

Identification of Results-Oriented Public Involvement Strategies Between Transportation Agencies and Native American Tribal Communities

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Abstract

Three key aspects necessary to ensure a successful project environment are communication, coordination and cooperation (3Cs) between stakeholders. Incorporating these aspects into implementation strategies is paramount to facilitate transportation project delivery and relationships among stakeholders. This report summarizes results from a study on collaborative efforts between transportation agencies and tribal nations within the United States. Several methods were used in this study, including qualitative content analysis, workshops, interviews and a Delphi study. Findings include a list of issues that are encountered on projects affecting tribal communities, and a set of 3Cs practices, which have been utilized to establish a collaborative environment. The study has implications for the transportation community because the singularity of the relationship between federal, state, local and tribal stakeholders significantly affects several aspects of a transportation project delivery, including planning, design, construction, and operations.

Executive Summary

Efforts to involve tribal communities in transportation planning and project implementation have increased in the last decade. Research of these efforts and initiatives in the area of tribal transportation has been performed to survey and summarize current practices in the field. While information on current practices is available for reference, little information exists as to the effectiveness of different strategies for collaboration that have been implemented. This NCHRP project and report aimed at identifying effective strategies for collaboration between transportation agencies and tribal communities. More specifically, best practices for successful communication, coordination and cooperation were investigated.

The study reviewed literature pertaining to programs and initiatives implemented to enable collaboration between transportation agencies and tribal communities. Initiatives were categorized as communication, coordination or cooperation best practices. Professionals in tribal transportation were then surveyed as to the effectiveness of each practice with respect to commonly encountered issues on transportation projects, as defined by the researchers. This report and the enclosed Guidebook provide a description of the effective practices as found by the researchers, as well as lessons learned pertaining to each of the practices.

Transportation projects that affect tribal communities encounter issues unique to the tribal transportation environment. With issues pertaining to cultural competency, sovereignty, the protection and preservation of tribal-sensitive resources, the confidentiality of tribal-sensitive matters, land ownership and monetary matters encountered on a project, collaboration among stakeholders is crucial to project success. In order to better understand these issues, the report provides a description of each issue and a process for identifying which ones might be encountered on a project. The best practices of communication, coordination and cooperation serve to enable success when such issues are present.

Implementation methods are not always clear, so each of the communication, coordination and cooperation practices is illustrated through a collection of case studies that is included in the Guidebook. Summaries of real-life situations in which states and tribes successfully collaborated on projects ease the implementation process when coupled with the lessons learned for each project. Interviews with transportation officials provided the data necessary to create these case studies.

The results of the study are presented as a tool in enabling collaboration among stakeholders on tribal transportation projects. With validation and case studies for each of the presented practices, agencies can easily identify practices of communication, coordination and cooperation that are appropriate for treating specific identified issues. Lessons learned and recommendations pertaining to each of the practices also provide users of the report to improve current practices and enhance existing transportation programs.

Chapter 1 Background

1.1 Overview

In April 2008, the National Academies of Sciences awarded to the Alliance for Transportation Research Institute (ATRI) of the University of New Mexico a research contract under the National Cooperative Highway Research Program (Research Contract NCHRP 08-65). Under this contract, the ATRI-led team worked closely with the Research Panel to develop a Guidebook for Successful Communication, Cooperation, and Coordination Strategies between Transportation Agencies and Tribal Communities.

1.2 Background

By definition, transportation systems are usually represented as networks designed to permit a flow of vehicles and commodities. This characteristic of transportation systems entails a need for overcoming geographic and institutional boundaries. While the transportation engineering profession has successfully confronted geographical barriers, transportation networks crossing Native American lands that are governed under different institutional frameworks provide non-technical challenges to those involved in the implementation of transportation improvements. The sovereignty and cultural differences of each must be recognized in establishing the framework for communicating, cooperating, and coordinating each entity's needs and efforts. Government-to-government interaction is crucial for the success of transportation improvements whether it be a federal, state, local or tribal project.

Local, state, federal and tribal governments often own and operate the nation's vast inventory of transportation facilities. With the expansion of settlements and the creation of new cities across the nation, a need for transportation facilities is always present and different owners are challenged with providing much-needed facilities. Surface transportation projects are extremely complex as they often involve a large number of project stakeholders in the form of different governmental entities. This is especially true on projects in which tribes are among the project stakeholders as additional governmental relationships and protocols are introduced into the project environment. Collaboration on transportation issues is impacted by complex issues such as sovereignty, intergovernmental agreements, tribal versus state jurisdiction, regional planning efforts, right-of-way (ROW) acquisition, funding and maintenance. Even when there are common interests, the planning, design, and implementation of transportation projects require collaboration among tribal, federal, and state agencies.

1.3 Federal Recognition of Tribes as Sovereign Nations

Tribes throughout the nation have a complex history and relationship with the federal government. Early recognition of tribes as separate and sovereign governments exists in the US Constitution, Article 1. The clause in the Constitution identifying tribes as sovereign governments gives Congress the authority to regulate commerce with many of the States, foreign nations and Indian Tribes (Deloria & Wilkins, 1999). This constitutional mention to Indian Tribes has been used to recognize tribes' status as governments, separate from federal or state government. As various entities and sovereign nations own land within the US, collaboration between federal, state and tribal governments is inevitable in the transportation planning process.

With project success relying heavily on the establishment of a collaborative environment among project stakeholders, the US government identified and established the need for

collaboration among state, federal, and tribal governments. In fact, the Executive Branch requires consultation with tribes on projects of concern to tribal communities (Clinton, 2000). In addition, the Legislative Branch mandates the investigation of historical sites and potential cultural properties of concern to tribes (National Historic Preservation Act, 2006). However, consideration of cultural properties and impacts to tribal lands and communities can be interpreted differently by the parties involved. Crucial to project implementation and success is the collaboration between transportation agencies and tribes to ensure that all parties agree on interpretations of cultural properties.

The US Constitution recognizes tribes as sovereign nations, but efforts for consulting with tribes on a government-to-government level have only recently taken place. Tribal involvement in transportation project planning has increased as efforts for establishing intergovernmental relationships have increased. Following a succession of Executive Orders by President Clinton, the unique relationship between tribal governments and the US government has been recognized. This relationship is at the highest level of authority. Figure 1 (A) identified this relationship. The government-to-government relationship, as established by the respective Executive Orders does not automatically flow down through the hierarchical governmental structure in which states and local governments are involved.

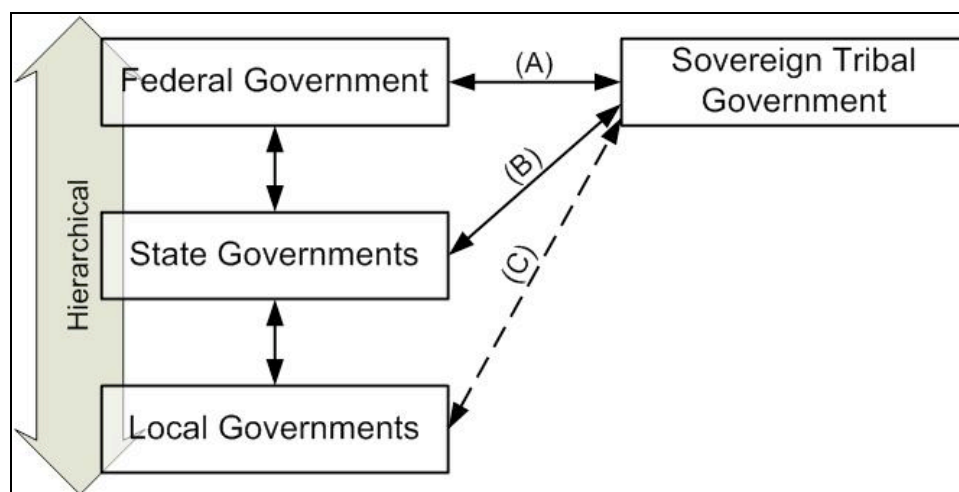


Figure 1: Relationships between Local, State, Federal and Tribal Governments

With transportation improvements affecting tribes and tribal lands, it is often necessary for states and local governments to consult with tribes. In order to enable a direct relationship between affected parties, many states have taken the initiative in establishing and recognizing a government-to-government relationship between the state and tribes with an interest in the state. In many states, the need for direct consultation has taken the form of formal agreements, which have been drafted and signed between the state and tribal governments residing or with interest in the state. Figure 1 (B) identifies this relationship. While this creates a direct relationship between the tribes and the state, the relationship between the tribes and the federal government remains the governing relationship.

1.4 Unmet Transportation Needs on Tribal Lands

According to the TEA-21 Reauthorization Task Force established by the National Congress of American Indians (NCAI), more than \$25 billion in transportation improvements on roads

crossing Tribal lands were needed in 2003. This Task Force was one of the many efforts by Tribes to be involved in the process of planning, implementing and operating transportation networks. This increasing involvement of Tribes in different phases of a transportation facility lifecycle is not only motivated by financing issues, but also by the importance of many aspects of transportation for the diversity of Tribal cultures. As with every other government, Tribal institutional frameworks are strictly related to the underlying collective culture. While each Tribal culture is unique, each one spans over a complexity of broad transportation issues of importance for Native American nations, including sovereignty, jurisdiction, respect of traditional cultural properties, environment, economic development, right-of-way, and safety.

Two possible sources of Federal funding are intended for transportation improvements on Tribal lands. The first group includes funds for the Indian Reservation Roads (IRR) and the Indian Reservation Roads Bridge (IRRBP) Programs, which are usually administered through the local Federal Highway Administration (FHWA) Division and the Bureau of Indian Affairs (BIA) Regional Office. In addition to IRR and IRRBP, a second group of funds includes the Federal-Aid Highway Programs, which are usually administered through the local FHWA Division Office and the local State transportation agency, and may be used for transportation improvements on Tribal lands. These funds can only be accessed by Tribes through partnerships with state and local transportation agencies. While Tribes have worked successfully with local, state and other stakeholders to improve transportation infrastructures, the documentation of these successful practices is often left behind. This research explored the successes behind such partnerships to leverage these experiences beyond their context.

1.5 Project Scope and Objectives

This research study developed a toolbox to design a collaboration practice for facilitating Communication, Cooperation and Coordination (3C) between transportation agencies and tribes. As requested from the complexity of this study, the Research Team provided a diverse background with specific expertise on Native American projects that helped overcome cultural barriers on the topic of this study. This approach allowed the researchers to achieve the two research objectives: (1) Develop a Transportation Agencies/Tribes 3C Guidebook, and (2) Develop a Detailed Implementation Plan. In addition, the adoption of a consensus-reaching approach helped overcome impediments by parties to the implementation of the 3Cs practices. Finally, the use of the proposed research deliverables is expected to improve 3C practice between transportation agencies and Tribal communities to face the needs for current and future improvements in the transportation infrastructure.

Chapter 2 Research Approach

2.1 Research Approach

2.1.1 Overview

The Research Team adopted a three-phase plan with the objectives to develop a detailed research plan during Phase One; collect and analyze data from a sample of Tribes and transportation agencies across the country in Phase Two; and, finally, deliver the Guidebook and develop a detailed implementation plan in Phase Three. Initially, an 18-month project schedule was expected. However, this initial schedule required a revision to reflect delays in the workshop organization and data collection. While estimates of this delay were provided in monthly and quarterly reports, an actual research schedule has been included in Section 2.1.3.

During the first phase, the Research Team conducted a literature review of pertinent domestic and international research and developed a detailed research plan. This phase included three tasks that were carried out during the initial three months of the contract that was executed at the end of April 2008. This initial phase produced a technical memorandum including detailed information on the approach for collecting and analyzing data and/or information. The Research Team submitted this document to NCHRP in July 2008.

Upon approval by the NCHRP in August 2008, the Research Team initiated the second phase of the research. This second phase was expected to take ten months to carry out the planned five tasks. Several factors described in the monthly and quarterly reports required Phase Two to take three months longer than expected. This phase produced the Interim Report including detailed information on research findings, Research Team recommendations, and an outline of the Guidebook. The Interim Report was submitted for approval by the NCHRP in July 2009.

Upon approval of the Interim Report by the NCHRP in August 2009, the Research Team initiated the final phase of the research. The third phase included three tasks that were carried out during an eight month period. This phase produced this preliminary draft of the final report, and the Guidebook as a stand-alone document, including a detailed implementation plan for assessing the effectiveness and comprehensiveness of information contained in the Guidebook. These documents are submitted to NCHRP for review by the Project Panel and staff. The Principal Investigator (PI) will then finalize the report and Guidebook to incorporate the reviewers' comments. Moreover, the project technical editor will edit the report and the Guidebook to ensure compliance with the Cooperative Research Programs (CRP) requirements for style and organization of reports.

2.1.2 Research Objectives

Objective 1: Develop Transportation Agencies/Tribes Collaboration Guidebook

Provide guidance to all parties working to develop successful transportation projects of interest to and affecting Tribes by evaluating and selecting the most appropriate collaboration practice for facilitating Communication, Cooperation, and Coordination (3C) between transportation agencies and Tribal communities in order to achieve successful transportation projects. Research results have been arranged in the form of a guidebook, the Transportation Agencies/Tribes Collaboration Guidebook.

Objective 2: Develop Detailed Implementation Plan

Develop a detailed implementation plan including a plan for action, and an implementation assessment practice to evaluate the effectiveness and comprehensiveness of the Guidebook. The implementation plan will provide suggestions on how the user may determine whether practices and tools included in the Guidebook: (1) facilitate communication between agencies and tribes; (2) simplify the process of coordinating actions between agencies and tribes; and, (3) suggest best cooperation practices for transportation agencies and tribes on common projects.

2.1.3 Research Process by Phase and by Task

Phase I: Detailed Research Plan Development

This phase included three tasks which were carried out during the initial three months of the expected contract time of twenty-four months. The outcome of this initial phase was a technical memorandum including detailed information on the approach for collecting and analyzing data and/or information. The technical memorandum was submitted for approval by the NCHRP. Tasks carried out in this phase are listed and described below.

- Task 1: Review of the state of the practice (May-Jun 08)
- Task 2: Develop detailed research plan (May–Jun 08)
- Task 3: Produce technical memorandum (Jun-Jul 08): Submitted to NCHRP on 7/16/08, reviewed by NCHRP by 8/13/08, late reviews by 8/19/08

TASK 1: REVIEW OF THE STATE OF THE PRACTICE

A considerable amount of literature contributions on the practices for facilitating communications between Tribal communities and transportation agencies was reviewed. The Research Team searched peer-reviewed journals, magazines, governmental reports, and other published technical resources using UNM library resources and electronic computer search engines for additional insight. The search found pertinent references of completed research and experience related to inter-governmental practices for communications, cooperation, and coordination. The Research Team also searched the literature to identify definitions of communication, cooperation and coordination. The research placed a special emphasis on the literature related to these relationships between governmental agencies and Tribes for transportation projects.

In addition, case studies that have previously been developed for transportation projects were reviewed as part of the research effort. Based upon the team members' involvement in other research studies and ongoing professional activities, a large amount of information on existing case studies was already available for the review and analysis in this project. In addition to cases available in the literature, members of the Research Team had direct experience on several transportation projects and studies affecting Tribes. Additional case studies were presented at the 1999 ATRI-sponsored New Mexico Tribal/State Transportation Summit, at the 2001 ATRI & TRB co-sponsored Conference on Transportation Improvements on Experiences Among Tribal, Local, State, and Federal Governments, and at the 2001 ATRI-organized Tribal Radioactive Materials (RAM) Transportation Workshop. All the information obtained from the literature and case study reviews were categorized and systematically analyzed. To provide an assessment of legal and policy requirements that support or detract from successful transportation projects involving tribes, the literature review and existing case studies were used to identify issues related with legal and policy requirements.

The Research Team developed a list of all sources analyzed, including all research projects and publications deemed relevant for this project established the body of knowledge (BOK) which the remainder of the research was based on. The major elements of the BOK included the focused literature review synopsis, and the list of sources.

TASK 2: DEVELOP DETAILED RESEARCH PLAN

The Research Team used a multi-faceted approach, combining workshops, interviews and surveys to identify the 3Cs practices to be included in the Guidebook. During this task, the Research Team developed a detailed research plan which was implemented in Phase II. The research team accomplished this task by completing the following subtasks:

Subtask 2A – Implement Team Collaborative Communication System

Given the large size of the team, the Research Team implemented an array of communication mechanisms to ensure project control. First, a chain of command was established by the sub-consultants to ensure the direction of the PI is followed throughout the project. Therefore, each subcontractor designated a single representative who was in charge of communications with the Principal Investigator (PI). The communication system was designed accordingly to this authority structure.

Second, to ensure frequent and effective communication, the Research Team used conventional methods (phone and email) coupled with frequent project status meetings scheduled onsite or in conference calls. A system that keeps recording of these meetings was used for scheduling and managing these conference calls. If a team member cannot attend a meeting, she/he would have access to these recordings.

Subtask 2B – Identify experts in communication, coordination and cooperation

The Research Team developed a list of industry experts by utilizing two repositories for the identification of these experts. First, the researchers compiled a list of contacts using the case study database developed during Task 1. Second, the researchers scanned the existing list of industry contacts established through the Team’s ongoing research and professional activities in the transportation arena. Additionally, attendance to industry organizations/associations events were used to establish additional contacts and as additional potential outreach mechanisms (e.g., Navajo Nation Transportation Conference, National Tribal Transportation Conference, Institute of Transportation Engineers Annual Meeting and Technical Conference, etc.). The Research Team also contacted state and local transportation agencies to identify agencies that have implemented and documented their practices in transportation projects of interest to and affecting Tribal communities. This effort facilitated identifying experts on these types of projects. The reasons for selecting both representatives of Tribes and agency personnel were: (a) to provide a comprehensive understanding of the joint decision process for these projects; (b) to identify the practices utilized at each phase in the process; (c) to describe the outcome of the experimented practices on existing projects; and (d) to refine and to validate each practice using a larger basis.

Potential respondents were selected from different regions and included staff at tribal and non-tribal agencies and communities involved in transportation projects. Therefore, stakeholders’ representatives from a broad range of entities were considered, including (1) tribal government, (2) non-recognized and state recognized tribes, (3) state departments of transportation, and (4) local agencies (i.e., county road departments and Rural and Metropolitan Planning Organizations).

Subtask 2C – Develop framework and methodology for analyzing BOK

The Research Team developed a framework and methodology for analyzing the BOK (developed in Task 1) with the purpose of identifying potential 3C practices. The Research Team considered and analyzed different approaches for analyzing information contained in the BOK. Finally, a process for implementing the selected methodology was developed and included in the Technical Memorandum.

Subtask 2D – Prepare a plan for interviews and workshops

The Research Team expected that additional effort would be required to refine 3Cs practices identified through the analysis of the BOK. Therefore, a set of interviews and workshops were used to collect additional information and details. In this subtask, the Research Team developed a plan for these interviews and workshops. First, the Research Team explored the availability of experts identified in Subtask 2A to participate in the study, either as interviewees or as panelists in the Delphi study. Initially, the Research Team contacted state and local transportation agencies to identify officials who have experience in transportation projects of interest to and affecting Tribal Communities. Concurrently, the Research Team identified techniques to outreach the Native American community, including telephone interviews and seminars/workshops at Tribal conferences.

The interview plan and procedures for managing workshops addressed the complexity of the problem at hand and the absence of previous studies on this topic. Because of the lack of original research, the Research Team decided to adopt a qualitative but rigorous approach based on interviews for performing this preliminary task. The purpose of conducting qualitative research interviews is, “to see the research topic from the perspective of the interviewee, and to understand how and why he or she comes to have this particular perspective (Cassell & Symon, 1994; pp.14).” This type of interview uses an interview guide (a list of topics that the interviewer should cover in the course of the interview) instead of a formal schedule of questions to be asked word by word. The interview guide was designed to explore pertinent issues related to each of the 3Cs practices. The overall purpose of the interview plan and guide is to capture as complete a picture as possible of both the 3Cs practices and the challenges/opportunities encountered with each practice. The focus of each area of inquiry was based upon the fundamentals uncovered through the literature review and the Research Team’s own expertise. In addition, this commonly shared interview protocol guaranteed uniformity in data collection independently from the member of the Research Team who is interviewing.

Following development and review of the interview guide, each research team member who served as an interviewer during this task was trained on the interview procedures. This training made the interview process as consistent as possible across interviewers. Specific attention was given to how to phrase questions and how to deal with difficult interviewees and overcome cultural differences (i.e., uncommunicative, over communicative, high status interviewees, would-be interviewers, and tribal languages).

Subtask 2E – Develop framework and methodology for Delphi questionnaire and data analysis

To refine information on 3Cs practices and achieve consensus, the Research Team adopted the Delphi technique (Linstone & Turoff, 2002). During this task, the research team formalized the research protocol for conducting the Delphi study. The Delphi research method was developed by researchers at the RAND Corporation in the 1950s and the 1960s for structuring a group communication process to deal with complex problems that do not lend themselves to precise analytical techniques. It allowed the Research Team to solicit expert judgment on the 3Cs

practices. In addition to being designed to minimize the time an expert devotes to responding, the Delphi exercise offered several potential research benefits, as described below. Delphi applications have evolved over the years, providing methods that involve significantly less effort by the participant than, for example, participating in an expert panel. Whereas this method served as an effective mechanism for creating a dialogue among the panel participants, it also provided them an opportunity to learn from each other, and to help the researchers build consensus on the 3Cs practices.

The Research Team believed that the particular circumstances surrounding the problem statement lead to the need for employing the Delphi technique (Linstone & Turoff, 2002). These circumstances include that “the problem does not lend itself to precise analytical techniques but can benefit from subjective judgments on a collective basis” (pp.4). Also, “more individuals are needed than can effectively interact in a face-to-face exchange,” and “time and cost make frequent group meetings infeasible” (pp.4). Finally, “disagreements among individuals are so severe or politically unpalatable that the communication process must be refereed and/or anonymity assured,” but also “The heterogeneity of the participants must be preserved to assure validity of the results, i.e., avoidance of domination by quantity or by strength of personality (“bandwagon effect”)” (pp.4). All these circumstances apply to the proposed study.

TASK 3: PRODUCE TECHNICAL MEMORANDUM

Following the completion of Task 1 and Task 2, the Research Team compiled all relevant material into a technical memorandum that included a synopsis of the literature review and the detailed research plan. The Research Team obtained approval of the research plan by the NCHRP before initiating the following research phase. The PI was act as the point of contact with NCHRP.

Phase II: Identification of 3Cs practices

This phase included five tasks which were carried out during thirteen months. During this phase, the Research Team identified practical practices for communication, cooperation, and coordination between transportation agencies and Tribal communities in order to facilitate successful transportation projects. The Research Team used both qualitative and quantitative data analysis techniques to analyze the results. Qualitative analysis, including the identification of similarities among responses, was used to analyze the interview data. Quantitative analysis, including frequencies, correlations and relationships among variables, were used to analyze the questionnaire data and was used to analyze portions of the interview data. The outcome of this phase was the Interim Report which included detailed information on research findings, Research Team recommendations for the implementation of the identified practices, and a detailed outline of the Guidebook. The Interim Report was submitted for approval by the NCHRP. Tasks carried out in this phase are listed and described below.

- Task 4: Data collection and analysis (Aug 08 – Oct 09)
- Task 5: Summarize research findings (Jan – Oct 09)
- Task 6: Make recommendations (May 09)
- Task 7: Develop a detailed outline for the Guidebook (May 09)
- Task 8: Interim Report for NCHRP review and approval (Jul 09)¹

¹ The Interim Report was submitted in July 2009. This report included interim results of the data analysis. Tasks 4 and 5 were continued to complete Round Two of the Delphi Study.

TASK 4: DATA COLLECTION AND ANALYSIS

During this task, the Research Team implemented the research approach outlined in the Technical Memorandum. The detailed research approach was revised to address the comments made by the NCHRP Project Panel. An overview of the research design behind the data collection and analysis is provided in Section 2.2. The research team accomplished this task by completing the following subtasks:

Subtask 4A – Analyze BOK

The Research Team used the framework and methodology (developed in Task 2C) for analyzing the BOK (developed in Task 1). The objective of this subtask was to identify potential 3Cs practices among case studies collected and reviewed in Task 1.

Subtask 4B – Conduct Interviews and Workshops

In the beginning, the Research Team conducted workshops at Tribal and transportation conferences to illustrate the list of potential 3C practices identified during the review and analysis of literature and case studies. The intent was to have at least one member of the Research Team presenting the practices and facilitating the workshop accordingly to the procedures identified in Subtask 2A.

In addition, phone interviews with comparable Tribal and State representatives were used to complement the list of practical 3Cs practices. Researchers would consider performing additional follow-up interviews if details on some of these practices are needed. The goal was to produce enough descriptive information, including examples and lessons learned to provide guidance in the application of these practices. Based upon the semi-structured interview guide developed in Subtask 2.A, the Research Team collected comparable information on each practical practice through face-to-face or phone interviews with transportation agencies or Tribal representatives. The Research Team maintained contact with the interviewees throughout the life of the research project should follow-up interviews (telephone or email) be required. Interviewers recorded interviews (if the interviewees allow). Interviewers summarized major issues and topics discussed within each interview. If the interviewee did not allow recording, the interviewer was careful in providing a major level of details in the summary. During this interview/workshop phase, the most significant issues related with legal and policy requirements were captured and explored in detail through identification and review of written sources. At the end of this task, the Research Team identified a set of practical 3C practices with examples that were validated through the Delphi study.

Subtask 4C – Conduct Delphi Study

To solicit expert judgment on the 3C practices, the Research Team conducted a Delphi study. First, the Research Team invited the experts identified in Subtask 2D to participate in the Delphi study. To provide an assessment of legal and policy requirements that support or detract from successful transportation projects involving tribes, individuals were also invited who had background on legal and policy issues in the Delphi panel.

Experts accepting the invitation were asked to respond to an initial questionnaire in the first round of the study. This questionnaire assessed the expert panel agreement with the importance and scope of each of the proposed strategies. In addition to rating each item, panelists were asked to provide qualitative feedback on the strategies. They were also asked to suggest (a) success factors, (b) barriers to implementation, and (c) implementation activities. Responses from all panelists were compared and analyzed. Results from the first round of the Delphi study were

used jointly with information from the comparative case studies to improve and better define the initial framework of strategies. For each practice, the average level of agreement with the provided definitions was computed. This score provided a measure of the overall panel agreement with how specific strategies are formulated. Inter-rater agreement was also computed to measure the panel's internal agreement on each of the strategies. Strategies that the panel did not agree with were modified and resubmitted for a second round of Delphi. Qualitative comments provided in response to open-ended questions were used to address panel disagreement and modify strategies. During the second round of the exercise, panelists received a summary of the modified framework of strategies, and a synopsis of responses from other informants. In addition, they received a second questionnaire, including a detailed description of each of these strategies. Responses from all panelists were compared and analyzed. Information submitted through this second questionnaire were analyzed to determine both the average importance rating of each of the strategies and to assess the panel's internal agreement. At the end of this process, the research team identified a set of mutually recognized 3Cs practices with examples to provide guidance in selecting the right collaboration practice for each type of project. A collaboration practice is intended as the set of 3Cs practices that are expected to be more successful in facilitating communication, coordination, and/or cooperation on that specific project or program.

TASK 5: SUMMARIZE RESEARCH FINDINGS

The designated note-taker for each workshop will summarize each workshop into the major issues and topics discussed there. A graduate student transcribed all interviews from Subtask 4C based upon available audio recordings. A review procedure followed each transcript completion allowing for both feedback/commentary between interviewers and transcribers and revisions/corrections of the interview transcripts as needed. The analyses of transcripts and summaries were reviewed by a second member of the research team to reduce the risk of research bias. The outputs of these analyses were revisited by the entire research team to reach a consensus on conflicting issues. The Research Team analyzed the summaries from workshops and interviews as well as the results from the Delphi study.

TASK 6: MAKE RECOMMENDATIONS

In this task, the Research Team used visualization tools to portray the complex information resulting from the previous tasks into a matrix tool that tracked the outcome of a certain practice into a Tribe/State context. Then, the 3Cs practices compiled in Task 5 were analyzed in relation to the three main categories: Communication, Coordination and Cooperation. The Research Team documented, evaluated, and compared the merits of each respective practice, discussing the advantages and disadvantages of each. Quantitative analysis of responses to the Delphi questionnaire provided a performance measure for each practice and broke down strategies into two groups: validated (if they achieve the panel consensus), and proposed (if they were found in multiple cases but were not able to achieve the panel consensus). In this context, the term "performance measure" refers to the use of specific indexes for measuring the panel's internal agreement. In a previous study based on Delphi technique, Dr. Migliaccio adopted inter-rater agreement as measured by average deviation (AD) index (Burke & Dunlap, 2002) at this purpose. These metrics are valid measures of panel's internal consensus. This approach provided a "performance measure" for each practice by ranking them against the criterion the panel analyzed them against.

TASK 7: DEVELOP A DETAILED OUTLINE FOR THE GUIDEBOOK

This task pulled together the knowledge gained from earlier tasks to develop the outline of the Guidebook. The result from this task combined with the findings from Tasks 5 and 6 created the Interim Report described in Task 8.

TASK 8: INTERIM REPORT FOR NCHRP REVIEW AND APPROVAL

This task compiled the knowledge gained from earlier tasks into an Interim Report which was reviewed by NCHRP. The Interim Report also developed the outline of the Guidebook and a draft of the implementation plan. The Research Team obtained approval of the Interim Report by the NCHRP prior to initiating subsequent research phases.

Phase III: Development of the Guidebook and of the Implementation Plan

This third phase included three tasks that were carried out during eight months. Initially, this phase produced a preliminary draft of the Research Report including the Task 9 Guidebook as a stand-alone document, and a detailed implementation plan for assessing the effectiveness and comprehensiveness of information contained in the Guidebook. These documents were submitted to NCHRP for review by the project panel and staff. Later, the PI finalized the Report and Guidebook to incorporate the reviewers' comments, and the project technical editor will edit the report and the Guidebook to ensure compliance with the CRP requirements for style and organization of reports. Tasks carried out in this phase are listed and described below.

- Task 9: Develop the Guidebook and the Research Report (Aug-Apr 10)
- Task 10: Identify path forward (Jan – Apr 10)
- Task 11: Final submittal of Guidebook, Research Report, and Executive Summary (Apr 10 - Jul 10)

TASK 9: DEVELOP THE GUIDEBOOK AND THE RESEARCH REPORT

The Research Team accomplished this task by completing the following subtasks:

Subtask 9.A – Prepare Transportation Agencies/Tribes Collaboration Guidebook

The Transportation Agencies & Tribes Collaboration Guidebook will provide guidance to decision-makers within transportation agencies and Tribes for evaluating and selecting the most appropriate strategies for communication, cooperation, and coordination in order to facilitate successful transportation projects. The Guidebook provides a systematic guidance through the evaluation/selection process by explaining potential issues, offering potential advantages and disadvantages of each practice, and providing performance measures as resulting from analysis of responses to Delphi questionnaires, and describing how to use them through examples. Through the manual, users will understand, at each step of the decision-making process, the implications of each practice on the collaboration effort and on project performance.

Subtask 9.B – Prepare Research Report

The research effort is described in the final Research Report, giving special attention to reporting challenges and lessons learned for use by a general research audience. These items are produced in Task 10. The implementation plan will provide suggestions on how the user may determine whether strategies included in the Guidebook: (1) facilitate communication between agencies and Tribes; (2) simplifies the process of coordinating actions between agencies and

Tribes; and, (3) suggest best coordination practices for transportation agencies and Tribes on common projects.

TASK 10: IDENTIFY PATH FORWARD

This task produced an analysis on the research gaps and needs that would enhance future editions of the Guidebook, but also produced a detailed plan for implementation of the Guidebook. The Research Team also analyzed strategies that were suggested, but did not reach the Delphi panel consensus (if any) to determine the need for reformulating the practice or collecting additional data. The Research Team obtained approval of the Guidebook by the NCHRP before preparing the final version. The PI will act as the point of contact with NCHRP.

TASK 11: FINAL SUBMITTALS

During this task, the Research Team will include suggestions from the NCHRP review to finalize the Guidebook, the stand-alone Executive Summary, and the Research Report.

Subtask 11.A – Finalize Guidebook and Research Report

The Research Team finalized the Guidebook to incorporate the reviewers' comments, and the project technical editor edited the Research Report and the Guidebook to ensure compliance with the Cooperative Research Program (CRP) requirements for style and organization of reports.

Subtask 11.B – Prepare Executive Summary

Finally, a summary of research findings and observations will be presented to the TRB Executive Committee Subcommittee for the NCHRP in the form of a stand-alone Executive Summary.

2.2 Research Design for Data Collection and Analysis

In this chapter, an overview of the approach for the data collection and analysis is provided including details on the three components of the research design: (a) identification of issues and practices, (b) workshops and interviews, and (c) Delphi study.

2.2.1 Overview

The research methodology followed a three-step approach as shown in Figure 2. This flowchart also shows changes to the timeline. First, documents identified in Task 1 were analyzed to identify underlying issues between state transportation agencies and tribes and to identify candidate practices for facilitating communication, coordination and cooperation (3C practices). Later, the Research Team conducted workshops at tribal and transportation conferences to generate discussion around the initial list of 3C practices. Interviews were also conducted to complement the literature findings. These interviews generated enough descriptive information, including examples and lessons learned to provide case studies and guidance in the application of these practices. Finally, a thorough assessment of the proposed practices was sought through the Delphi study component.

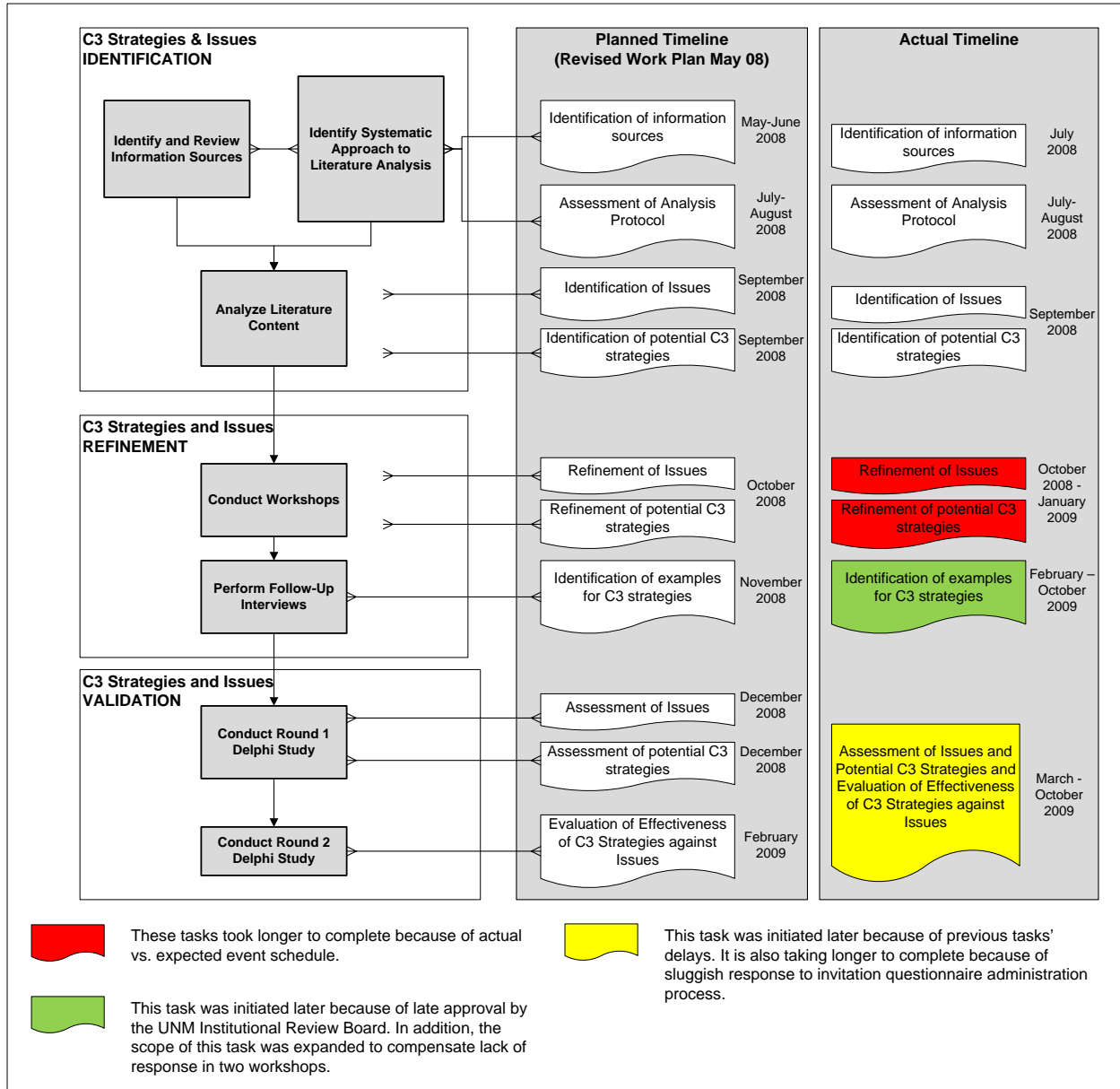


Figure 2: Research Methodology Approach

Data collection and analysis activities (i.e. Task 4) were initiated after the Project Panel agreed on the research plan during a conference call held on August 13, 2008. The data collection task included four subtasks: (a) content analysis, (b) organization of workshops/panel sessions, (c) performing of interviews, and (d) conducting the Delphi study. For research activities meeting requirements set by 45 CFR Part 46, the project PI acted to obtain approval by the Institutional Review Board (IRB) at the University of New Mexico. Requests for IRB approval were submitted for the Interview and Delphi subtasks. Interviews activities were authorized on January 2009 while the Delphi phase was considered exempt.

2.2.2 Identification of 3Cs Practices and Issues

Activities in this research phase did not involve Human Subject research covered by 45 CFR Part 46. Therefore, while information sources were identified during Tasks 1-3, data analysis activities were initiated immediately after the Project Panel agreed on the research plan on August 13, 2008. Content analysis of the bibliographic sources was completed on September 30, 2008. The results of this phase included a detailed list of issues that may affect success of transportation projects of concern to tribal communities.

Documents identified and reviewed in Task 1 were systematically analyzed to identify and record frequency of both the underlying issues and the 3C practices between state transportation agencies and Tribes. After this systematic analysis of written information sources was completed, the Research Team developed a comprehensive list of issues affecting the success of transportation projects of interest to and affecting tribes. In addition, initial versions of 3C practices adopted to overcome and mitigate the previous issues were identified. The remaining part of this section includes information on the approach used for analyzing the documents collected and reviewed in Task 1. This approach relied on accurately identifying and defining issues and 3C practices.

After the initial review of the literature, major categories of issues were identified and then reviewed by individual team members. Utilizing the Research Team experience, issues were categorized into one of these categories independently from the entities involved or the geographic area. However, there was an understanding that issues may change according to the specific context (i.e., tribe, state, geographic area). To help identifying context-specific issues, a set of questions was developed for each category. The answers provided for these questions further isolated issues in each of the categories. In the following research phase, documents were analyzed to identify answers to these questions that could lead to the development of examples and case studies. This case-based approach added depth to the understanding of the major issues.

A protocol for systematic analysis of the written documents was developed to provide guidance in the analysis process. The goal of the analysis was to extract 3C practices. This protocol was based on a previous version of the operational definitions of Communication, Coordination and Cooperation. The protocol also included a procedure for analyzing documents. An inter-coder reliability test of this initial protocol produced a fair value of the free-marginal Cohen's Kappa reliability index. The Research Team used this quantitative value together with qualitative comments by three raters to improve the protocol. The approach to the content analysis was of a qualitative nature, so the protocol was intended to provide guidance more than consistency to the analysis process. As a result, a rigorous approach to the protocol validation was not needed. Changes to both the attributes of what characterizes a 3C practice and the analysis process were made. The new revised protocol was utilized in identifying practices for communication, coordination and cooperation as identified in the literature.

Forty-five sources of the 120 identified in the annotated bibliography included in the Technical Memorandum were analyzed using the protocols for the identification of issues and practices. The literature was sampled in a manner that provided a sample from each of the categories of implementation practices as identified in the literature review (i.e., literature with information on formal agreements, tribal liaisons, executive orders, environmental review, tribal summits, etc.). The literature was also sampled to include all case studies identified in the literature review in order to provide a detailed analysis on issues and practices on both the programmatic and project-specific level.

2.2.3 Refinement of 3Cs Practices and Issues

During this phase, the Research Team used workshops and interviews to refine the previously developed list of issues and 3C practices. Initially, this information was presented in the format of panel sessions/workshops. Feedback allowed for the identification of weaknesses in the list of issue/practices and follow-up with personal interviews.

Workshops/Seminars

Activities in this subtask did not involve Human Subject research covered by 45 CFR part 46. Therefore, activities were initiated immediately after the Project Panel agreed to the research plan on August 13, 2008. Three venues were initially considered for workshops as stated in the Technical Memorandum. However, three additional venues were added following submittal of the Technical Memorandum. Feedback was received at each of the following venues and was used to revise interim findings with respect to the list of issues and practices.

The first venue for a presentation/workshop/panel session was the meeting of the Transportation Committee at the 65th Annual Convention and Trade Show of the National Congress of American Indians held in Phoenix, Arizona held October 19-24, 2008. With the help of Mr. John Healy, co-chair of the Transportation Committee, the Research Team was able to schedule a presentation session on October 22th. Dr. Migliaccio and Jason Hurd delivered a presentation on the research project and on the lists of issues and practices identified during the content analysis phase. In addition, meeting attendees were provided an informational packet and invited to participate in the project. Several contacts were established at the meeting.

The second venue was the 11th Annual National Tribal Transportation Conference sponsored by the Tribal Technical Assistance Program held in Oklahoma City, Oklahoma held November 10-13, 2008. With the help of Mr. Ronald Hall, chair of the NCHRP panel, the Research Team scheduled a presentation session on November 13th. In addition, a booth on the project was set up at the conference. A team member was in charge of the booth where he provided an informational packet and established contacts. The presentation session was initially scheduled over a 1hr and 45min time slot. The plan was to host a workshop with several activities, including presentations by three project team members (Terry Holley, Geri Knoebel and Mike Quintana) and group activities by the attendees. However, a last-minute change in schedule constrained this session to a shorter time. Presentations were provided, feedback was gained and contacts were established.

The third venue was the 14th InterTribal Transportation Association (ITA) Annual Conference held in Las Vegas, Nevada held December 10-12, 2008. With the help of Mr. John Healy, chair of the ITA, the Research Team scheduled a workshop session on December 12th. Dr. Migliaccio and Dexter Albert delivered presentations on the research project and on the lists of issues and practices identified during the content analysis phase. In addition, meeting attendees were assigned to groups for reviewing interim findings. Each group reported its comments to the audience and further discussion resulted. Dr. Migliaccio and Dexter Albert coordinated the activities, and collected feedback and contact information. Several contacts were established at the meeting. In addition, the ITA, and two Tribal Transportation Assistance Program (TTAP) directors offered to distribute an invitation to participate in the study to their respective members.

The fourth venue was the 46th Paving and Transportation Conference sponsored by the Department of Civil Engineering and the Alliance for Transportation Research Institute at the University of New Mexico held January 5-6, 2009 in Albuquerque, New Mexico. With the help of Dr. Jim Brogan, ATRI director, the Research Team scheduled a presentation on January 6th.

Dr. Migliaccio and Rebecca Martinez delivered a presentation on the research project and on the lists of issues and practices previously identified. Meeting attendees were invited to participate in the project and several contacts were made.

The fifth venue was the Transportation Research Board (TRB) 88th Annual Meeting held January 11-15, in Washington, DC. The project's PI participated in the TRB workshop titled: "What Every Transportation Professional Needs to Know about Tribal Issues," scheduled for January 11, 2009, from 1:30 p.m. until 4:30 pm. The goal was to gain feedback on interim findings. Moreover, the project's PI delivered a brief presentation on the status of the project to the NCHRP committee with the goal of gaining feedback on the format of the final deliverables. In addition, Rebecca Martinez delivered a presentation to Session 769 "Native American Transportation Issues and Success Stories" on January 14th. Several contacts were made and feedback on interim findings was provided.

Finally, three Research Team members attended the Tribal Road Construction Contracts Course, hosted by the Tribal Technical Assistance Program of Colorado State University, held March 16-18, 2009, in Bernalillo, New Mexico. With the help of Ronald Hall, the chair of the NCHRP panel, the Research Team gave a presentation on the project and invited all attendees to participate in the interview and/or Delphi phase of the project. In addition, Research Team member, Isaiah Pedro, hosted a booth for the duration of the workshop to provide information on interim results of the study and participation forms to attendees interested in participating to the study. Six acceptance forms were collected at the event as well as an additional seven confirmations of interest for participating in the study.

Interviews

Activities in this subtask required submittal of a request to the UNM-based Institutional Review Board (IRB) as set in 45 CFR part 46. Therefore, activities were not initiated until this approval was granted. A request was submitted on October 2008, but interview activities were not initiated until approval was provided by the IRB. UNM's IRB approved the interview research protocol on January, 7, 2009, so recruitment for the interview phase was initiated. Initial contacts for interview invitations were extracted from the previously compiled list of transportation professionals as provided in the Technical Memorandum for this project. State tribal liaisons and contacts from the workshops attended were among the first invitees for this phase of the project. Interviews with individuals that accepted the invitation were performed and follow up contacts established.

Interviews began on February 4, 2009, with a large number of interviews being conducted during the month of February. Follow up interviews were conducted concurrently with the interview analysis during the months of March, April and May. A total of 30 interviews were conducted with transportation professionals in the Northwest, Southwest, North Central, South Central and Northeast US and Alaska. Of the thirty professionals interviewed, four were from federal agencies, 11 from state agencies, nine from local agencies, and two from non-governmental agencies. Four additional interviews were conducted with members of tribes from the Northwest and Southwest regions of the US.

The results of the interview phase were used to develop case studies. These case studies were used together with other case studies developed from literature sources and/or Research Team member personal experience to develop a case study collection, which illustrated instances in which one or more of the issues and practices identified were encountered and implemented. The Research Team has also used this process to further refine the issues and practices. Formulation

of case studies (i.e., Task 5) from these interviews began in March 2009. In addition to the formulation of case studies, results of the interview phase were analyzed to provide a thorough description of each of the issues and practices. Analysis of interviews for these issue and practice descriptions was initiated in May 2009. This further analysis allowed the development of a list of structured case studies.

2.2.4 Validation of 3Cs Practices and Issues

To solicit expert judgment on the 3C practices and issues, a Delphi study has been conducted. Activities in this subtask required submittal of a request to the UNM-based Institutional Review Board as set in 45 CFR part 46. A proposal for approval was submitted. Later, this proposal was modified and the PI called for a waiver from the approval process. The basis for this waiver is that the Delphi study would be used for quality improvement purposes, and quality improvement studies do not need IRB approval. Basically, the Research Team is following the Delphi process to systematically collect and analyze information about the effectiveness of existing programs (practices/practices) in order to:

- make judgments about these programs and
- improve program effectiveness and/or informed decisions about future program development.

The Research Team used interim findings, as refined during Tasks 4.B and 4.C, to develop a preliminary form of the Delphi questionnaire. The Research Team sent this draft questionnaire to the NCHRP committee chair, Ronald Hall, for distribution among the Project Panel members. To begin the actual data collection phase, the Research Team mailed invitation letters to participate in the Delphi study to individuals in the Tribal Leaders Directory on March 23, 2009. Invitations were also sent to local, state and federal agencies identified during Task 2, as well as additional contacts made at the workshops/presentation events and subsequent volunteers (i.e. Task 4.B). These individuals were asked if they are available to participate in the Delphi study and received an invitation acceptance form designed to assess areas of expertise of each individual. Collecting this preliminary information guaranteed that the Delphi panel expertise covers all of the issues. These individuals would insure a thorough assessment of the suggested practices in the light of these requirements. A preliminary analysis of the invitation questionnaires also allowed the Research Team to verify that all the required expertise is represented on the Delphi panel. If the number of individuals was believed not sufficient, additional individuals could be identified using a nomination process by the Research Panel.

Individuals accepting the invitation were asked to respond to the Delphi questionnaire. At the end of this process, the Research Team identified a set of mutually recognized 3Cs practices with examples to provide guidance in selecting the right collaboration practice for each type of project.

Chapter 3 Findings and Applications

3.1 Literature Review

Cooperation on transportation issues is impacted by complex issues such as tribal/ state sovereignty, intergovernmental agreements, jurisdiction, regional planning efforts, right-of-way (ROW) acquisition, funding and maintenance. Even when there are common interests, the planning, design, and implementation of transportation projects require coordination and cooperation among tribal governments and federal and state transportation agencies. The researchers conducted a review of existing literature on programs and initiatives regarding transportation projects affected by, or of interest to, tribal communities to document the challenges and issues of these government-to-government relationships and to identify best practices that address those issues. The study of the state of the practice had the following objectives:

- Identify and categorize issues surrounding transportation projects affected by or of interest to tribal communities.
- Identify programs implemented and initiatives taken to alleviate issues, as identified in the previous objective.
- Identify best practices in transportation projects affected by or of interest to tribal communities and define a path forward for further analysis of the literature in order to identify practices implemented to address the identified issues.

A total of 120 documents, which include: articles, reports, Web sites, and case studies, were reviewed. All published literature regarding transportation projects were identified through Internet sources and public databases. A majority of literature provided for the review was predominantly published by state and federal agencies, with little literature published by individual tribes. Refer to the annotated bibliography as provided in the Technical Memorandum for the list of literature reviewed and its respective summaries.

3.1.1 Descriptive Statistics

Statistics were compiled with the goal of identifying geographic areas and thematic areas that lack written documentation. Table 1 illustrates that all the reviewed documents describe efforts within seventeen state boundaries. Among the sources reviewed, 84 documents described efforts that were state specific. Among the state-specific documents, there are 60 described programs in which state DOTs were involved. As shown in Table 1, a majority of these documented efforts are from the states of Arizona and New Mexico.

As shown in Table 2, 27 tribes were referred to in 29 documents, but additional documents were reviewed that did not specify the tribal entity. Only the Navajo Nation, which possesses many local chapters, was addressed in five documents while the remaining tribes were referred to once. This breakdown of the literature reviewed made it possible to compare the extent to which each DOT, tribe, and thematic area was addressed. This allowed the identification of state DOT and tribal entities that would require additional future research.

3.1.2 Identification of Implementation Practices

This section includes a synopsis of the documents that were reviewed. These documents were grouped into two categories: (a) Overall Government-to-Government Efforts: these documents describe efforts to facilitate communication, cooperation and coordination between

transportation agencies and are government entity-specific without referring to any specific project; and (b) Project Specific Government-to-Government Efforts: contains documentation on approaches implemented either by tribes or transportation agencies for the delivery of specific transportation projects.

Information on the number of documents reviewed that address a specific category and subcategory is provided in Table 3. Using this categorization, the state of practice was summarized into a list of different approaches to implement practices with specific examples of each.

Table 1: Descriptive Statistics by State

<i>State</i>	<i>Count</i>	<i>DOT-related Count</i>
Alaska	4	2
Arizona	15	14
California	3	3
Georgia	2	1
Idaho	1	1
Iowa	4	4
Kansas	2	2
Maine	1	1
Minnesota	7	7
Montana	1	1
New York	2	NA
New Mexico	28	13
Oklahoma	1	1
Pennsylvania	2	2
South Dakota	2	2
Washington	5	3
Wisconsin	4	3

Overall Government-to-Government Efforts

Tribal involvement in the decision-making process and in regional programming for transportation infrastructure is evolving. Government-to-government agreements establish frameworks for mutually beneficial working relationships and formalize the tribal involvement process. These efforts improve success and address issues prior to the execution of specific transportation projects. The developed framework is intended to be comprehensive and implemented at all times, not just specifically for one transportation project. Efforts are documented through the following:

- The establishment of formal agreements between transportation agencies and tribes,
- The organization of intergovernmental tribal summits and meetings,
- The establishment of the tribal liaison position within DOTs,
- The formalization of best practices through publication of reference books and guides,
- The investigation of the state of the practice of issues occurring with respect to transportation projects affected by or of interest to tribal communities.

Table 2: Descriptive Statistics by Tribe

<i>Tribe</i>	<i>Count</i>
Metlakatla Indian Community	1
Navajo Nation	5
Coeur d'Alene Tribe	1
Standing Rock Sioux Tribe	1
Chickaloon Native Village	1
Assiniboine Tribe of Fort Peck Reservation	1
Sioux Tribe of Fort Peck Reservation	1
Oglala Sioux Tribe	1
Seneca Nation	1
Spokane Tribe	1
Fond Du Lac Band of Lake Superior Chippewa Indians	1
Caddo Nation	1
Shakopee Mdewakanton Sioux Community	1
Muckleshoot Indian Tribe	1
Iroquois Tribe	1
Nisqually Indian Tribe	1
Confederated Tribes of the Chehalis Reservation	1
Penobscot Indian Nation	1
Jicarilla Apache Nation	1
Seminole Nation	1
Pojoaque Pueblo	1
San Ildefonso Pueblo	1
San Juan Pueblo	1
Santa Clara Pueblo	1
Tesuque Pueblo	1

Table 3: Descriptive Statistics by Category

<i>Category</i>	<i>Subcategory</i>	<i>Count</i>
Overall	Tribal Summit/Meeting	32
	Tribal Liaison	7
	Reference Guide	28
	Research and Study	19
	Other	33
Project	Finance and Planning	42
	Pre-Construction: Design	5
	Pre-Construction: Environmental Evaluation	17
	Pre-Construction: Right-of-Way	8
	Construction	11
	Operation and Maintenance	5

ESTABLISHMENT OF FORMAL AGREEMENTS

Executive Order 13175 issued by President Clinton on November 6, 2000, describes the unique relationship between the U.S. government and tribal governments (Clinton, 2000). This established the formal requirements for agencies to consult with tribal governments on any project that affects tribal entities in order to reduce impositions. It serves to help streamline federal processes for tribal governments, and because many transportation projects are federally funded, state governments and other local entities had to implement practices for consultation. Following the Executive Order, states developed formal agreements, created organizations to conform to the new requirements, and strengthened relationships with tribal governments.

Increasingly, Memorandums of Understandings (MOUs) have been developed which detail the tribal consultation process with federal and state agencies on transportation planning, development, and maintenance of projects. These agreements provide a practical framework for intergovernmental relations. Transportation planning efforts through Metropolitan Planning Organizations (MPOs) and Regional Planning Organizations (RPOs) are formalizing working relationships between tribes and local governments in regional and long-range transportation planning. These formal relationships and agreements significantly improve communication and cooperation on transportation planning and construction projects located on tribal lands.

In order to assist in tribal consultation on transportation projects, DOTs like the Minnesota Department of Transportation (MnDOT) have taken the approach of creating and signing MOUs with tribal governments. MnDOT and several Minnesota tribes have signed MOUs to increase tribal employment on transportation projects taking place on or near reservation land. The MOUs define that the MnDOT and tribal representatives will take part in annual meetings to discuss long-range plans and a three-year program in an effort to increase tribal employment on transportation projects. In addition, the MOUs declare that the MnDOT will include provisions to support and increase such employment, and tribes will identify tribal members qualified for employment on these projects. The development of formal agreements, like MOUs, serves to streamline the transportation project process and increase tribal involvement.

TRIBAL SUMMITS AND MEETINGS

Using summits or meetings provides a means for state and tribal agencies to communicate on best practices, issues, and needs concerning tribal transportation projects. Intergovernmental transportation summits have improved communication between tribal, state, and federal agencies and provided a forum for open communication between leaders and decision makers. They also provide a chance to identify individual agency and mutual needs and issues.

In 1999, the New Mexico Department of Transportation (NMDOT) took part in a summit that involved tribal, state, and federal representatives. This summit was organized to discuss issues surrounding transportation projects affected by or of interest to tribal communities throughout the state of New Mexico. The summit also provided tribal governments an opportunity to voice their needs in the transportation sector and to identify specific tribal concerns with transportation projects. Goals of the summit included improved government-to-government cooperation, agreement on communication protocols and processes, review of other successful government-to-government relationships, and the establishment of agreements that clarify and define issues

and resolutions. Successful project execution and coordination was identified as being ongoing and the need for continued participation in activities, such as the summit, was recognized.

STATE DEPARTMENT OF TRANSPORTATION TRIBAL LIAISONS

Tribal liaison positions in state DOTs provide a central point of contact. An individual serving as tribal liaison assists tribes and state DOTs with implementing direct and effective government-to-government relations by establishing long term working relationships based upon mutual concerns and by providing a culturally competent link between agencies. This position is further enhanced if held by a tribal member. The tribal liaison assists in creating relationships to facilitate tribal interactions with the state and improving project execution. The tribal liaison is typically well-versed in transportation projects concerning tribal communities and is viewed as a successful component of the state's organizational structure. However, during a roundtable discussion between five state DOTs, it was recognized that the tribal liaison position was most successful when located higher in the decision-making process.

In 2005, the Transportation Planning Capacity Building Program held a roundtable and panel discussion session between state DOT tribal liaisons in Spokane, Washington. Tribal liaisons for Arizona, California, Minnesota, Montana, New Mexico, Oklahoma, Washington, and Wisconsin are maintained by their respective state DOTs. Each of these states supports a full-time tribal liaison position dedicated to the coordination and improvement of tribal and state relationships. A special emphasis has been made on the importance of the role of liaison and the need for continuing education in transportation matters that affect tribes.

FORMALIZATION OF BEST PRACTICES THROUGH REFERENCE BOOKS AND GUIDES

To formalize best practices and make them readily available for use by states and tribes, reference books and guides have been created by state DOTs and other agencies such as the American Association of State Highway and Transportation Officials (AASHTO). These resources range from compilations of best practices on transportation projects affected by or of interest to tribal communities, to handbooks for agencies to follow in order to complete a transportation project within the existing legal framework. The guides detail approaches used by various states to improve the success of project execution, and to provide guidelines to follow when completing a transportation project as well as identify best practices in such projects. These resources provide a knowledge base to all transportation agencies that utilize them, facilitate information sharing across the transportation spectrum, and further streamline the project execution process by providing necessary resources, such as environmental permits.

The MnDOT Tribes and Transportation e-Handbook is an online resource that provides agencies with helpful information from policy and programmatic agreements to information on environmental assessment and permitting. Tribes and transportation agencies can access this resource guide and obtain consistent guidance information on the project process. This resource further provides government entities with examples of prior successful projects that may be incorporated into a project at hand. In addition to tribal program information, this also provides information on various project phases (design, construction, etc.) as well as agreements signed to endorse construction projects that mutually benefit all government entities involved. Resources provided in the e-Handbook allow quick and consolidated access to government policy and

MnDOT practices to ensure that government entities are well informed when executing transportation projects.

INVESTIGATION OF TRIBAL TRANSPORTATION ISSUES, PRACTICES AND PROGRAMS

Research studies and assessments conducted by state DOTs serve as an investigation of transportation issues, practices, and programs. These studies focus not only on state activities in tribal transportation, but also serve to solicit information from the public, including tribal members. Research studies and assessments provide information about the programs and implementation practices that are being used by states across the nation as well as public opinion on project issues. This addresses both the issue of identifying successful practices utilized by states and the issue of open communication between transportation agencies and the public.

A synthesis was conducted by CTC & Associates LLC for the Wisconsin Department of Transportation (WisDOT) in 2004 on state DOT activities with respect to transportation projects affected by or of interest to tribal communities. This study was performed to assist WisDOT in identifying manners in which other state DOTs implemented programs to achieve successful transportation projects. The study focuses on WisDOT current practices as well as the DOTs of California, Arizona, Washington, Minnesota, Iowa, New Mexico, Alaska, Montana, Pennsylvania, Idaho and Kansas. The report categorizes the research and practices into four areas:

- The use of tribal liaisons,
- The organization of tribal summits,
- The publication of transportation research guides,
- The establishment of advisory committees to address cultural issues between tribes and transportation agencies.

Research on these practices and programs already implemented provides the DOT with a knowledge of the practice in transportation projects affected by or of interest to tribal communities and can be considered when creating and implementing new programs for successful coordination, cooperation, and communication.

The use of an assessment to assist in the development of a program or method for project completion is illustrated in a project in Idaho in which public opinion was solicited in order to create a report and develop recommendations for negotiations on a natural resources management plan. The U.S. Institute for Environmental Conflict Resolution, the Coeur d'Alene tribe and other agencies assessed past negotiation efforts as well as the possible structure for future negotiations to update a Lake Management Plan for Coeur d'Alene Lake. The report and recommendations were based on interviews and discussions with individuals and agencies with an interest in the Lake Management Plan. This type of assessment takes into consideration the opinions and suggestions of the community in order to propose a plan of action and methodology for successful coordination, cooperation and communication.

Project-Specific Government-to-Government Efforts

Programs implemented for increased success in tribal transportation are not only employed in government-to-government efforts, but have also been implemented in project-specific issues.

These efforts were utilized to address issues that are predominant in project finance and planning, pre-construction, construction, and operation and maintenance.

FINANCE AND PLANNING

The lack of funding for transportation projects has led agencies like the Federal Highway Administration (FHWA) to develop ideas for innovative funding practices to tribal entities. In a presentation prepared by the FHWA Resources Center, innovative finance techniques available to tribal governments were identified. Some of these techniques include leveraging, credit assurance, partnerships, and matching funds with state DOTs. For leveraging, tribal governments can utilize Grant Anticipation Revenue Vehicle (GARVEE) bonds. Other finance options identified by the FHWA were credit assistance from State Infrastructure Banks (SIB), a Section 129 Loan, and the Transportation Infrastructure Finance and Innovation Act (TIFIA). The possibility of partnering with state DOTs for fund matching was identified as an innovative financial option for tribal governments in order to alleviate budgetary constraints.

PRE-CONSTRUCTION

Following the planning and acquisition of funding, pre-construction activities commence, including design, environmental assessment, and right-of-way (ROW) acquisition. Few case studies have been identified in which tribal involvement was documented in all areas of pre-construction.

DESIGN

Tribal consultation during the design phase of pre-construction is not frequently cited in literature reviewed. If a transportation project is undertaken by state or federal agencies and the same project is affected by or is of interest of tribal communities, the state or federal agency most often perform or contract out engineering design activities. Some instances were noted in which tribes contributed information, ideas, opinions, or suggestions on the final design of transportation projects, which enabled tribal designs and aesthetic concerns to be incorporated in a transportation project.

ENVIRONMENTAL ASSESSMENT

Environmental assessment has a special connotation when the project affects tribal land. Issues of environmental protection as they apply to tribes are unique as tribal land has significance beyond physical property. Tribal lands have historical, cultural, and religious meaning to a tribe, and as such, must be treated differently. Section 106 of the National Historic Preservation Act requires federal agencies to consider the impact of projects on historical land. Keeping tribal land issues in mind, states have implemented programs to treat such issues and alleviate problems that may arise when a transportation project affects tribal land. Using programs such as programmatic agreements and the establishment of the state or tribal historic preservation officer, states and tribes increase the prospect of success for alleviating environmental assessment and historic preservation issues.

In the state of Minnesota, the MnDOT, the FHWA, and the Fond Du Lac Band of Lake Superior Chippewa Indians have signed a programmatic agreement implementing consultation in accordance with 36 CFR 800 on federal transportation projects in Minnesota. This agreement defines stipulations by which the Fond Du Lac Band of Lake Superior Chippewa Indians, the

FHWA, and the MnDOT abide by in order to satisfy Section 106 of the National Historic Preservation Act. If it is found that a project will have an adverse effect to property of religious or cultural significance to the Fond Du Lac Band, the FHWA was involved in creating a memorandum of agreement to minimize the effect on such historic properties. The formalization of roles on a transportation project concerning the Fond Du Lac Band assisted in defining clear and mutual paths of action on projects while streamlining environmental assessment and historic preservation processes.

RIGHT-OF-WAY

Sovereignty issues have a direct impact on the tribal concerns about ROW and state DOTs' ability to maintain or construct improvements. Transportation projects often need to take place on tribal lands in order to address public transportation needs. In these cases, ROW acquisition impacts tribal sovereignty by the removal of tribal lands. Acquisition of tribal lands for ROW requires adherence to the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as well as application to the Department of the Interior's Bureau of Indian Affairs for use, occupancy, and construction on tribal lands. ROW issues are not just in the form of a monetary transaction, as there are significant issues that deal with culture. Federal and state transportation agencies have implemented several approaches for involving tribal entities into the ROW acquisition process with the goals of alleviating these issues and minimizing delays on project execution.

In the spring of 2000, the Kansas Department of Transportation (KDOT) developed new statewide tribal consultation procedures in collaboration with the four federally recognized tribes in Kansas. Negotiations were held on tribal lands in order to determine the manner in which regular project contacts would occur. Appointing a DOT position dedicated to right-of-way alleviates land issues, provides a consistent contact, and retains expertise in tribal right-of-way acquisition within the DOT organization.

CONSTRUCTION

Construction of a transportation project commences upon the completion of pre-construction activities. Issues that arise during the construction phase are typically related to inter-agency cooperation among the involved parties. In order to complete a transportation project on tribal land, tribes and transportation agencies need to coordinate activities and cooperate effectively with one another to ensure that no delays occur. Adding to the complexity of construction activities, private contractors hired by DOTs and transportation agencies still must abide by tribal laws, regulations, and protocols. Cooperation in the form of pooled resources can assist in successful project execution if all agencies have well-defined roles and responsibilities.

Kawerak, Inc., a nonprofit corporation and a regional consortium of tribal governments located in Alaska, plays a large role in Alaska transportation and project execution. Kawerak began contracting for the BIA in 1976 and began to operate a transportation-construction program in 2000 for the Bering Straits Region to meet the area's transportation needs. Kawerak trains and employs natives of Alaska to plan, design, construct and maintain transportation projects.

An Arizona transportation project, which took place in the adjacent communities of Tuba City and Moenkopi, encountered coordination issues due to the necessity of working inside the political boundaries of two separate, and distinct, tribal governments: the Hopi Tribe and the

Navajo Nation. The private contractor who was hired by the Arizona DOT (ADOT) had to coordinate with both tribal governments in regards to hiring practices, abiding by local Indian Employment Preference Laws, satisfying tax obligations, and obtaining permits for water resources. To address these requirements, the contractor began working with the tribal agencies involved at the pre-construction meeting. Additionally, follow-up and follow-through activities by means of in-person visits ensured compliance and successful completion of the project.

OPERATION AND MAINTENANCE

Perhaps one of the least-addressed issues in the area of project-specific efforts is in the area of operation and maintenance. Once a project has been planned and successfully completed that specific project still requires consultation between tribal and non-tribal entities in order to operate and maintain the constructed project. The issue of operation and maintenance (O&M) is mentioned in literature cases when the need for consultation is identified by an agency. While the need for continued collaboration efforts throughout O&M has been identified, few implementations were found addressing this need.

Operation and maintenance matters were addressed in the U.S. 191/I-40 traffic interchange project in Arizona. The ADOT recommended three modern roundabouts for the new interchange, and wanted community buy-in and coordination for the roundabout alternative. They also expressed a need for coordination with the local Navajo chapter on the cleanup and maintenance of new sidewalks, as well as the payment of electrical utilities for the new street lights. The ADOT recognized that coordination was required beyond the construction phase of the project to address O&M; MOUs were negotiated to outline mutual obligations and considerations.

3.1.3 Literature Review Findings

Many efforts have been implemented in order to improve coordination, cooperation, and communication between tribal governments and transportation agencies. While communication, coordination and cooperation practices "enable" collaboration, they do not guarantee that parties collaborate throughout the project development process or that actions are conducted with mutually beneficial outcomes. The recognized practices have been identified as being implemented to increase success, but assessing if they resulted in actual success was not within the scope of this component of the study. The interview phase captured nuances and tried to record lessons learned while the Delphi phase has been conducted to provide a "measure" of the perceived success of each practice.

The literature reviewed showed that little documentation exists on implementation of a collaborative environment during project execution. While it is important for tribal governments and transportation agencies to have a basis for relationships and communication prior to the implementation of specific projects, it is also important for programs to be established during project execution to guarantee the continued success of these relationships. While overall level programs help improve successful government-to-government relationships, these programs and relationships need to be successfully transitioned to the project-specific level.

3.2 Content Analysis

The literature review provided the Research Team with an overview of the programs and initiatives that have been implemented throughout the US to increase the success of transportation projects concerning tribal communities. However, the current study focused on the

identification of “practical strategies for Communication, Cooperation, and Coordination (3C) between transportation agencies and tribal communities in order to facilitate successful transportation projects.” First, this direct mention of 3Cs required the researchers to investigate the meaning of these words within the given context. Second, a content analysis was performed on a sample of the literature to develop a list of recurring issues as found on transportation projects of concern to tribal communities and specific communication, coordination and cooperation practices implemented to alleviate the issues.

3.2.1 Communication, Cooperation, and Coordination

This direct mention of 3C required the researchers to investigate the meaning of these words within the given context. A review of definitions was conducted to include several dictionaries and glossaries. After this search, the Research Team adopted the following definitions for the terms Communication, Cooperation and Coordination.

Communication between tribes and transportation agencies is the process by which information, data or knowledge regarding issues and projects is exchanged through methods, such as speech, writing, or graphics by the transmitting party, so that it is satisfactorily received or understood from the receiving parties.

This operational definition of communication allowed researchers to “tag” practices that focus on the concept of exchanging information, data or knowledge and on the assessment that the transmitted message is satisfactorily received and understood from the receiving parties.

Similarly, a definition of coordination was identified as relevant to the topic:

Coordination between tribes and transportation agencies is the process by which representatives of these entities communicate information on how and when each party must act in order to harmoniously work interdependently for the purpose of achieving effective common results. In the given context, coordination encompasses the development and adjustment of plans, programs, and schedules among parties to achieve general consistency, as appropriate. Therefore, for coordination to happen parties need to communicate and the object of communication includes information on how and when each party must act and that there is mutual obligation for follow through.

This operational definition of coordination allowed researchers to “tag” strategies that focus on the concept of exchanging information with the goal of developing efficiently interdependent plans, programs and schedules. The information defined “how and when each party must act.”

In addition, a definition of Cooperation was identified:

Cooperation between tribes and transportation agencies is the process by which representatives of these entities involved in carrying out the transportation planning, programming and delivery processes (i.e., state transportation agencies and tribes) work together to achieve a common goal or objective.

This definition of cooperation was modified from other definitions to reflect the study focus. This operational definition allowed researchers to “tag” practices that focus on the concept of “working together to achieve a common goal or objective” as Cooperation Practices.

3.2.2 Issues and Practices

As the cumulative Research Team experience revealed, the majority of efforts on transportation projects encompasses more than one of the previously defined aspects of communication, coordination or cooperation. Overall, the three Cs are often cited as the “soft

side of project management” and constitute a recurrent theme within the literature on project management. This framework of definitions was developed for projects affected or of interest to tribes. It relied on an escalating approach that would require additional effort and reward (in terms of relationship and trust building) when the entities are increasing interaction from communication to coordination and from coordination to cooperation as shown in Figure 3.

To explain this concept on a generic transportation project, it is possible to envision that project stakeholders need to step up to the implementation of these three concepts from the underlying project context with its complex issues. When the project is of interest to and affecting tribes, the project context layer also acquires different meanings and presents different challenges for the delivery of the transportation project.

During the content analysis, five major issues encountered on transportation projects of concern to tribal communities were identified, allowing for each of the acknowledged issues to be categorized. The issues identified are not restricted to a specific entity or the geographic area in which the project is located. Issues were grouped within five major categories with each category having several sub-categories. These issues were then further refined during the interview phase of the project and re-categorized into six major issues categories and their subcategories as can be seen in Chapter 4 of the Guidebook.

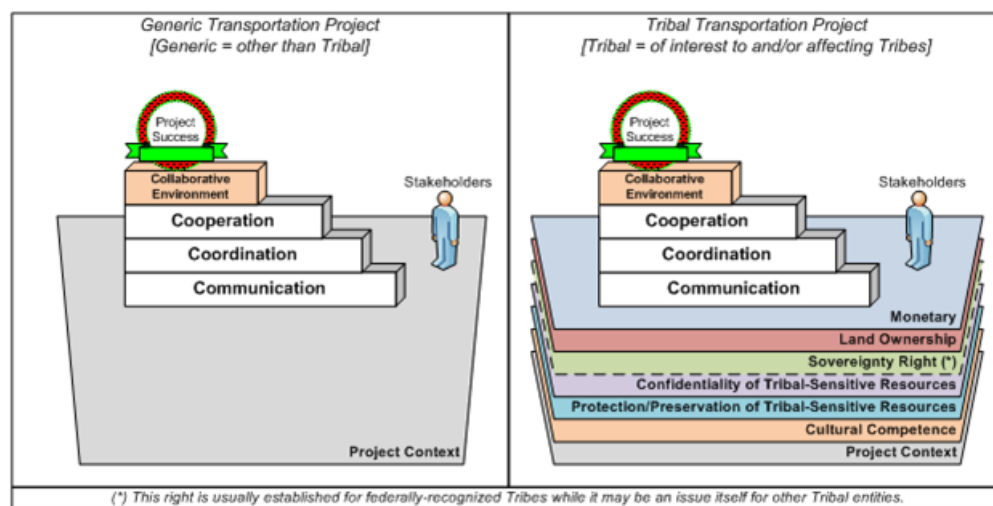


Figure 3: Contextual Application of Three Cs

When a transportation project is of interest to and affecting tribes, stakeholders need to step up to the same contextual ladder for implementing the three Cs concepts as a non-tribal project. However, an underlying layer of complexity is added to this effort in tribal transportation projects because the parties need to be culturally competent in order to correctly implement the three Cs. This Cultural Competence additional layer of complexity is underlying all the other contextual issues because it is present independently of other issues that are present. In addition, it may magnify effects from the other issues when cultural competence issues are present. Tribes and local governments do not fully understand each other’s cultural practices as they pertain to interaction in the transportation process. Major challenges in consultation efforts are meeting the individual cultural needs of each entity involved in the planning process and communicating cultural significance to transportation agencies. Specific issues within cultural competency are

(1) lack of cultural knowledge within the transportation sector, (2) the need for skill development in cultural competency and (3) the need for understanding of cultural context on projects. It would be difficult to meet the requirements set above for communication if the communicating party is not competent on the communication means to be used with the receiving party.

In addition to the Cultural Competence additional layer of complexity, the initial project context layer also acquires different meanings and presents different challenges for transportation project of interest to and/or affecting tribal communities. First, tribes may consider certain resources to be sensitive and of concern when affected by a transportation project, while local, state and federal governments may not find the same resources to be of concern. Resources that may be defined “sensitive” by tribes include (1) natural and biological resources, (2) cultural resources and (3) historical resources. For example, while a site may not be federally recognized as a historical site, it may be considered historical by a tribe. Second, there may be areas of concern that cannot be divulged. In considering sites for projects, areas of concern like (1) natural and biological resources, (2) location of cultural sites, traditional practices, and (3) traditional symbols, may exist, but details on each are confidential and cannot be shared with non-tribal transportation agency staff.

In addition, the federal government recognizes many tribes across the United States as sovereign nations, introducing an additional level of governmental entity participating in the transportation project process and a new dynamic in project execution. Issues regarding (1) jurisdiction, (2) government-to-government relations and (3) institutional relationships and protocols are introduced to the project environment. As a result, the relationship between states and tribes must rely on government-to-government protocol of mutually respectful interaction. This type of interaction may be sometimes well-established between recognized tribes and state governments, but it may become an issue itself when the tribal entity being involved in the public outreach process is a non-recognized tribe or the state agency does not recognize tribal sovereignty.

Issues regarding land ownership often add to the difficulty of project execution. When acquiring land for transportation projects, Right of Way often leads to difficulty on a project when (1) full ownership of a site for a transportation belongs to a tribe, (2) one of the parties involved owns the surface of a proposed transportation site, and (3) mineral exploration rights of a site belong to an entity that is not the owner of the land in question.

Last, funding is an issue common to virtually all transportation projects with unique aspects on transportation projects of concern to tribal communities, such as: (1) Project funding is an issue in all transportation projects because of funding deficiencies. (2) Project taxation and other fees can also lead to difficulties in project execution when tax and fee agreements between parties aren’t executed prior to project commencement.

The issues described in the discussion above were structured into six major categories:

1. Cultural competency issues,
2. Issues related to the protection/preservation of tribal-sensitive resources,
3. Issues related to the confidentiality of tribal-sensitive matters,
4. Sovereignty issues,
5. Land ownership issues, and
6. Monetary matters issues.

Another result of the content analysis is a list of communication, cooperation and coordination practices that have been implemented for the alleviation of the six major categories of issues. The identified practices were categorized within the overarching practices of communication, coordination and communication. The practices were then refined and additional practices added during the interview phase of the project.

3.3 Case Studies

In March 2009, the Research Team initiated the analysis of the interviews performed to date. Refer to Guidebook, Appendix C for structured case studies. In addition to the formulation of case studies, the interviews were utilized to refine the list of issues and practices results as well as to provide a thorough description of each of the issues and practices identified. Analysis of interviews for these issue and practice descriptions was completed in May, 2009.

Preliminary results of the interview phase show a difference in the approach and level of consultation between state and local governments and tribal communities. The use and perceived success of each of the identified practices differed from region to region, with the level of involvement with tribes varying from state to state. It has also been identified that while some practices have been used and perceived as successful in one region, that does not assure the same success in an alternate region. For example, in a state in the North Central US, the consultation process is performed primarily between the state and a committee comprised of all tribes having an interest in transportation projects in the state. Professionals in this state have identified that the tribes consulted preferred to be consulted with as a group. This type of collaboration requires a consensus from all tribes involved regardless of the location of the project. Professionals in other states and regions (i.e., the Northwest) have identified that tribes that are consulted preferred to work with the state on a one-on-one basis, without other tribes in the state being involved if they are not directly affected by the project. This difference in program approaches and perceived success across the US suggests that successful practices for communication, coordination and cooperation may vary from region to region.

3.4 Delphi Study – Round 1

3.4.1 Overview

This section summarizes findings from the first round of the Delphi Study. This initial round of the study was conducted by administering a survey on the perceived effectiveness of each practice when a given category of issues was present on a transportation program/project initiatives. Respondents needed to state their level of agreement/disagreement on a six-option scale or select the “I don’t know” option. Among the 70 individuals who accepted to participate to the Delphi panel, the researchers received responses from 48 individuals corresponding to an encouraging ~68% response rate. In addition, four NCHRP panel members submitted their responses to the questionnaire. Given the low response rate by the NCHRP panel members, these second set of responses was compiled, but it was not used in the findings.





In addition to rating each item, panelists were asked to provide qualitative feedback on the practices. Responses from all panelists were compared and analyzed. Qualitative comments provided in response to open-ended questions were used to identify lessons learned and recommendations. In addition, they were used to address panel disagreement and modify

practices that showed agreement or consensus (Yellow Flag) or moderate agreement but a lack of consensus (Red Flag).







Figure 4 shows the results of the practice evaluation assessment. This assessment utilized the numerical ratings to determine:

- If respondents broadly agreed on the effectiveness of a given practice in presence of a given issue;
- If there was a consensus on the median value among respondents.

The first criterion was met if at least 75% of respondents show at least moderate agreement with the provided statement. The second was met if the Average Deviation Index (Burke & Dunlap, 2002) from the Median value was determined to be less than 1 to show inter-rater agreement. Different configurations were analyzed before deciding that four scenarios needed to be treated differently from each other. The four-color scale used in Figure 4 defines these scenarios that are described below.

-  Green (i.e., PASS: Broad Agreement on effectiveness (at least 75% of respondents showed some level of agreement) AND Internal Consensus (AD <1);
-  Yellow (i.e., REDO): Broad Agreement on effectiveness (at least 75% of respondents showed some level of agreement) OR Internal Consensus (AD <1);
-  Red (i.e., Potential REDO or FAIL): Significant Agreement on effectiveness (at least 60% of respondents showed some level of agreement);
-  Black (i.e., FAIL): Low Agreement (less than 60% of respondents showed some level of agreement).

Researchers adopted the following criteria in stating the research findings that are detailed later in this chapter.

-  Green and  Black items would not need follow-up investigation because they were clearly effective (i.e., Green) or clearly ineffective and/or the responses largely differed among respondents (i.e., Black).
-  Yellow and  Red items would require further investigation through triangulation between these results and qualitative research results.
-  Yellow items include items for which at least 75% of respondents showed some level of agreement or items for which respondents showed internal consensus on the median value. These two groups of items were resubmitted to the Delphi panel for a new evaluation. Researchers used data collected in other research activities and responses in the Delphi questionnaire comments/feedback section to identify additional details and disclaimers to the formulation of the practice that could allow the practice to pass (i.e., green) or fail (i.e., black) the evaluation. A significant component of this “practice refinement” exercise relies in the researchers’ improved understanding of the application of the given practices resulting from their own experience and involvement in the research project thus far.
-  Red items were resubmitted to the Delphi panel for a new evaluation. Researchers analyzed responses in the Delphi questionnaire comments/feedback section. If respondents provided qualitative comments suggesting that additional details and disclaimers to the








formulation of the practice could allow the practice to pass the evaluation, the red-flagged items would be converted into Red-Yellow  and resubmitted to the Delphi panel for a new evaluation in a revised form. Otherwise, they will be converted into Red-Black  and dropped from the study.

Figure 4: Summary of Delphi Study, Round 1

3.4.2 Results

Analyzing the results of Delphi 1, all but one practice were deemed effective at least in the presence of an issue while three practices are considered effective for every situation. Eight practices may be able to pass the second round

Table 4: Delphi Round 1 – Practice Ranking

						Applicability
State Tribal Liaisons	6	0	0	0	0	Always
Meetings/Seminars	6	0	0	0	0	Always
Formal Agreements	5	1	0	0	0	Potentially Always (*)
Investigating Alternatives	5	1	0	0	0	Potentially Always (*)
Disaster Planning	5	1	0	0	0	Potentially Always (*)
Regional/State Conferences	5	0	1	0	0	Potentially Always (*)
Planning Organizations	5	0	1	0	0	Potentially Always (*)
Regional Districts	5	0	0	0	1	Mostly (*)
Tribal Moderator	4	2	0	0	0	Potentially Always (*)
Presentations	3	1	1	0	1	Mostly (*)
Tribal Consortium	3	0	0	3	0	Often (*)
Resource Sharing	2	3	0	1	0	Mostly (*)
Standards and Handbooks	2	1	1	1	1	Mostly (*)
Public Involvement	2	1	1	1	1	Mostly (*)
Data Collection/Analysis	1	2	1	1	1	Mostly (*)
Newsletters/Bulletins	1	1	0	2	2	Sometimes
Loans for Funding	0	0	1	1	4	Sometimes
Mailings/ Response Forms	0	0	0	0	6	Never
TOTAL	60	14	7	10	17	
(*) Final results available after second round of Delphi						

An analysis of the 108 practice-issue combinations is provided in Appendix A. Lessons learned and recommendations are also provided for each practice.

3.5 Delphi Study – Round 2

3.5.1 Overview

This section summarizes findings from the second round of the Delphi Study. This round of the study was conducted by administering a survey on the perceived effectiveness of the practices that were selected for further evaluation after the first Delphi round. Respondents needed to state their level of agreement/disagreement on a six-option scale or select the “I don’t know” option. Among the 48 individuals who participated to first round of the Delphi panel, the researchers received responses from 34 individuals corresponding to an encouraging ~71% response rate.

In addition to rating each item, panelists were asked to provide qualitative feedback on the practices. Responses from all panelists were compared and analyzed. Qualitative comments provided in response to open-ended questions were used to identify lessons learned and recommendations.

Figure 4 shows the results of the practice evaluation assessment. This assessment utilized the numerical ratings to determine:

- If respondents broadly agreed on the effectiveness of a given practice in presence of a given issue;
- If there was a consensus on the median value among respondents.

The first criterion was met if at least 75% of respondents showed at least moderate agreement with the provided statement. The second was met if the Average Deviation Index (Burke & Dunlap, 2002) from the Median value was determined to be less than 1 to show inter-rater agreement. Different configurations were analyzed before deciding that four scenarios needed to be treated differently from each other. The four-color scale used in Figure 4 defines these scenarios that are described below.









-  Green (i.e., PASS): Broad Agreement on effectiveness (at least 75% of respondents showed some level of agreement), and Internal Consensus ($AD < 1$);
-  Green Star (i.e., PASS): Broad Agreement on effectiveness (at least 75% of respondents showed some level of agreement), and borderline Internal Consensus ($AD \sim 1$);
-  Red (i.e., POTENTIAL PASS or FAIL): Significant Agreement on effectiveness (at least 60% of respondents showed some level of agreement);
-  Black (i.e., FAIL): Low Agreement (less than 60% of respondents showed some level of agreement).

Figure 5: Summary of Delphi Study, Round 2

3.5.2 Results

Analyzing the cumulative results of Delphi Round 1 and Round 2, all but one practice were deemed effective at least in the presence of an issue while nine practices are considered effective for every situation.

Table 5: Delphi Round 2 – Practice Ranking

					Applicability
Tribal Liaison and Coordinators	6	0	0	0	Always
Meetings/Summits/Workshops	6	0	0	0	Always
Formal Agreements	6	0	0	0	Always
Training	6	0	0	0	Always
Investigating Alternatives	6	0	0	0	Always
Planning Organizations	6	0	0	0	Always
Emergency Preparedness Planning	6	0	0	0	Always
Tribal Moderators and Mediators	6	0	0	0	Always
Regional or State Level Conferences	5	1	0	0	Always
Regional Transportation/Transit Districts & Coalitions	5	0	0	1	Mostly
Resource Sharing	5	0	1	0	Mostly
Presentations	5	0	0	1	Mostly
Standards and Handbooks	4	0	1	1	Mostly
Public Involvement	4	0	1	1	Mostly
Data Collection/Analysis	4	0	1	1	Mostly
Tribal Consortia	3	0	3	0	Often
Newsletters/Bulletins	2	0	2	2	Sometimes
Loans and Grants for Funding	1	0	1	4	Rarely
Mailings/ Response Forms	0	0	0	6	Rarely
TOTAL	86	1	10	17	

Chapter 4 Conclusions, Recommendations, and Suggested Research

4.1 Conclusions

Transportation initiatives can be characterized by a high level of complexity as the environment for transportation projects and programs usually involves multiple stakeholders. This complexity is heightened when transportation projects and/or programs affect or are of concern to tribal communities. Transportation initiatives that affect tribal communities encounter issues unique to the tribal transportation environment. With issues pertaining to cultural competency, sovereignty, the protection and preservation of tribal-sensitive resources, the confidentiality of tribal-sensitive matters, land ownership and monetary matters encountered on a project, collaboration among stakeholders is crucial to project success. In order to better understand these issues, this study identified a description of each issue and developed a process for identifying which ones might be encountered on a project.

An extensive review of the state of practice allowed the Research Team to identify programs and initiatives implemented to enable collaboration between transportation agencies and tribal communities. Several practices were identified and categorized as communication, coordination or cooperation practices. Professionals in tribal transportation were then surveyed as to the effectiveness of each practice with respect to commonly encountered issues on transportation projects. This report and the enclosed Guidebook provide a description of the effective practices as well as lessons learned pertaining to each of the practices. The identified practices of communication, coordination and cooperation serve to enable success when issues specific to tribal transportation initiatives are present.

Implementation methods are not always clear, so each of the communication, coordination and cooperation practices is illustrated through a collection of case studies. Summaries of real-life situations in which states and tribes successfully collaborated on projects shall ease the implementation process when used together with the lessons learned for each project. Interviews with transportation officials provided the data necessary to create these case studies.

The results of the study are organized into a tool for enabling collaboration among stakeholders on tribal transportation projects. Using case studies for each of the presented practices, agencies can easily identify practices of communication, coordination and cooperation that are appropriate for treating specific identified issues. Lessons learned and recommendations pertaining to each of the practices also provide users of the report an opportunity to improve current practices and enhance existing transportation programs.

4.2 Recommendations and Other Contributions

Tribal involvement in transportation initiatives results in an intergovernmental environment as tribes are recognized as sovereign nations, and as such have their own institutional protocols. The Clinton administration codified the government-to-government relationship between the federal government and federally recognized tribal governments in the late 1990s and required the federal government to consult with tribes on programs and initiatives that concern them.

Federal legislation began to flow down to states with many states and their respective transportation agencies already utilizing consultation practices on both the programmatic and project level. Initiatives like summits, formal agreements, and the creation of a tribal liaison position with the agency, began to be utilized to facilitate the consultation process. In a selected group of states, consultation efforts have reached a higher level of implementation with the

creation of intergovernmental networks with stakeholders as members. These networks helped to create the infrastructure for collaboration between stakeholders over time so that other collaborative initiatives might be successful independently from the people who carry them out at a certain time.

While performing this study, the Research Team started to question the role of intergovernmental networks as a tool for institutionalizing collaborative environments in the transportation sector when tribes are stakeholders. At this regard, an exploratory study was conducted beyond the scope of the NCHRP contract. A preliminary analysis of interview case studies pertaining to 11 states in which tribes take an active role as stakeholders in transportation projects and initiatives was performed. The Research Team defined three levels of intergovernmental implementation and three levels of collaboration among stakeholders. These categories were used to assess the two constructs (i.e., intergovernmental implementation and collaboration) for these states. The results suggest that there is a trend of increased collaboration with a higher level of intergovernmental network integration. In the four states that were categorized as fully integrated, the collaborative process occurs routinely among project stakeholders on transportation projects or initiatives.

In the case of the four states that have fully integrated intergovernmental networks and achieved a high level of collaboration, three determinants of intergovernmental networks and collaboration were found. Those determinants were: (1) Leadership and Management Action, (2) Relationships, and (3) Collaborative Frequency. These factors, when engaged in an iterative process can allow successful intergovernmental work and collaboration.

Leadership and management action was defined as a product of any combination of three types of action, which include (1) the normative establishment of collaborative process, (2) coercive action, and (3) formal agreements signed by stakeholders. Leadership and management action establishes a government-to-government relationship between the state and consulting tribes, recognizing tribal sovereignty. It also calls to action state agencies and departments, requiring consultation and collaboration through state law. Stakeholder relationships are contractually defined with the signing of formal agreements among parties.

Relationships were defined as the second determinant of intergovernmental work and collaboration. When parties are able to build both professional and personal relationships, intergovernmental work on transportation projects becomes a much more successful process. Results indicate that in the case of tribal involvement on a transportation project, professional and personal relationships are considered one and the same. Professional relationships establish stakeholders as partners and enable the ability of stakeholders to make business decisions. Personal relationships are created when stakeholders make an effort to know more about each other, both in the project context and the personal context. Personal relationships allow stakeholders to better understand each other's viewpoint and encourage stakeholders to seek solutions to transportation issues that are of the most benefit to all parties involved. This aspect is somehow related with the underlying issue of cultural competency. Research on cultural competency for other sectors have identified the characteristic of being sympathetic as crucial for a social worker to be successful in achieving cultural competency. The integration of personal relationships into current business models was also identified as an important factor in collaboration on projects.

Success and collaboration can only be achieved over time and with continuous effort, as is indicated by *collaborative frequency*. States that have established intergovernmental networks and a collaborative environment began the consultation process and obtained leadership and

management support at least a decade ago. Continuous work with tribes engages the iterative process and allows for the building of relationships, trust and collaboration between parties.

Findings of this exploratory study also support the following recommendation by the Research Team. While the 3C practices presented in this guidebook are recognized for enabling project success, when used in presence of an intergovernmental network, these practices serve as the “vehicles” for achieving true collaboration and success. Likewise, the underlying intergovernmental network acts as the infrastructure for these collaboration practices to operate at their best. The experience of some states which have gone further to establish intergovernmental networks shows that these networks enable collaboration by establishing an ongoing infrastructure for communication, coordination, and cooperation among the parties involved. Therefore, it would be recommended to integrate the Guidebook content with broader initiatives aiming at the establishment of these networks. Once established, these networks will ensure that further pursuit of collaboration will be recurring among the parties involved instead of depending on the individuals.

4.3 Systemic Barriers

Collaboration among stakeholders is crucial to project success. There are many barriers to effective collaboration between Tribes and transportation agencies that must be addressed in order to further these collaborative efforts and successful transportation initiatives.

- Recent federal legislation has mandated that Tribes be included in statewide long-range and strategic transportation planning processes. This had previously done by the BIA on behalf of Tribes. Lack of tribal transportation expertise is a barrier to full participation in these processes. From state perspective, many state agencies lack sufficient knowledge about tribes including sovereignty issues and cultural competency. These factors create barriers to effective collaboration in tribal transportation initiatives.
- Many MPOs and RPOs lack experience in working with Tribes in developing intergovernmental regional transportation plans
- Communication is often difficult because of a lack of knowledge and understanding of applicable laws, protocols, values, and jurisdictional issues on the part of tribes and federal/ state/ local agencies. This also includes technical, institutional, procedural and cultural issues and processes by both Tribes and agencies.
- TTAP centers are important training and technology transfer resources for Tribes. However, the lack of resources, including funding and staffing, limits these centers’ ability to effectively address the needs of Tribes in a timely manner.

4.4 Suggested Research

The scope of this project was limited to:

- assessing problems and barriers that hinder success on transportation initiatives affecting or of interest to tribal communities,
- compiling these problems and barriers into categories of issues,
- identifying 3C practices and validating best practices, and
- organizing the research findings into a Guidebook.

Identifying the role of intergovernmental networks as the infrastructure for collaboration was a byproduct of this study. The concept and initiative of establishing intergovernmental networks is new and little literature exists as to how a network can be established. Also, while current

practices can be found in the literature, little guidance exists on beginning the consultation and collaboration process. With these points in mind, the following areas have been identified for future research:

- The identification of issues in establishing an intergovernmental network among stakeholders with a special focus on “what has gone wrong” in the past, so that lessons learned might be established. This study may extend beyond state/tribe intergovernmental networks to include other categories of stakeholders.
- The development of a set of guidelines for starting the consultation and iterative processes for states that have just begun consulting with tribes.

These areas of future research are identified for their ability to add to the body of knowledge and have applicable impact on the day-to-day implementation of transportation projects and initiatives that affect both state, local and tribal governments.

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Appendices

Appendix A: Analysis of Delphi Study, Round 1

Exhibit A.1: Communication practices

The evaluation of the communication practices shows that only few of the existing practices are perceived as effective for fostering communication. In addition, there is not a practice that is always considered effective. Parties desiring to foster communication for a transportation program or project should select a combination of practices and try to use the identified lessons learned and recommendations for each one of the selected practices.

Table 6: Communication Practices – Analysis of 1st Round of Delphi Study

Practices		MC1: Cultural Competency	MC2: Protection/ Preservation	MC3: Confidentiality	MC4: Sovereignty	MC5: Land Ownership	MC6: Monetary Issues
Section B) Communication Practices							
B.1 Presentations	At least moderate agreement	86.7%	67.4%	46.7%	77.3%	90.2%	84.1%
	Internal Consensus	0.91	1.15	1.51	1.07	0.73	0.82
B.2 Data Collection/Analysis	At least moderate agreement	71.7%	77.3%	46.3%	75.0%	82.5%	87.2%
	Internal Consensus	1.24	1.14	1.34	1.03	1.10	0.95
B.3 Standards and Handbooks	At least moderate agreement	64.4%	71.4%	43.2%	80.0%	77.5%	78.6%
	Internal Consensus	1.07	1.05	1.23	0.88	0.83	0.88
B.4 Newsletters/Bulletins	At least moderate agreement	65.0%	51.3%	32.4%	70.6%	62.9%	78.4%
	Internal Consensus	1.10	1.21	1.08	1.00	0.89	0.76
B.5 Mailings/ Response Forms	At least moderate agreement	38.5%	33.3%	16.7%	24.3%	28.1%	19.4%
	Internal Consensus	1.49	1.38	0.97	1.11	1.09	0.97
B.6 Tribal Moderator	At least moderate agreement	92.5%	92.5%	97.4%	91.9%	83.3%	82.9%
	Internal Consensus	0.75	0.78	0.66	0.70	1.00	1.06

Presentations

SUMMARY

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when Cultural Competency, Land Ownership and/or Monetary Issues are present.

REDO: While at least 75% of the respondents have shown moderate or stronger agreement on the effectiveness of the given practice in presence of Sovereignty Issues, there was a lack of consensus. At this regard, different comments were provided that suggested a different approach to the use of this practice. In addition, comments were provided that suggested a different approach to the red-flag use of this practice in presence of Protection/ Preservation of Tribal

Sensitive Resources Issues. Therefore, a second round of Delphi is required to evaluate this revised formulation of the given practices.

FAIL: This practice is perceived as clearly ineffective and/or the responses largely differed among respondents in terms of its effectiveness when Confidentiality Issues are present.

LESSONS LEARNED

- Presentations do not replace discussions and are only a starting point for discussions
- Presentations are effective when information presented is factual, like specific regulations and laws.
- Presentations can be helpful for local agencies to provide basic understandings of tribal rights, consultation requirements, and roles and responsibilities.
- Issues presented must be on the general level and not tribe specific.
- Traditional Cultural Properties (TCP) cannot be discussed outside of the tribe, clan, medicine society, or other group that attaches significance to the resource.
- Presentations allow groups with differing opinions access to the same data, and often result in a better understanding of issues and solutions as a result of discussion following or part of a presentation.
- Presentations are appropriate for discussions when tribes are remotely located and can be conducted without face-to-face interaction i.e., conference call, webinar, Web sites.
- Successful presentations have been made on cultural sensitivity and government-to-government relations training especially when jointly presented by tribal and environmental staff to project development teams and agency management.
- Each individual tribe is the one that understands its culture, tribal-resources, sensitive matters, sovereignty issues, land ownership and monetary issues.
- Land-based and non-land based tribes will have different issues depending on their specific cultures.
- In some states, federally-recognized tribes do not reside in the state making communication difficult. WEB-N would be helpful to augment emails and phone calls.

RECOMMENDATIONS

- Presenters must have a strong level of cultural competency,
- Pre-approval should be obtained from the tribes or materials should be developed jointly prior to presenting on any sensitive issues.
- Presentations for the agency/ public may be effective when attempting to identify the presence of Traditional Culture Properties concerns. These should be conducted in the early planning stages.
- Tribal issues require that the agency involved treat tribal concerns with respect. Using formats of communication and/or presentations that are common within the tribal culture is more important than using "standard" presentation formats. The level of sophistication of the presentation should be geared to the audience attending.
- Areas that have a cultural context are a series of complex relationships that cannot be fully explained in a presentation situation.
- Presentations can be used to describe to DOT staff why certain issues/ practices/etc. are sensitive and cannot be discussed.
- When used, presentations should be short, interactive and allow for discussion.

- Presentations' primary function should be for providing visual aids.
- Generally, tribal officials would rather meet in the field as opposed to sitting down at the table to discuss abstract ideas.

Collection, Analysis and Distribution of Data

SUMMARY

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when Monetary Issues are present.

REDO: While at least 75% of the respondents have shown moderate or stronger agreement on the effectiveness of the given practice in presence of Land Ownership Issues, there was a lack of consensus. At this regard, different comments were provided that suggested a different approach to the use of this practice. In addition, comments were provided that suggested a different approach to the red-flag use of this practice in presence of the Protection/ Preservation of Tribal Sensitive Resources and Sovereignty Issues. Therefore, a second round of Delphi is required to evaluate this revised formulation of the given practice.

FAIL: This practice is perceived as clearly ineffective and/or the responses largely differed among respondents in terms of its effectiveness when Cultural Competency, and/or Confidentiality Issues are present.

LESSONS LEARNED

- Data collection is a fundamental, but often very sensitive element of transportation planning, particularly as it applies to cultural resources and traditional practices.
- Data collection and analysis can be a practice appropriate for all parties but only if that collection, analysis and distribution of data is pre-approved by appropriate tribal leaders and elders and handled exactly the way the tribe desires.
- Data sharing systems are only appropriate in terms of disseminating project planning information, such as project location, descriptions, and schedules.
- Each individual tribe is the one that understands their culture, tribally-sensitive resources, sovereignty issues, land ownership and monetary issues. Although governments should understand these issues, many remain unidentified.
- Land based and non-land based tribes will have different issues depending on their specific cultures.
- Effective communication is based on reliable, accurate data.

RECOMMENDATIONS

- While collecting information, understanding cultural differences, having agreements in regard to confidentiality are critical in getting necessary information.
- Data collection on tribal issues needs to be performed by either tribal personnel or a professional retained by the tribe.
- Tribes must be clear about the use of the data, terms of access, distribution and who maintains/ controls the data.
- Data collection and dissemination works best for those items not subject to interpretation (e.g., what was found during a right of way survey).

Publication of Standards and Handbooks

OVERVIEW

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when Sovereignty, Land Ownership and/or Monetary Issues are present.

REDO: Comments were provided that suggested a different approach to the red-flag use of this practice in presence of Protection/ Preservation of Tribal Sensitive Resources Issues. Therefore, a second round of Delphi is required to evaluate this revised formulation of the given practice.

FAIL: This practice is perceived as clearly ineffective and/or the responses largely differed among respondents in terms of its effectiveness when Cultural Competency, and/or Confidentiality Issues are present.

LESSONS LEARNED

- Standards and Handbooks’ ‘one size fits all’ approach is ineffective because it does not recognize tribal cultural sensitivity, the differences between individual tribes and the geographic differences.
- Information contained in standards and handbooks can only be used as a starting point to communication when explaining parts of the subject that can be captured in factual terms.
- Publication of standards and handbooks should not replace consultation protocols that are established collaboratively between the parties. However, such standards may be helpful in sharing information on what issues are of particular importance to the parties such as limitations on funding.
- They are relatively good as a product internal to a state DOT since they are generally developed and used by DOT staff to assist in gaining knowledge on tribal consultation and issues related with the consultation process.
- Tribes prefer direct interaction processes as opposed to written procedures and standards.
- Standards for construction of transportation facilities already exist.

RECOMMENDATIONS

- Tribes and other stakeholders need to be involved when standards and handbooks are being developed, so that tribes can provide guidance on what can appropriately or sensitively be presented. This involvement can also assist in identifying contacts for additional guidance when certain resources or concerns are encountered.
- Standards and handbooks could prove to be an effective communication tool to educate transportation agencies about the complexity of sovereignty, land ownership and funding issues. These would not work as well when communicating transportation needs to tribal governments and people.
- Standards and handbooks need to be presented in a culturally competent manner acceptable to all involved parties. Each tribe is different, requiring different procedures, protocols, approaches, and issues.
- These documents should be developed primarily by the DOT when the subject matters focus on transportation engineering issues such as policies, practices and procedures.
- Development of handbooks and standards works when everyone has the same frame of reference. In the case of states the standards are different from the tribes. BIA and the tribes

use different rating systems, funding systems, and operational systems than most of the states.

Distribution of Newsletters and Bulletins

OVERVIEW

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when Monetary Issues are present.

REDO: Comments were provided that suggested a different approach to the yellow-flag use of this practice in presence of Land Ownership Issues. Therefore, a second round of Delphi is required to evaluate this revised formulation of the given practices.

FAIL: This practice is perceived as clearly ineffective and/or the responses largely differed among respondents in terms of its effectiveness when Cultural Competency, Protection/Preservation of Tribal Sensitive Resources, Confidentiality, and/or Sovereignty Issues are present.

LESSONS LEARNED

- There is general agreement that reliance on such mass distribution methods cannot be the primary mode of communication, nor can they replace more personal, one-on-one and small group face-to-face conversations.
- As with other communication practices, information on sensitive issues must be handled in a culturally appropriate manner and must be approved by the tribes.
- Newsletters tend to be limited because they are not cost effective. Publication and distribution costs are expensive and can often be labor intensive.
- Newsletters are viewed by some to be only appropriate for information on new initiatives and policies, not on specific projects when timely information distribution is needed.
- Newsletters and bulletins may be viewed as propaganda from the state or as anti-collaborative or too impersonal.
- Effectiveness is difficult to gauge due to lack of information on utilization rates of recipients.
- Newsletters and bulletins cannot be relied on as the sole source of information sharing because there may be literacy and comprehension issues.
- Newsletters and bulletins can be used internally by tribes to communicate with tribal members.
- Newsletters and bulletins may be a tool for keeping DOTs and tribes in contact with each other.

RECOMMENDATIONS

- When utilizing this practice, it is necessary to find out who the audience is within the tribe (executive government, cultural resources, planning) and what form of newsletter/bulletin should be used (electronic or paper).
- Information must be written in a culturally competent manner.
- Information about culturally sensitive issues and practices must not be distributed.
- If tribal information is being distributed, it must be published by the non-tribal agencies as written.

- Separate newsletters on transportation topics are not necessarily needed. Give consideration to including articles in established tribal newsletter.
- Articles should be short and to the point.

Use of Mailings with Response Forms

OVERVIEW

FAIL: This practice is perceived as clearly ineffective and/or the responses largely differed among respondents in terms of its effectiveness when any of the listed issues are present.

LESSONS LEARNED

- This can be a good practice when used electronically, but monitoring success has shown that this practice is not fully utilized by the tribes.
- This practice is viewed by some as too impersonal and could be limited by literacy and cultural comprehension concerns. Consequently, this could introduce selection bias into the response demographics, and subsequently, the evaluation of returned comments.
- Mailings do not contribute to collaborations.
- This practice is only appropriate to determine if a tribe wants to be involved in a particular DOT project and/or participate in a consultation process.
- Feedback shows that some entities believe that mailings should be simplified (yes/no questions) while others suggest that mailings are oversimplified and do not treat transportation and culturally sensitive issues appropriately.
- Some entities limit the use of mailings to EIS/EA comment dissemination only.

RECOMMENDATIONS

- A cover letter should be included in the mailing which summarizes the project (area, phase, etc.) as well as deadlines for responses.
- Mailings with response forms are not appropriate for issues related to sovereignty and culturally sensitive issues.
- Mailings should be sent as a first step and follow up should be performed.
- If such an approach was sanctioned by a tribe and directed to an audience that the tribe wanted to be polled in that way, it could be an effective practice.
- Mailings are a good step for making the consultation process easier if wanted by the tribe.

Appointing a Tribal Moderator

OVERVIEW

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when Cultural Competency, Protection/ Preservation of Tribal Sensitive Resources, Confidentiality, and/or Sovereignty Issues Sovereignty are present.

REDO: While at least 75% of the respondents have shown moderate or stronger agreement on the effectiveness of the given practice in presence of Land Ownership or Monetary Issues, there was a lack of consensus. At this regard, different comments were provided that suggested a different approach to the use of this practice. Therefore, a second round of Delphi is required to evaluate this revised formulation of the given practices.

LESSONS LEARNED

- Tribal moderators are good for establishing relationships, building trust, and diffusing tension.
- This practice can be successful in alleviating communication problems and encouraging one-on-one communication.
- Tribal moderators are effective when reviewing working decisions and explaining technical issues to tribal members.
- Moderators are sometimes viewed as biased toward the agency that they are employed by.
- The position is often more successful when held by a tribal member.
- This technique can be effective for large complex (multi-state) projects affecting multiple tribal governments particularly when the moderator is a respected tribal leader from a tribe not affected by the proposed project.

RECOMMENDATIONS

- All transportation project stakeholders should be involved in the selection of a tribal moderator.
- Moderator selection is important to success and should be agreed upon by all involved parties in order to be trusted and supported in that position.
- Moderators should be neutral, unbiased.
- The role of a tribal moderator should be used to lay the foundation for working relationships with the ultimate goal to not need a tribal moderator.
- The moderator needs to be a facilitator more than a moderator to ensure successful communication between the entities.

Exhibit A.2: Coordination practices

The evaluation of the coordination practices shows that many of the existing practices are perceived as effective for fostering coordination. In addition, there are three practices that are always considered effective. Parties desiring to foster coordination for a transportation program or project should select a combination of practices and try to use the identified lessons learned and recommendations for each one of the selected practices.

Table 7: Coordination Practices – Analysis of 1st Round of Delphi Study

Strategies		MC1: Cultural Competency	MC2: Protection/ Preservation	MC3: Confidentiality	MC4: Sovereignty	MC5: Land Ownership	MC6: Monetary Issues
Section C) Coordination Strategies							
C.1 Meetings/Seminars	At least moderate agreement	97.8%	95.3%	92.9%	97.7%	97.6%	85.4%
	Internal Consensus	0.59	0.63	0.69	0.50	0.63	0.83
C.2 Public Involvement	At least moderate agreement	82.9%	75.0%	57.9%	70.3%	97.6%	76.3%
	Internal Consensus	0.90	1.18	1.29	1.30	0.63	1.05
C.3 Tribal Consortium	At least moderate agreement	82.9%	76.5%	68.8%	79.4%	71.0%	71.9%
	Internal Consensus	0.86	0.94	1.16	0.97	1.06	1.03
C.4 Loans for Funding	At least moderate agreement	44.4%	55.0%	45.0%	52.6%	66.7%	73.9%
	Internal Consensus	1.33	1.40	1.40	1.32	1.10	1.22
C.5 State Tribal Liaisons	At least moderate agreement	100.0%	100.0%	100.0%	100.0%	91.9%	88.6%
	Internal Consensus	0.50	0.51	0.47	0.51	0.65	0.77
C.6 Formal Agreements	At least moderate agreement	81.8%	95.3%	90.7%	100.0%	94.4%	91.2%
	Internal Consensus	1.09	0.57	0.77	0.64	0.72	0.85
C. 7 Regional/State Conferences	At least moderate agreement	87.5%	82.1%	67.6%	81.1%	75.7%	77.1%
	Internal Consensus	0.73	0.90	1.27	0.84	0.92	0.91

Meetings, Seminars, Summits and Workshops

OVERVIEW

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when any of the surveyed issues is present.

LESSONS LEARNED

- These practices can be good venues for establishing relationships, building trust, and ‘getting both sides on the same page.’
- These practices can encourage one-on-one communication but little can be resolved in multi-group settings.
- At the conference and summit levels, the practice can be too time-constrained to be effective.
- Practice could be used as an initial step to the consultation process.
- The audience and groups to be included in the venue should be carefully considered when planning the agenda.

- Meetings are more private and personal and can be successful in addressing specific and/or sensitive issues with individual tribes as well as assist in coordination efforts.
- Workshops are appropriate for general education.
- Summits are generally not results-oriented.
- Larger meetings can be successful when issues are discussed in generalities.

RECOMMENDATIONS

- Matters concerning cultural competency, protection/preservation of resources should be handled on a case-by-case, project-by-project basis in smaller settings with more personal interaction.
- Tribes should be included in developing the agenda for these functions.
- For project-specific issues, meetings should be used and should only include stakeholders to minimize issues with confidentiality.
- Meetings should be utilized for agency and Tribe-specific project work.
- Seminars should be used for agency-wide training on tribal issues (in cooperation with the tribe).
- Summits should be utilized on statewide issues and for high-level government-to-government collaboration.
- Workshops are effective on broad statewide issues if issues are discussed in individual workshops.
- Field visits can be a good form of meeting with tribal members.
- For the most part, these venues apply to concerns that are generic to all tribes and would not be project-specific for any one tribe.
- Remoteness can be an issue so these events should be held regionally.
- The parties involved in these venues should have the authority to make decisions.

Public Involvement Practices

OVERVIEW

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when Cultural Competency, and/or Land Ownership are present.

REDO: While at least 75% of the respondents have shown moderate or stronger agreement on the effectiveness of the given practice in presence of Monetary Issues, there was a lack of consensus. At this regard, different comments were provided that suggested a different approach to the use of this practice. In addition, comments were provided that suggested a different approach to the red-flag use of this practice in presence of Protection/ Preservation of Tribal Sensitive Resources Issues. Therefore, a second round of Delphi is required to evaluate this revised formulation of the given practices.

FAIL: This practice is perceived as clearly ineffective and/or the responses largely differed among respondents in terms of its effectiveness when Confidentiality, and/or Sovereignty Issues are present.

LESSONS LEARNED

- Using public involvement to group tribes with the non-Native American public is not successful.
- Public involvement is appropriate for sharing information about project planning and project development but not for communication about issues.
- Public involvement is important for successful transportation projects on tribal lands because it involves tribal community participation which is traditional form of consensus building in Native American societies.
- Public involvement can be useful in educating the public in general terms. If tribal issues are discussed, they also need to be in generalities.

RECOMMENDATIONS

- Public Involvement meetings are not appropriate to discuss tribally-sensitive issues such as the protection and confidentiality of culturally important/ significant sites, government-to-government relations, and treaties.
- Public involvement meetings should be held early in the project lifecycle.
- Public involvement meetings are important if they are held at on tribal lands.
- Presentations at any public involvement occasions must be mindful of confidentiality concerns. This type of activity is useful for involving individual citizens in the transportation project, but it is not a substitute for more formalized government-to-government relationships.
- Pre-approval must be obtained from tribes in order to discuss culturally-sensitive issues in a public forum.
- Public involvement practices can be useful for identifying stakeholders in a project but it is not a practice for facilitating coordination with tribes in project planning.

Constitution of Tribal Consortiums*OVERVIEW*

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when Cultural Competency, Protection/ Preservation of Tribal Sensitive Resources, and/or Sovereignty Issues are present.

FAIL: This practice is perceived as clearly ineffective and/or the responses largely differed among respondents in terms of its effectiveness when Confidentiality, Land Ownership and/or Monetary Issues are present.

LESSONS LEARNED

- At a statewide level, tribal consortiums can be an effective practice by fostering relationship building.
- Concept can be difficult because of complex relationships between tribes in a state.
- Consortiums have been successful for producing key legislative initiatives when focused on shared resources, resource protection and economic development.
- Can be difficult to constitute a tribal consortium when tribal recognition status differs among tribes within the state (e.g., federally-recognized vs. state recognized vs. non-recognized).

- Consortiums are not effective when tribes have different cultural outlooks and they do not necessarily recognize government-to-government relations.
- Issues must be discussed in generalities.
- Particularly in large land-based tribes, consortiums can be appropriate for discussing specifics such as funding and lobbying.
- Practice can be good when a project concerns several tribes.
- In some regions, tribes do not want to be grouped together with other stakeholders.
- The ability to discuss issues is important to the tribes in a consortium. The group is a powerful entity and individuals can make concessions to ensure the success of the group. At times, a consortium can work through issues with a single tribe representing the will of the group, and reporting back to the group, thus effectively streamlining the coordination process.
- This practice can streamline the transportation project planning and development processes.
- This venue can be good for education, but not as good for individual attention.

RECOMMENDATIONS

- Tribes have different beliefs (ceremonies, burials, site protections and others) which result in different treatment protocols. These differences may impact the effectiveness of consortiums.
- The consortium should not be considered a decision-making body.
- Consortium may only work if the tribes suggested it and it is perceived as a tool to be used at their discretion.

Use of Loans for Funding

OVERVIEW

REDO: While almost 75% of the respondents have shown moderate or stronger agreement on the effectiveness of the given practice in presence of Monetary Issues, there was a lack of consensus. At this regard, different comments were provided that suggested a different approach to the use of this practice. Therefore, a second round of Delphi is required to evaluate this revised formulation of the given practice.

FAIL: This practice is perceived as clearly ineffective and/or the responses largely differed among respondents in terms of its effectiveness when Cultural Competency, Protection/Preservation of Tribal Sensitive Resources, Confidentiality, Land Ownership and/or Sovereignty Issues are present.

LESSONS LEARNED

- Loan money is often tied to specific agendas depending on the source of the loan.
- Loans hardly ever work to the benefit of both parties.

RECOMMENDATIONS

- Loans need to be provided with “no strings attached”.
- There should be grants, not loans.
- Readily available tribal programs from agencies like the BIA and the National Park Service should be investigated and expanded as an alternative to loans.

- Sharing should be done through a cooperative agreement.

Appointment of State Tribal Liaisons/ Coordinators

OVERVIEW

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when any of the surveyed issues is present.

LESSONS LEARNED

- As a single point of contact for the tribes, the tribal liaison is a reliable source of information and helps tribes that have new Tribal Historic Preservation Officers (THPO's) get the lay of the land. This liaison is also a good resource for new Department hires that need to know how to coordinate with tribes on individual projects.
- The tribal liaison serves as a “go between” and helps establish relationships. Since the consultation process is more relationship building, the tribal liaison must have an understanding of the interests and cultural context of the tribes.
- The tribal liaison serves to connect people in an agency to the appropriate tribal representative, provide coaching, and facilitates as needed.
- Success depends on the person chosen for the position.
- The liaison needs to build a relationship with the tribes and demonstrate that they genuinely understand the interests and cultural contexts of the tribe.

RECOMMENDATIONS

- The position should be associated with the director of the agency for which he/she works so that working with the liaison is viewed as a “superior to superior” relationship; the higher level the liaison is in the hierarchy, the better success the liaison is perceived to be.
- A tribal liaison is more credible if the person is of Native American descent. If not, they still must be an advocate for tribal initiatives, to order to optimize cooperation from the tribes.
- Tribal liaisons can be helpful in improving cultural sensitivity at the agency level. However, they should have some authority to act on behalf of the tribes and/or the agency in order to be effective.
- All agency staff needs to consider themselves as “tribal liaisons”.

Establishment of Formal Agreements

OVERVIEW

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when all of the surveyed issues except Cultural Competency Issues are present.

REDO: While at least 75% of the respondents have shown moderate or stronger agreement on the effectiveness of the given practice in presence of Cultural Competency, there was a lack of consensus. At this regard, different comments were provided that suggested a different approach to the use of this practice. Therefore, a second round of Delphi is required to evaluate this revised formulation of the given practice.

LESSONS LEARNED

- Formal agreements are an effective coordination practice for protection/ preservation of tribal sensitive resources, confidentiality, sovereignty, land ownership and monetary issues. There is moderate agreement but no consensus that formal agreements are a good practice for cultural competency issues. If a tribe has not had positive government-to-government background in the past, then formal agreements are viewed with lack of trust. For this reason, cultural competency did not have consensus on the formal agreement practice.
- Generally, formal agreements are with individual tribes which can facilitate the governments-to-government relationships.
- All signing parties must understand and agree to the process and issues addressed in the agreement as well as establish expectations, joint responsibilities, timeframes and appropriate contacts.
- Agreements can streamline the consultation process.
- Agreements are a necessary result of negotiation.
- Tribes can be skeptical of trusting written agreements because issues in the past perceived (failure to fulfill treaty obligations) cloud efforts made today.
- Some states have seen no difference in working with tribes that have signed agreements with the state and those that have not.
- Agreements have been successful for treating funding issues.

RECOMMENDATIONS

- Agreements can only work there has been on-going communication and trust building prior to signing the agreement.
- There is a culturally significant difference between tribes and agencies that need to be honored. Sufficient time must be allowed in the decision making process to gain respect among the stakeholders and facilitate coordination.
- A formal agreement will have little effect on cultural competency unless there are other commitments to address this at the transportation agency level.
- Formal agreements can be difficult to negotiate because there is the inherent conflict between state sovereignty and tribal sovereignty.

Use of Regional/ State Conferences*OVERVIEW*

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when Cultural Competency, Protection/ Preservation of Tribal Sensitive Resources, Sovereignty, Land Ownership, and/or Monetary Issues are present.

REDO: Comments were provided that suggested a different approach to the red-flag use of this practice in presence of Confidentiality Issues. Therefore, a second round of Delphi is required to evaluate this revised formulation of the given practices.

LESSONS LEARNED

- Conferences should be used for general discussion, with follow up meetings scheduled for individual discussions with each tribe.

- This practice is best used as a first step for building relationships and getting to know stakeholders rather than achieving specific tasks.
- These venues are useful for networking, developing face-to-face relationships, identifying issues, and sharing information on agency programs and projects.
- This practice works well if specifics of culturally sensitive issues are not discussed and are only dealt with in generalities.
- Conferences can be difficult when tribal recognition is “mixed” within the state (federally recognized, state recognized, non-recognized).
- Conferences tend to be attended by a majority of non-tribal representatives and this discourages tribal input.
- Large conferences are not results oriented.

RECOMMENDATIONS

- Conferences are the appropriate venue only if the tribes and the transportation entities are in agreement with the participants and the topics prior to the event.
- While most transportation issues exist at the local level, conferences could be helpful with regional or statewide issues.
- Conferences are best if hosted at tribal locations.
- A third party is needed to administer a post evaluation of the event to measure empirical results.
- Tribal issues are unique to each tribe so even regional level conferences may not be personalized enough to be effective.

Exhibit A.3: Cooperation practices

The evaluation of the cooperation practices shows that a large majority of the existing practices are perceived as effective for fostering cooperation. However, there are not practices that are always considered effective. Therefore, parties desiring to foster coordination for a transportation program or project should select a combination of practices and try to use the identified lessons learned and recommendations for each one of the selected practices.

Table 8: Cooperation Practices – Analysis of 1st Round of Delphi Study

Strategies		MC1: Cultural Competency	MC2: Protection/ Preservation	MC3: Confidentiality	MC4: Sovereignty	MC5: Land Ownership	MC6: Monetary Issues
Section D) Cooperation Strategies							
D.1 Planning Organizations	At least moderate agreement	86.5%	85.3%	71.4%	90.6%	87.9%	88.6%
	Internal Consensus	0.62	0.71	1.00	0.59	0.76	0.74
D.2 Regional Transportation / Transit Districts	At least moderate agreement	86.5%	76.0%	58.3%	80.8%	84.0%	92.0%
	Internal Consensus	0.62	0.88	1.13	0.88	0.88	0.84
D.3 Resource Sharing	At least moderate agreement	77.8%	78.8%	61.3%	87.1%	82.9%	91.7%
	Internal Consensus	1.14	1.15	1.19	0.97	1.00	0.83
D.4 Investigating Alternatives	At least moderate agreement	91.9%	97.4%	91.9%	88.6%	81.8%	93.8%
	Internal Consensus	0.73	0.71	0.84	0.91	1.00	0.91
D.5 Disaster Planning	At least moderate agreement	88.9%	86.7%	76.7%	100.0%	80.8%	90.3%
	Internal Consensus	0.89	0.83	1.00	0.62	0.96	0.90

Use of Planning Organizations

OVERVIEW

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when Cultural Competency, Protection/ Preservation of Tribal Sensitive Resources, Sovereignty, Land Ownership and/or Monetary Issues.

REDO: While at least 60% of the respondents have shown moderate or stronger agreement on the effectiveness of the given practice in presence of Confidentiality, there was a lack of consensus. At this regard, different comments were provided that suggested a different approach to the use of this practice. Therefore, a second round of Delphi is required to evaluate this revised formulation of the given practice.

LESSONS LEARNED

- Planning organizations are viewed as a successful cooperation practice for issues such as cultural competency, protection/ protection of tribal sensitive resources, sovereignty, land ownership, and monetary issues. The one exception is confidentiality issues. Confidentiality will always be present and hard to deal with when increasing the number of participants in the planning process.

- Planning works well when tribes are treated as truly equal partners whose needs are considered by other partners.
- Good for planning but not for engineering and construction.
- Partnerships between local/state and federal and tribal governments can improve the statement of tribal needs and methodologies for achieving common transportation needs.
- Good for improving statements of needs and the methodologies for achieving those needs.
- Good for open issues, but not for specific, culturally sensitive issues.
- The focus should be on the development of processes and protocols for avoiding negative impacts on tribes.
- This venue can be good for developing cultural competence and awareness of sensitive issues.

RECOMMENDATIONS

- Tribes have to be equal partners in planning organizations.
- Tribes and Agencies need to seek individuals that are best suited for the organization and need to give decision-making power to those individuals on behalf of the groups they represent.
- Planning organizations would be an inappropriate entity to facilitate cooperation regarding tribal sensitive matters or sovereignty issues since these are inherently governmental responsibilities.

Use of Regional Transportation/ Transit District or Coalitions

OVERVIEW

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when Cultural Competency, Sovereignty, Land Ownership, Monetary, and/or Protection/ Preservation of Tribal Sensitive Resources Issues are present.

FAIL: This practice is perceived as clearly ineffective and/or the responses largely differed among respondents in terms of its effectiveness when Confidentiality Issues are present.

LESSONS LEARNED

- Regional transportation/ transit districts and coalitions can be an effective practice for addressing cultural competency, sovereignty, land ownership and monetary issues. Protection/ preservation of tribal sensitive resources and confidentiality issues do not lend themselves to this practice.
- Regional coalitions can address project prioritization, and funding issues, as well as the larger institutional cultural context of agencies.
- Coalitions can be a good practice for identifying stakeholders and developing a resource pool.
- Tribes can assert leadership in this type of coalition.
- This practice seems more appropriate for issues that revolve around transit, not other transportation issues.
- The perception of regional districts or coalitions is that the entities that have the most money will get the most projects.

RECOMMENDATIONS

- None from Delphi panelists.

Use of Resource Sharing*OVERVIEW*

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when Sovereignty, and/or Monetary Issues are present.

REDO: While at least 75% of the respondents have shown moderate or stronger agreement on the effectiveness of the given practice in presence of Land Ownership, Cultural Competency and/or Protection/ Preservation of Tribal Sensitive Resources Issues, there was a lack of consensus. At this regard, different comments were provided that suggested a different approach to the use of this practice. Therefore, a second round of Delphi is required to evaluate this revised formulation of the given practice.

FAIL: This practice is perceived as clearly ineffective and/or the responses largely differed among respondents in terms of its effectiveness when Confidentiality Issues are present.

LESSONS LEARNED

- Tribes often do not have resources (money, time) to share since they have insufficient funding for programs and projects.
- The perception is that whoever has more money gets the projects they want.
- Resource sharing allows stakeholders to accomplish more together than separately.
- Resource sharing can be successful on cultural resource investigations.
- The process is complicated when more than one tribe is involved in a project.

RECOMMENDATIONS

- All parties should be willing to share resources, both monetary and others (materials, staff, etc.).
- There needs to be resource sharing when it comes to reimbursing tribal members for their time and costs associated with consultation and not just on the project-specific level. Lack of travel funds is a significant barrier to participation.
- Within agency protocols, barriers need to be removed to allow for reimbursement to different parties to ease the process.

Use of Investigation of Alternatives Studies*OVERVIEW*

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when Cultural Competency, Protection/ Preservation of Tribal Sensitive Resources, Confidentiality, Sovereignty and/or Monetary Issues are present.

REDO: While at least 75% of the respondents have shown moderate or stronger agreement on the effectiveness of the given practice in presence of Land Ownership Issues, there was a lack of consensus. At this regard, different comments were provided that suggested a different approach

to the use of this practice. Therefore, a second round of Delphi is required to evaluate this revised formulation of the given practices.

LESSONS LEARNED

- The investigation of alternatives is a successful practice for cultural competency, protection/preservation of tribal sensitive resources, confidentiality, sovereignty, and monetary issues. There was moderate agreement but no consensus on the use of this practice for land ownership issues.
- Looking at alternatives is one of the most productive methods to avoid, minimize, or mitigate adverse affects on tribes or tribal lands.
- This practice allows for discussion and the development of a better understanding of issues and how they affect or appear to affect interested parties.
- Alternatives are important so tribes do not feel that they are being "railroaded" into just one option already chosen by the transportation agency.
- The investigations of alternatives is already part of the environmental assessment process and should be part of the design concept process.

RECOMMENDATIONS

- Alternative review works best when both agencies are in equal positions in terms of resources and expertise. Current processes do not lend themselves to this method of facilitating communication between the entities.
- This practice can be effective on a project-specific and site-specific basis.
- This is the heart of consultation under Section 106 of the National Historic Preservation Act, so when tribes are involved in identifying alternatives that will have the least impact on the resources of concerns, the consultation process goes much smoother with better outcomes.
- Anytime a transportation agency is willing to work with the tribes or other parties to find another alternative, the tribe will generally be more willing to participate. The agency should not come in with a done deal or a preferred alternative. They need to approach the tribe with the project purpose and need, have valid discussions about the purpose and need, and once that purpose/need has been agreed upon, move forward as a team towards the development of viable alternatives.

Disaster Planning Initiatives

OVERVIEW

PASS: This practice is perceived as effective for facilitating communication on transportation programs/projects when Cultural Competency, Protection/ Preservation of Tribal Sensitive Resources, Sovereignty, Land Ownership and/or Monetary Issues are present.

REDO: While at least 75% of the respondents have shown moderate or stronger agreement on the effectiveness of the given practice in presence of Confidentiality Issues, there was a lack of consensus. At this regard, different comments were provided that suggested a different approach to the use of this practice. Therefore, a second round of Delphi is required to evaluate this revised formulation of the given practice.

LESSONS LEARNED

- Elements of a tribal MOU for disaster mitigation can include cost sharing, involvement of a local emergency planning group where the county and local fire departments are involved that meet quarterly. The plan includes emergency plans with up to date contact numbers and training for those who would be tribal emergency contacts. The tribal emergency contact has emergency powers to implement the plan with a call to the tribal president or council chairperson.
- Two levels are needed in disaster planning, the tribal level to coordinate with outside agencies and their resources for events on reservation, and secondly the tribe as part of the larger community and the potential use of tribal resources in emergency.
- Having a catastrophe will make jurisdictions invisible and will develop, at least temporarily, better communication between the transportation entities and tribes.

RECOMMENDATIONS

- An agreement should be established to cover urgent/immediate correction for Federal Emergency Management Agency (FEMA) projects that facilitate emergency vehicles and other service vehicles. Permanent repairs should then go through the appropriate consultation process, just on an accelerated schedule.
- In disaster planning, the tribal law enforcement entities are more involved and often lack the resources for the follow-up efforts required for good planning.
- Oftentimes, tribal institutional cultures are not setup in the same manner as the states and this inhibits the planning effort.

Appendix B: Analysis of Delphi Study, Round 2

Exhibit B.1: Communication practices

The analysis of the first round of Delphi required a reassessment for nine practice-issue combinations. In addition, it was needed to assess a practice that emerged from the analysis of the interviews, Training. This practice was assessed against the six categories of issues. After changes in the formulation of the practices were implemented, all nine combinations were perceived as effective for fostering communication. Table 6 merges definitive results from Round 1 with results from the reassessment conducted in Round 2. Cells with text in bold font include results from Delphi 2.

Table 9: Communication Practices – Analysis of 2nd Round of Delphi Study

Practices		MC1: Cultural Competency	MC2: Protection/ Preservation	MC3: Confidentiality	MC4: Sovereignty	MC5: Land Ownership	MC6: Monetary Issues
Section B) Communication Practices							
B.1 Presentations	At least moderate agreement	86.7%	88.2%	46.7%	93.8%	90.2%	84.1%
	Internal Consensus	0.91	0.71	1.51	0.56	0.73	0.82
B.2 Data Collection/Analysis	At least moderate agreement	71.7%	85.3%	46.3%	87.9%	81.3%	87.2%
	Internal Consensus	1.24	0.74	1.34	0.73	0.97	0.95
B.3 Standards and Handbooks	At least moderate agreement	64.4%	93.9%	43.2%	80.0%	77.5%	78.6%
	Internal Consensus	1.07	0.67	1.23	0.88	0.83	0.88
B.4 Newsletters/Bulletins	At least moderate agreement	65.0%	51.3%	32.4%	70.6%	84.4%	78.4%
	Internal Consensus	1.10	1.21	1.08	1.00	0.81	0.76
B.5 Mailings/ Response Forms	At least moderate agreement	38.5%	33.3%	16.7%	24.3%	28.1%	19.4%
	Internal Consensus	1.49	1.38	0.97	1.11	1.09	0.97
B.6 Tribal Moderator	At least moderate agreement	92.5%	92.5%	97.4%	91.9%	90.6%	96.3%
	Internal Consensus	0.75	0.78	0.66	0.70	0.78	0.59
B.7 Training	At least moderate agreement	100.0%	100.0%	90.0%	96.8%	93.3%	96.3%
	Internal Consensus	0.63	0.58	0.63	0.52	0.57	0.59

Exhibit B.2: Coordination practices

The analysis of the first round of Delphi required a reassessment for five practice-issue combinations. After changes in the formulation of the practices were implemented, all five combinations were perceived as effective for fostering coordination. Table 7 merges definitive results from Round 1 with results from the reassessment conducted in Round 2. Cells with text in bold font include results from Delphi 2.

Note: One of the practices, Regional and State Conferences was perceived as effective for fostering coordination when confidentiality issues are present. However, results showed a borderline consensus. The high number of individuals believing in the effectiveness of this practice convinced the Research Team to issue a wild card to validate this practice-issue combination. To reflect this decision, this combination is marked with a Green Star in the Guidebook.

Table 10: Coordination Practices – Analysis of 2nd Round of Delphi Study

Strategies		MC1: Cultural Competency	MC2: Protection/ Preservation	MC3: Confidentiality	MC4: Sovereignty	MC5: Land Ownership	MC6: Monetary Issues
Section C) Coordination Strategies							
C.1 Meetings/Seminars	At least moderate agreement	97.8%	95.3%	92.9%	97.7%	97.6%	85.4%
	Internal Consensus	0.59	0.63	0.69	0.50	0.63	0.83
C.2 Public Involvement	At least moderate agreement	82.9%	85.3%	57.9%	70.3%	97.6%	84.4%
	Internal Consensus	0.90	0.91	1.29	1.30	0.63	0.69
C.3 Tribal Consortium	At least moderate agreement	82.9%	76.5%	68.8%	79.4%	71.0%	71.9%
	Internal Consensus	0.86	0.94	1.16	0.97	1.06	1.03
C.4 Loans for Funding	At least moderate agreement	44.4%	55.0%	45.0%	52.6%	66.7%	84.2%
	Internal Consensus	1.33	1.40	1.40	1.32	1.10	0.95
C.5 State Tribal Liaisons	At least moderate agreement	100.0%	100.0%	100.0%	100.0%	91.9%	88.6%
	Internal Consensus	0.50	0.51	0.47	0.51	0.65	0.77
C.6 Formal Agreements	At least moderate agreement	91.2%	95.3%	90.7%	100.0%	94.4%	91.2%
	Internal Consensus	0.62	0.57	0.77	0.64	0.72	0.85
C. 7 Regional/State Conferences	At least moderate agreement	87.5%	82.1%	81.3%	81.1%	75.7%	77.1%
	Internal Consensus	0.73	0.90	1.03	0.84	0.92	0.91

Exhibit B.3: Cooperation practices

The analysis of the first round of Delphi required a reassessment for six practice-issue combinations. After changes in the formulation of the practices were implemented, all six combinations were perceived as effective for fostering cooperation. Table 8 merges definitive results from Round 1 with results from the reassessment conducted in Round 2. Cells with text in bold font include results from Delphi 2.

Table 11: Cooperation Practices – Analysis of 2nd Round of Delphi Study

Strategies		MC1: Cultural Competency	MC2: Protection/ Preservation	MC3: Confidentiality	MC4: Sovereignty	MC5: Land Ownership	MC6: Monetary Issues
Section D) Cooperation Strategies							
D.1 Planning Organizations	At least moderate agreement	86.5%	85.3%	83.3%	90.6%	87.9%	88.6%
	Internal Consensus	0.62	0.71	0.83	0.59	0.76	0.74
D.2 Regional Transportation / Transit Districts	At least moderate agreement	86.5%	76.0%	58.3%	80.8%	84.0%	92.0%
	Internal Consensus	0.62	0.88	1.13	0.88	0.88	0.84
D.3 Resource Sharing	At least moderate agreement	93.8%	90.3%	61.3%	87.1%	80.8%	91.7%
	Internal Consensus	0.66	0.71	1.19	0.97	0.96	0.83
D.4 Investigating Alternatives	At least moderate agreement	91.9%	97.4%	91.9%	88.6%	93.3%	93.8%
	Internal Consensus	0.73	0.71	0.84	0.91	0.67	0.91
D.5 Disaster Planning	At least moderate agreement	88.9%	86.7%	92.0%	100.0%	80.8%	90.3%
	Internal Consensus	0.89	0.83	0.64	0.62	0.96	0.90