMS, Cash Flow and Legislative Reporting systems. [Tracy Posey](#), Project Delivery PCS/PDWP Systems Manager, 503-986-6375.

Oregon Department of Transportation. [Project Management Institute](#). (As of September 24, 2007).

The Project Management Institute (PMI®) defines the following five primary process areas/groups for project management: Initiating - Processes involved with authorizing the project or phase; Planning - Processes involved with defining and refining project objectives and selecting the best course of action; Executing - Process involved with coordinating people and other resources to carryout the plan; Controlling - Process involved with ensuring that project objectives are met by monitoring and measuring performance and taking necessary corrective action; and Closing - Process involved with formalizing acceptance of the project or phase deliverables and ensuring an orderly end. Other topics covered at the website include PMBoK ® Process Areas, Integration Management, Scope Management, Schedule Management, Cost (Budget) Management, Quality Management, Resource Management, Communication Management, Risk Management, Procurement Management, and Project Management Training/Resources.

Southeast Michigan Council of Governments (SEMCOG). *Integrating Environmental Issues in the Transportation Planning Process: Guidelines for Road and Transit Agencies.* (January 2007).

In this document SEMCOG has developed a regional analysis of impacts of planned transportation projects on the environment and a series of guidelines for mitigating those impacts. First SEMCOG defines and identified environmentally sensitive resources in the region and then analyzes the likelihood of transportation projects impacting those resources. SEMCOG aims to balance transportation needs with environmental protection and construct and maintain a transportation system that minimizes negative impacts, and where possible actually increases public access to environmental resources. Through this document, SEMCOG promotes good planning practices via a series of guidelines which should be considered by road and transit implementing agencies for all types of projects, regardless of the resource, and then guidelines specific to each type of resource.

Tennessee Department of Transportation. *Tennessee's Environmental Procedures Manual. (As of September 15, 2007)*

The manual focuses on the following- Undertaking and successfully completing the NEPA process for federally funded transportation projects or those transportation projects that require a major federal action (such as Section 404 permits); Undertaking environmental evaluations of state-funded transportation projects through the Tennessee Environmental Evaluation Report (TEER) process; Standardizing work efforts and environmental documents; Improving the quality of the documents and the analyses; Facilitating the development and review of documents by TDOT staff and federal and state agencies; and Providing technical guidance on impact assessment.

Texas Department of Transportation. *Independent Assessment of Auditable Unit D- Management and Support Functions- Executive Summary.*

As seen in the draft of the report, TxDOT retained Deloitte Consulting LLP (“Deloitte Consulting”) to conduct an independent assessment of TxDOT operations related to Auditable Unit D — Management and Support Functions. The objectives of this project were to assess high-risk areas of TxDOT’s management and support functions to improve the quality of the statewide transportation services, identify opportunities for enhancing revenue to maximize financial resources available, develop strategies to remove operational barriers and improve the efficiency and effectiveness of operations, highlight exemplary and innovative practices, and recommend opportunities for reducing risks and improving operations at TxDOT’s headquarters. The results of this assessment are presented in this document. According to the report, the overarching themes, for the most part, that drive the behaviors, processes, risks, and opportunities within the organization are risk management, people and technology. Among the themes noted: “TxDOT’s ability to develop and implement a comprehensive risk management program appears to be complicated by the districts’ considerable latitude for decision making and policy interpretation. Divisions and districts invest significant amounts of resources in developing risk management solutions. These solutions are oftentimes not adapted or integrated Agency-wide because they are developed in isolation. It is critical for TxDOT to develop a comprehensive risk management program to address key risks. With the advent of comprehensive development agreements (CDAs), enterprise risks increase and will require TxDOT to prioritize these risks.

Additionally, it was noted that the Internal Audit office (IA) has not been sufficiently involved in evaluating the risks associated with CDAs. It is particularly important that IA be involved as early as possible in evaluating these risks so that they can provide management with assurance that the CDA processes are being properly designed and controlled to limit TxDOT’s exposure with CDAs. The report then provides an explanation of identified key risk issues, observations and recommendations for mitigation.

Transportation Research Board. [NCHRP Report 25-25 \(Task 22\) Forecasting Indirect Land Use Effects of Transportation Projects.](#) (December 2007).

The report provides updates on recent research findings on indirect land use effects. It also identifies several key emerging areas of practice *not* addressed in the current literature and notes where current practice needs more detailed guidance. This guide strengthens the field of indirect land use forecasting and works to inform current practice

with useful research findings. It also guides practitioners on what approach to use when current guidebooks do not provide direction.

U.S. Department of Transportation, Federal Transit Administration. *Construction Project Management Handbook, Revision 1. (April 2007).*

The Handbooks provides comprehensive coverage of construction project management, including the applicability of the principles of project management and of all phases of project development in sequence and in separate chapters—from project initiation through planning, environmental clearance, real estate acquisition, design, construction, commissioning, and closeout. The study is organized to provide the transit agency and the project manager with a clearer understanding of the applicability of the structures and principles of construction project management. This Handbook provides guidance that is tailored more to Agencies that are constructing maintenance and operational facilities, intermodal terminals, park-and-ride stations, and other similar supporting transit facilities. Throughout the chapters, project management concepts are illustrated with the use of a hypothetical example, a typical project to plan, design, and build a new bus maintenance facility.

U.S. Department of Transportation, Federal Highway Administration, Federal Transit Authority. *Linking the Transportation Planning and National Environmental Policy Act (NEPA) Processes. (February 2005).*

This document provides guidance and information (both conceptually and through some illustrative “current practice” examples) on how information, analysis, and products from transportation planning can be incorporated into and relied upon in NEPA documents under existing laws. The document is organized in a “Question and Answer” format organized into three primary categories – “Procedural Guidance”, “Substantive Guidance” and “Administrative Issues”. The Procedural Guidance addresses questions such as how products from the transportation processes can be better incorporated into the project development/NEPA processes, and the considerations that the FHWA and FTA will take into account in their review of planning products for acceptance in project development/NEPA. Questions discussed under Substantive Guidance include general issues such as what should be considered in order to rely upon transportation planning studies in NEPA, and specific questions addressing NEPA analysis such as Purpose and Need, Alternatives, Affected Environment and Environmental Consequences, and Environmental Mitigation. Lastly, the Administrative Guidance questions address the staffing and organizational arrangements that may be helpful in allowing planning products to be accepted in the NEPA process, and how environmental, regulatory, and resource agency liaisons (Federally- and State DOT-funded positions) and partnership agreements been used to provide the expertise and interagency participation needed to enhance the consideration of environmental factors in the planning process.

U.S. Department of Transportation, Federal Highway Administration. [Linking Planning and NEPA Progress Report, FY 2006/Quarters 2 and 3. \(As of September 12, 2007\).](#)

- Between July 11 and September 12, 2006, the Volpe Center interviewed 15 of the 20 Federal Highway Administration Division Offices (FHWA/DO) and state Departments of Transportation (DOT) that participated in the Linking Planning and NEPA: Towards Streamlined Decision-making workshop to discuss the status of linking

planning and National Environmental Policy Act (NEPA) efforts in their states. This report describes findings from 15 state interviews about linking planning and NEPA activities in FY06 Q2 and Q3. The states are Arkansas, California, Georgia, Idaho, Maine, Missouri, New Mexico, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Washington and Wisconsin.

- **US Department of Transportation. Environmental Stewardship and Transportation Infrastructure Project Reviews. Executive Order 13274. Purpose and Need Work Group. [Baseline Report](#).** Revised Draft. March 1, 2005.

The comprehensive, easy to read report identifies attributes of good purpose and need statements and opportunities for improvements, and provides two examples of good purpose and need statements. The report identifies challenges and impediments that may result in agency disagreements and project delays. The report contains information on guidance documents and selected training programs, including an assessment of guidance and training. The report presents a summary of laws, regulations, and executive orders related to purpose and need for transportation projects.

U.S. Department of Transportation, Federal Highway Administration. *Project Management Plan Guidance. (As of September 15, 2007).*

This Project Management Plan guidance is aimed to assist the recipient of Federal financial assistance in the preparation of a Project Management Plan to meet the requirements of SAFETEA-LU. It is a guide for implementing the major project and documents assumptions and decisions regarding communication, management processes, execution and overall project control. The ultimate purpose of the Project Management Plan is to clearly define the roles, responsibilities, procedures and processes that will result in the major project being managed such that it is completed - on-time, within budget, with the highest degree of quality, in a safe manner for both the individuals working on the project and for the traveling public, and in a manner in which the public trust, support, and confidence in the project will be maintained. Topics covered include- Project Phases, Procurement and Contract Management, Cost Budget and Schedule, Project Reporting and Tracking, Internal and Stakeholder Communications, Project Management Controls (Scope, Cost, Schedule, Claims, etc.), Design Quality Assurance/Quality Control (QA/QC), Construction Quality Assurance/Quality Control (QA/QC), Project Communications (Media and Public Information) and Project Documentation.

U.S. Department of Transportation, Federal Highway Administration, Federal Transit Administration. *Memorandum from Mary E. Peters, Administrator regarding [Guidance on Purpose and Need](#). July 23, 2003.*

This memo makes clear that FHWA or FTA have sole responsibility for defining purpose and need where other Federal agencies do not have separate decision-making responsibilities, and addresses protocols for when they are not the sole agency for decision-making for the proposed action.

U.S. Department of Transportation, Federal Highway Administration, Office of NEPA Facilitation. *Collaborative Problem Solving: Better and Streamlined Outcomes for All, Guidance on Managing Conflicts and Resolving Disputes*

between State and Federal Agencies During the Transportation Project Development and Environmental Review Process. (2002).

The guidance presents strategies for managing conflict and identifying issues that may arise during the transportation project development and environmental process reviews under the National Environmental Policy Act (NEPA) and related laws. These strategies would help Federal and state transportation and resource agencies to implement a coordinated environmental review process that streamlines unnecessary delays for highway and transit project construction. The guidance discusses the following- Environmental Streamlining, Broad environmental streamlining strategies for engaging the relevant agencies to identify problems through early coordination, Traditional dispute resolution processes successfully applied to solving issues that may surface during the NEPA process, and provides examples of prototypical procedural alternate dispute resolution frameworks for managing project-level conflicts.

Virginia Department of Transportation. [Project Management Guide](#). (As of June 2008)

The online guidance presents VDOT's project management policies and procedures for managing each project life cycle. Some portions are still in development guidance for developing the project scope, budget estimates and project development schedules are all available.

Virginia Department of Transportation. [Environment Document Preparation](#). (As of June 2008).

The guidance is for project sponsors of Enhancement projects. The web link provides access to the NEPA documentation forms, agency coordination, resource specific guidance and environmental certification.

Washington State Department of Transportation. [Environmental Procedures Manual](#). (September 2007).

The Environmental Procedures Manual (EPM) provides guidance for complying with federal, state, and local environmental laws and regulations and WSDOT policy during all phases of the WSDOT Transportation Decision-Making Process, which includes Transportation Planning, Project Scoping and Programming, Design and Environmental Review, Environmental Permitting and PS&E (Plans, Specifications, and Estimates), Construction, Maintenance and Operations, and Property Management. The manual is primarily a technical resource focused on the "how to" of environmental review and permitting as required by the National Environmental Policy Act (NEPA) and State Environmental Policy Act (SEPA) and other laws and regulations. In addition to technical guidance, the manual provides background information on environmental laws, interagency agreements, and WSDOT policy statements to aid in interpreting the numerous mandates. The manual's seven major parts each contain chapters that describe the phase and relevant environmental considerations or requirements during that phase. These are: Transportation Planning, Project Scoping and Programming, Design and Environmental Review, Environmental Permitting and PS&E, Construction Maintenance and Operations, and Property Management

Washington State Department of Transportation, Cost Estimate Process.
[Determine Risks and Set Contingency.](#)

In WSDOT's Cost Estimate Process guidance, Risk Management is the process of maximizing the probability and consequences of positive risk events (opportunities) and minimizing the probability and consequences of negative risk events (threats) to the project objectives. In the context of cost estimating, the cost impact of project risks (favorable or unfavorable) must be included to derive a total project cost. External Specialists are involved in a workshop format to validate the base estimate, provide input on specific issues such as construction staging, and elicit risks for modeling purposes. Risk assessments consider Market Conditions and Inflation Rates. Risk Management is the process of maximizing the probability and consequences of positive risk events (opportunities) and minimizing the probability and consequences of negative risk events (threats) to the project objectives. In the context of cost estimating the cost impact of project risks (favorable or unfavorable) must be included to derive a total project cost. External Specialists are involved in a workshop format to validate the base estimate, provide input on specific issues such as construction staging, and elicit risks for modeling purposes. Risk assessments consider Market Conditions and Inflation Rates. WSDOT has a Project Management Process online guide.

APPENDIX B

Web-based Survey and Respondents

NCHRP 25-25(27) Survey on Effective Project Management for NEPA

The Transportation Research Board (TRB) is conducting research on effective project management for NEPA, as part of the National Cooperative Highway Research Program. ICF International is conducting this research under contract to TRB. The goal of this effort is to identify current practices and tools used by state DOT Project Managers responsible for the NEPA process. This research will produce practical, user-friendly guidelines that give State DOT project managers some new approaches and tools for considering NEPA/environmental aspects during project scope development, scheduling and budget estimating. The guidelines should better equip project managers to successfully identify and manage risks, resolve conflicts and accelerate the overall project development process, and ensure NEPA/environmental compliance.

Please forward the questionnaire to the appropriate personnel who manage NEPA projects in your agency. We will especially appreciate any responses individuals might be able to send us by the end of the year, as we will be starting interviews and subsequent phases of the research thereafter. Otherwise, please consider this survey to have a due date of Jan. 11th. Thank you for your participation! For additional information regarding this survey please contact Marie Venner at 303.798.5333 or Chris Paulsen at 303.369.0420.

Your Name, Title, Phone, Email:

1. As a project manager, when do you become involved in the NEPA process?

Long-range planning
 Preparation of the RFP
 Scoping
 Other _____

2. In your experience, what are the most difficult parts of the NEPA/environmental process to manage? Please rate each from 1 (very difficult) to 5 (no problem).

Public involvement
 Scoping
 Coordination with other agencies
 Coordination with local governments
 Public meetings
 Other _____

Development of purpose and need
 Alternatives development and screening
 Impact analysis
 Mitigation planning
 Responding to public and agency comments
 Permits and other approvals
 Environmental commitment compliance
 Changes after approval of the environmental document
 Other: _____

3. Do you have a process that requires concurrence from resource agencies, instead of just coordination?

Yes

No

4. If so, at what point in the Project Development process do you get concurrence from the resource agencies? Please check all that apply.

Long-range planning

Project level scoping

Development of Purpose and Need

Alternatives Development/Screening

During environmental analysis

Circulation of the NEPA document

Mitigation /permitting (just prior to completion of the environmental document)

5. How are agencies decisions/recommendations communicated with the DOT and how do you ensure they do not change, once decisions are made? Please check all that apply.

Verbal agreement

Written agreement. If yes, does your agency have:

a standard agreement procedure?

written concurrence points, for EISs? For EAs? For more complex CEs?

Decisions can change at any time

Decisions can change only for good cause

6. At times, resource agencies have been known to complain that FHWA and the DOT do not address their comments. Does your agency:

Have procedures for responding to and tracking agency comments? Please attach information.

Utilize typical response letters or other forms to communicate back to the agencies?

Utilize databases or information system for responding to and tracking agency comments?

7. During the past five years, what factors cause delays or require design changes in the NEPA/environmental phase of project development at your agency? Please rate each from 1 (important/big problem) to 5 (not a problem).

Overall project funding

Mid-project change in DOT personnel/PM

Inadequate number of DOT environmental staff

Availability of consultants

Changes in environmental regulations

Design optimization

Mid-project change in personnel at resource agency and accompanying changes in interpretations of environmental regulations

- Delay in receipt of resource agency
- Lack of input or substantive comment from resource agency at early stage, causing rework later on. Please identify the cause insofar as you can/could discern it; e.g. insufficient staffing at resource agency? Lack of a system for not only early involvement but also early decision-making by/at the resource agency? Insufficient collaborative outreach by DOT?
Other? _____
- Request for a difficult, impossible, or otherwise unreasonable level of detail early in the process (e.g. an interagency education issue, or balancing each agency's laws, mandates)
- Disagreement on methodology to assess impacts
- Environmental costs, or cost-benefit issues with regard to mitigation
- Mitigation redesigned or not agreed on until late in process, particularly for secondary and/or cumulative impacts
- Change in project scope requested by local agencies or public
- Community opposition, litigation, or obtaining permits/permissions from local jurisdictions
- Loss of historical knowledge, inadequate documentation of decisions, or lack of sufficiently convenient information systems, to help new team members get up to speed
- FHWA (e.g. inadequate staffing)
- Other: _____

8. What tools are available to Project Managers (PMs) to successfully manage the project development and NEPA process(es) at your agency? For each that you have available, please provide a 1-5 ranking in terms of their effectiveness in teaching project managers what they need to know to smoothly manage the NEPA Project Management process. Any specific comments you may have would also be helpful.

- Central project management office staffed with PM experts
- Support from environmental office
- Monthly newsletter with project management tips
- Project management IT systems. Name yours: _____.
- To what other internal IT systems is it connected and how helpful are those connections?

- Project management guidance (please comment on whether you think your agency's guidance is user friendly, how read/used it is, and what might make it more so)
- Project management guide to NEPA (please comment on whether you think your agency's guidance is user friendly, how read/used it is, and what might make it more so.)
- Comprehensive NEPA Guidance/Handbook. Is any NEPA guidance integrated with other Project Development Process guidance?)
- Training on NEPA (please comment on length, PMs perspectives on how helpful it is, and whether it addresses the most common types of delay)

- ___ Training on Project Management techniques (please comment on length, PMs perspectives on how helpful it is)
- ___ Training and guidance on CSS concepts
- ___ Training for local agencies in the NEPA process
- ___ Guidance and/or training on public involvement process, tools and techniques
- ___ Mentoring (please describe)
- ___ Knowledge management/lessons learned sharing system (please attach description)
- ___ Continuous process improvement in NEPA project development to identify the extent to which guidance is being followed, problems that are occurring, and revising the process and training as necessary
- ___ Value Engineering with participation of environmental staff
- ___ Standard Scope of Services and Staff Hour Estimates
- ___ Electronic Review Comment System
- ___ Consultant Evaluations and feedback system
- ___ Risk management processes
 - ___ Quick risk based “graded approach analysis” to determine requirements for planning and maximize project control effectiveness at the lowest cost and assist in identification and mitigation of project risks (i.e. determine where to assign what PM resources; help define scope of Project; evaluate risk elements based on risk (vs. cost of project); definition of roles and responsibilities; and, get agreement from all members of the project team).
 - ___ General risk management guidance
 - ___ Enhanced or detailed early scoping process
 - ___ Other risk management process
- ___ Other(s): _____

We are interested in how your agency has addressed these challenges. If you would be available for a follow up interview, please ensure your name/phone/email are recorded at the top of this survey and indicate a date/time you would be available for an interview in January 2008, outside of Jan 13-18 (TRB week): _____

Thank you for taking the time to contribute this information. If you are available for a follow-up interview, you will hear from us regarding confirmation of the time you propose, in January. Happy Holidays!

Survey Respondents

State DOT Respondents

Alaska

Alaska Department of Transportation and Public Facilities

Bill Ballard, Statewide Environmental Manager

Reuben Yost, Special Projects Manager

Bruce Campbell, Environmental Coordinator, Northern Region

Miriam McCulloch, Project Manager

David Bloom, Preconstruction Engineer, Northern Region

Tim Woster, Design Group Chief

Patricia Miller, Design Group Chief

Richard Stumpf, Engineering Manager

Gail Gardner, Engineering Manager

Ryan Anderson, Engineering Manager

Barry Hooper, Project Manager

Kevin Jackson, Project Manager

John Linnel, Project Manager

Janet Brown, Preliminary Design and Environmental Chief, Northern Division

James Amundsen, Project Manager Central Region, Hwy Design

Connecticut

Connecticut Department of Transportation

Keith Hall, Transportation Supervising Planner

Colorado

Colorado Department of Transportation

Brad Beckham, Environmental Program Branch Manager

Florida

Florida Department of Transportation

Larry Barfield, Environmental Process Compliance Administrator

Idaho

Idaho Transportation Department

Shawn Smith, Environmental Planner

Connie Jones, Senior Environmental Planner

Zach Funkhouser, Senior Environmental Planner

Alan Wubker, Senior Environmental Planner

David Karsann, Senior Environmental Planner

Greg Vitley, Environmental Planner

Dennis Clark, Environmental Section Manager

Tim Cramer, Senior Environmental Planner

Illinois

Illinois Department of Transportation

Barbara Stevens, Environment Section Chief

Kentucky

Kentucky Transportation Cabinet, Division of Environmental Analysis

Tim Foreman, Administrative Section Supervisor

Maine

Maine Department of Transportation

Raymond Foucher, PM for major highway & bridge

Michigan

Michigan Department of Transportation

Margaret Barondess, Manager, Environmental Section

New Hampshire

New Hampshire Department of Transportation

Jonathan Evans, Environmental Manager

Bob Landry, Project Manager

Marc Laurin, Senior Environmental Manager

Kevin Nyhan, Senior Environmental Manager

Donald Lyford, Project Manager

Virginia

Virginia Department of Transportation

Christopher Collins, Project Studies Manager

Washington

Washington State Department of Transportation

Carol Lee Rolkvam, Environmental Policy Branch Manager

Wyoming

Wyoming Department of Transportation

Timothy Stark, Environmental services Engineer

Federal Highway Administration, Division Offices

FHWA Resource Center - Lakewood, Colorado

Rod Vaughn, Environmental Specialist

FHWA Alaska Division

Dale Lewis, Transportation Program Manager

FHWA Connecticut Division

Robert W. Turner, Environmental Engineer

FHWA Florida Division

George Hadley, Environmental Programs Coordinator

FHWA Louisiana Division

Robert Mahoney, Environmental Specialist

FHWA, Montana Division

Carl James, Transportation Specialist

FHWA New York Division

Jeffrey Berna, Environmental Coordinator

FHWA North Dakota Division

Mark Schrader, Environment & Right-of-Way Engineer

FHWA, Utah Division

Edward Woolford, Environmental Program Manager

Bryan Dillon, Area Engineer

APPENDIX C

Telephone Interview Questions and Respondents

Telephone Interview Questions
NCHRP 25-25 (27) - Effective NEPA Project Management

Name:

Agency:

Job Title:

Number of years managing NEPA projects:

1. Does the DOT's long-range planning process include development of an initial purpose and need statement? Range of alternatives? Screening of alternatives? Environmental impact assessment?
 - If yes, how are these decisions documented?
 - Do the decisions made in planning typically withstand the test of time for use in the NEPA document?

2. What attributes of the NEPA/environmental process should be better defined, in your opinion?
 - What are the biggest challenges in conducting the scoping process?
 - What are the biggest challenges in developing purpose and need?
 - What are the biggest challenges in developing and screening alternatives?
 - What are the biggest challenges in conducting the impact analysis?
 - What specific elements of the NEPA/environmental process (i.e., cultural resources, wetlands, water quality, threatened and endangered species, environmental justice, etc.) do you find the most challenging? Why? How has this been addressed in your agency/
 - What are the biggest challenges in conducting the indirect and cumulative impact analysis?
 - What are the biggest challenges in responding to public and agency comments/
 - What are the biggest challenges in mitigation planning?

3. What changes in environmental regulations have affected your projects? Federal regulations? State regulations? Local regulations?

4. In your opinion, do you get requests for difficult, impossible, or unreasonable level of detail?

5. Does your agency have difficulty getting timely input from the resource agencies?

6. What level of design do you usually complete to support the NEPA/environmental process? To what degree does your NEPA/environmental process run concurrently with engineering and design?
7. What types of changes occur after approval of the environmental document that cause re-do loops of work already completed?
8. A common concern is inadequate staffing of environmental personnel at the DOTs, FHWA and the resource agencies and staff turnover. Describe how this impacts your projects?
9. To what degree is the NEPA/environmental process considered when you develop your initial scope, cost estimate and schedule? What are some specific ways your agency uses to incorporate environmental aspects?
10. What mechanisms do you use for identifying and managing risks on a project, particularly those related to the NEPA process?
11. As you manage the NEPA process, what do you consider “acceptable risk”?
12. What process do you have for dispute resolution and has it been successful in moving projects forward in a timely manner?
13. What tools are most effective for managing the NEPA process? Which tools are least effective? Why?
14. Are there any specific methods you have used to successfully manage the NEPA process? What suggestions do you have for streamlining the NEPA/environmental process?
15. The best NEPA project management guidance and training would include: _____

Telephone Interview Participants

Larry Barfield
Environmental Process Compliance Administrator
Buddy Cunhill
Environmental Project Development Administrator
Florida Department of Transportation

Brad Beckham
Environmental Programs Branch Manager
Colorado Department of Transportation

Christopher Collins
Project Studies Manager
Virginia Department of Transportation

Kelly Dunlap
Chief, Environmental Office
Caltrans

Mary Frye
Environmental Coordinator
FHWA, Arizona

Gail Gardner
Engineering Manager
Alaska Department of Transportation

Connie Jones
Sr. Environmental Planner
Idaho Department of Transportation

David Karsann
Sr. Environmental Planner
Idaho Department of Transportation

Stephen Larson
Environmental Programs Manager
Iowa Department of Transportation

Dale Lewis
Transportation Program Manager
FHWA, Alaska

Robert Mahoney
Environmental Specialist
FHWA, Louisiana

Carol Lee Roalkvam
Environmental Policy Branch Manager
Washington State Department of Transportation

Bob Turner
Environmental Engineer
FHWA, Connecticut

Christopher Waszczuk
Chief Project Manager
New Hampshire Department of Transportation

Edward Woolford
Environmental Program Manager
Greg Punske
FHWA, Utah

Alan Wubker
Sr. Environmental Planner
Idaho Department of Transportation

APPENDIX D

State DOT NEPA Manuals

State DOT Environmental Procedures Manuals

- Alaska Department of Transportation and Public Facilities [Alaska Environmental Procedures Manual](#)
- Arizona State [Environmental Guidance Documents](#)
- Caltrans [Project Development Procedures Manual](#)
- Colorado DOT [NEPA Manual](#)
- Florida DOT [Project Development and Environmental Manual](#)
- Idaho Transportation Department [Environmental Process Manual](#)
- Illinois DOT [Bureau of Design and Environment Manual](#)
- Louisiana Department of Transportation and Development [Environmental Manual of Standard Practice](#)
- New Hampshire [Environmental Documentation Manual](#)
- Ohio DOT [Project Development Process](#)
- Pennsylvania DOT Department of Environmental Quality Assurance [Guidance Documents](#) on such topics as EIS's , EAs, Needs Study, and resource topics such as air, noise, and section 4(f), public involvement and many other topics.
- Tennessee [Environmental Procedures Manual](#)
- Utah DOT [Environmental Process Manual of Instruction](#)
- Washington State DOT [Environmental Procedures Manual](#)