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Volume III: Research Report

Volume III

Research Report: Developing and Maintaining Partnerships for Multimodal Transportation Planning

FINAL REPORT

Prepared for the
National Cooperative Highway Research Program
Transportation Research Board
National Research Council

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Dr. Edd Hauser, P.E., was the Principal Investigator on this project for Kimley-Horn. A number of individuals at each of the firms involved were involved in the research. Those that specifically contributed to this volume, the Guidelines, included Dr. Hauser; Dr. Steve A. Martin and two associates of his firm: Mr. Thomas J. Harrelson, former Secretary of Transportation in North Carolina and Mr. J. Timothy Welch, J.D.; Mr. Tom Humphrey, P.E., consultant; Mr. Larry Meisner, P.E., AICP and Ms. Amy R. Breese of Kimley-Horn. All work was supervised by Dr. Hauser and work by those other than Kimley-Horn personnel was conducted under subcontract or consultant agreements with Kimley-Horn.

Investigators or co-investigators who were responsible for the case study interviews and reports contained in Volume II were Dr. Hauser, Secretary Harrelson, and Dr. Claude Barnes of North Carolina A&T State university.

ABSTRACT

This research report on developing and maintaining multimodal transportation partnerships documents the research and analysis procedures used in carrying out this research. The research report highlights and summarizes the background on the research, illustrates a nationwide multimodal partnership database, and sets out certain definitions and caveats that were important in documenting the process used throughout. In addition, it summarizes the interim reports that were submitted during the course of the study. The topics included in the analysis phase include a summary of the case study process; an identification of partnership issues and barriers to establishing effective partnerships; and an identification of the steps to forming and maintaining successful partnerships.

The primary output of the research report, however, are the final two chapters addressing implementation of the results of the study, a design of evaluation mechanisms, future research needs, and study conclusions. One of the key findings and conclusions of the research was that the partnering process, if applied correctly as a project management tool, has a very high likelihood of increasing the success of partnerships in complex multimodal transportation projects.

EXECUTIVE SUMMARY

The National Cooperative Highway Research Program (NCHRP) initiated a series of research projects on multimodal transportation planning in response to the intent and specifications of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. This project is the one study from this series that focuses on the dynamics of partnerships that are formed to carry out the planning of multimodal projects. Three reports have been prepared as a result of this study:

(1) Volume I: "Guidelines for Developing and Maintaining Successful Partnerships for Multimodal Transportation Projects."

(2) Volume II, "Case Studies of Multimodal Transportation Partnerships"

(3) Volume 1II:Research Report: "Developing and Maintaining Partnerships for Multimodal Transportation Planning."

This Executive Summary of Volume III provides an overview of the research tasks and the specific outcomes of each task:

Task 1 — An industry scan that includes a literature search, a review of recent and on-going NCHRP and Federal Highway Administration (FHWA) multimodal research and an analysis of current practices in partnership development and partnering.

Outcomes — A Technical Memorandum containing (1) a two-page summary on each of some sixty multimodal partnerships; (2) a bibliography of relevant literature on multimodal and intermodal transportation partnerships; and (3) a listing of some 100 organizations, associations, Transportation Research Board (TRB) committees, and individuals that are involved to some degree in multimodal transportation.

Task 2 — A preliminary investigation and definition of successful partnerships and the steps involved in developing a partnership.

Outcomes — A Technical Memorandum containing (1) a listing and analysis of the components of successful partnerships that are useful in developing multimodal transportation projects; (2) a listing and analysis of common issues and barriers associated with partnerships; and (3) a preliminary assessment of the steps for forming successful partnerships.

Task 3 — A preliminary investigation and analysis of partnership opportunities in relation to common multimodal planning activities.

Outcome — A Technical Memorandum describing the development of an "opportunity model" for establishing and maintaining partnerships.

Task 4 — The recommendation of specific multimodal partnerships for in-depth investigation through the case studies.

Outcomes — A Interim Report containing a synthesis of the first three Technical Memoranda, plus (1) selection criteria for case studies included the mix of modes, regional distribution, character of the geographic area, population of the area, passenger or freight movement, and type of partnership; and (2) from the list of 60 case studies in the database, twelve were selected initially for in-depth analysis.

Task 5 — The carrying out of the selected case studies.

Outcomes — Twelve case study reports which analyze the history and current status of the project, future plans, description of partnership arrangement (steps in developing, organizational and individual roles), partnership evaluation (goals; legal, technical, and institutional issues; outcomes; and keys to success). A Technical Memorandum was prepared summarizing the results of the case studies. The case study reports have been developed into Volume III.

Task 6 — A refinement of the Task 2 definition of successful partnerships and steps in developing partnerships.

Outcome — A Technical Memorandum, which is a draft of "Guidelines for Developing and Maintaining Successful Partnerships for Multimodal Transportation Planning." This document became the basis of Volume I of this report.

Task 7 — Development of a plan for implementation of the research, evaluation of the guidelines, and recommendations for future research.

Outcome — A Technical Memorandum which was developed into Section 7 of this research report.

Task 8 — Preparation of the three-volume final report.

Outcome — The draft of the three-volume final report documentation is currently in the NCHRP Project Panel review process.

CHAPTER 1.0

INTRODUCTION

1.1 Background on the Research

Both ISTEA and the proposed NEXTEA (and other proposals for the 1997 Surface Transportation Act) include incentives for improving multimodal planning processes, including the formaiton of partnerships.

The series of NCHRP research projects on multimodal transportation planning is an important response to the intent and specifications of the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). The issues of multimodal planning (planning for all modes of transportation as an integrated system), and intermodalism (the facilities and systems where two or more modes interface as an integrated system), have historically been given less attention and effort by state and local transportation agencies than has planning for individual modes. Hence, the idea of a seamless transportation system is still in its conceptual stage.

This series of research projects for the NCHRP, AASHTO and its member departments, the FHWA, MPOs, and the private sector, is important for two reasons. First, it will implement the recommendations of the July 1992. Seattle meeting of the TRB Committees on Transportation Planning, Programming, and Finance which articulated the concept and need for multimodal research. It will also carry through with recommendations of the 1994 report of the National Commission on Intermodal Transportation (NCIT), which were:

- Make efficient intermodal transportation the goal of Federal transportation policy.
- Increase investment in intermodal transportation.
- Restructure government institutions to support intermodal transportation.

During an October 1994 conference at MIT on the National Transportation System (NTS), these recommendations were reinforced by five panels of experts, representing all modes of transportation. Some of the key recommendations of the panel chaired by MIT's Thomas F. Humphrey included:

- Action on the NTS must be taken by Congress.
- Future intermodal planning processes must include information technology and advanced communications.
- The NTS dialogue must include funding from trust funds and other sources.
- MPO's must have resources to make decisions in an intermodal planning process.

Virginia's 1995 Public-Private Transportation Act, among other acts recently enacted in other states, have great potential to stimulate multimodal development

Subsequent events at the national level and in some states have punctuated the response to ideas and recommendations such as these. In addition to the proposal to reorganize the USDOT with a comprehensive "Intermodal Transportation Administration," states such as Virginia have continued to seek and pass legislation aimed at encouraging private financing of multimodal transportation projects and creation of public-private partnerships.

The Virginia Public-Private Transportation Act of 1995 is a major innovation. The Virginia DOT and Department of Rail and Public Transportation (DRPT) have issued draft implementation guidelines under which consortia might submit proposals to the Commonwealth to "acquire, construct, .improve, maintain and/or operate any transportation facility.'" While the act does not specifically call for intermodal system or facility proposals, it is clear that such projects are encouraged; one of the criteria listed in the draft guidelines is a description of "**the conceptual design and all proposed interconnections with other transportation facilities**."

A complete set of proposed project characteristics[2] includes:

- Interconnections with other transportation facilities
- Total life-cycle costs
- Federal, state, and local permits and approvals
- Adverse social, economic, and environmental impacts, and mitigation actions
- Public utility facilities that will be crossed
- Plan for securing all necessary property
- Proposed schedule for implementation
- Liability issues in design and construction
- **Critical factors for the project's success**

VDOT Secretary Robert E. Martinez3 has expressed the view that the Virginia legislation and approach to implementation is a significant advance among the states in encouraging multimodal solutions to transportation needs, as well as enhancing the ability of public-private partnerships to plan, design, build

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"Public-Private Transportation Act of 1995: Implementation Guidelines," Draft, Virginia DOT, Richmond, April, 1995

[2]ibid

[3]Robert E Martinez, Secretary, Virginia Department of Transportation, Personal Interview, May 8, 1995

and operate facilities in the Commonwealth. Virginia provides the study team with a next-door, living laboratory for the immediate and long-term study of the development and operation of multimodal partnerships. It is particularly significant that one of the elements of each proposal will be an apriori determination of the factors that will enhance the successful completion of each proposed project.

1.2 Multimodal and Intermodal

Multimodal = Intermodal in the context of this study

As implied in the first paragraph of Section 1.1, the study team has adopted a working definition of multimodal and intermodal transportation. Throughout the project to this point, it has become obvious that the terms "intermodal" and "multimodal" are often used interchangeably. We will use the terms interchangeably throughout this report. As a point of clarification, however, many knowledgeable transportation professionals use the term multimodal to designate a transportation system where more than one mode is involved. Intermodal, as a complementary part of a multimodal system, is commonly interpreted by those with this view as signifying transfers between or among the various modes. Such nodal points as park and ride facilities, truck/rail transfer yards, truck terminals at airports, and urban multi-use or "union" passenger terminals are examples of such intermodal facilities.

However, it is also apparent from a review of the available literature that the historical use of the term multimodal is usually attached to passenger transport modes, with intermodal being commonly used to describe the freight transportation system. Irrespective of the existing body of literature, the term multimodal could be easily substituted for the other, and either term would fit the goal statements of the NCIT (Section 1.1). Using the term multimodal to include intermodal would broaden the recommendations cited.

At the AASHTO Policy Committee meeting in Albuquerque on November 10-15, 1994, a resolution was passed citing the need for the cooperative, intermodal development of the National Transportation System.

> ***It is our considered opinion that without a major paradigm shift on the part of Federal, state, and local governments and the private sector towards accomplishing the ultimate goal of a seamless transportation system, our nation will not be in a position to build such a system.***

1.3 Objectives of the Research

The overall goal is to develop a set of strategies and tools for establishing and maintaining multimodal partnerships

This is the only project in the 8-32 series that deals specifically with **partnerships** formed to carry out multimodal projects. The goal is to develop a set of strategies and tools for establishing and maintaining partnerships in multimodal transportation planning for both freight and passenger transport. The following specific objectives have been identified by the NCHRP project panel and the research team'

- To conduct a thorough, systematic study of successful multimodal and intermodal transportation projects and services.
- To develop and document the factors involved in successful partnerships, and the factors that form barriers to success.
- To develop and document a typology of partnership and team-building opportunities in the public and private sectors by relating partnership attributes to common multimodal transportation planning activities.
- To prepare guidelines on how to develop successful, prototypical partnerships in the following categories: public-public, public-private, private-private, public-community, and perhaps others (such as those that involve universities and/or non-profit organizations).

The set of guidelines (Volume I) that accompany this research report is intended primarily for state and local transportation agencies. Additional benefits would be gained by the transportation system construction industry, design and planning professionals, providers of transportation services (transit providers, the trucking industry, rail transportation, marine transport terminals), and quasi-public and private transportation system organizations (toll authorities, parking authorities, and airport authorities).

1.4 Organization of the Study Documentation

The series of reports documenting this study is in three volumes: Volume I is the Guidelines document; Volume II is the compilation of Case Studies; and Volume III is the Research Report.

CHAPTER 2.0

NATIONWIDE MULTIMODAL PARTNERSHIPS DATABASE

2.1 Developing the Database

Various sources have been consulted to explore partnerships in multimodal or intermodal projects. The work plan identified the approach to this task:

> ***"Conduct an industry scan that includes a literature search, a review of existing NCHRP and FHWA studies, ... , and an analysis of the state-of-the-art of partnering practices in both the public and private sectors associated with multimodal and intermodal transportation activities. Prepare a summary of examples - including participants, location, contact person(s), purpose and outcomes -for use as a candidate list of case studies."***

Most available literature on this subject deals with public-private partnerships and single- mode projects.

The identification and classification of the various types of team-building, public involvement, and partnership activities that have taken place in multimodal transportation activities in recent years lays the groundwork for the industry scan. Literature searches were conducted through TRIS, the on-line service NEXIS/LEXIS, and certain local Internet gateways such as Access Atlanta and NANDONET. Literature was reviewed for examples of multimodal or intermodal partnerships.

There is a significant body of literature specifically about public-private partnerships but most of the current literature deals with single-mode projects only. The issue of partnerships for multimodal transportation planning is such a new concept that there is a dearth of available literature addressing the subject. The conclusion is that this project, along with the concurrent series of 8-32(4) projects, is significant, ground-breaking research.

Perhaps more important than the literature searches and reviews of previous and current NCHRP and TRB studies has been the effort to contact individuals and organizations throughout the country for recommendations of examples of projects involving partnerships. This part of the industry scan uncovered contacts representing a wide variety of private companies, public agencies (state and local), and various transportation associations.

Figure 1 was used as an initial screening instrument for data on multimodal partnerships. The "Summary Partnership Data" form, along with a

Figure 1. Summary Partnership Data form

Kimley-Horn and Associates, Inc.

April 17, 1995

NCHRP Project 8-32(4)
Developing and Maintaining Partnerships for Multimodal Transportation Projects

Summary Partnership Data **File No.**_____
(Leave this space blank)

Name and Location of Project: Project Commencement Date: Project Completion Date:
Key Contact (name, title, address, phone, FAX):
Project Description:
Modes Included:
Key Technical, Legal, Institutional Issues addressed by Partnership:
Important Outcomes Expected (or Actual Outcomes, if project is complete):
Type of Partnership: Public-private _____ Public-private-community group _____ Public-public _____ Other type partnership (describe): Completely private_____ _____
Participants (organizations) included in Partnership:

Figure 1. Summary Partnership Data form, cont.

Purpose of Partnership
Evaluation Criteria to Determine Success of Partnership:
Barriers to Forming Partnership that were Overcome:
Elements/Activities That Should Have Been Done but Were Not:
Elements/Activities That Should Have Been Done Differently:
Other Relevant Information on this Project:
Individual responsible for preparing this response, if different from the "Key Contact" identified on the first page (with address, phone, FAX numbers):

PLEASE FAX to Dr. Edd Hauser at Kimley-Horn and Associates: (919) 677-2050.
If this cannot be done conveniently, mail to P.O. Box 33068, Raleigh, NC 27636-3068.

letter of explanation, was sent to approximately 80 national organizations and associations, and other specific contacts that have been involved in multimodal activities over the past several years. Approximately 20 TRB Committees were also sent this form. Many respondents provided knowledgeable assessments of specific projects and additional contacts for case study nominations.

A very representative cross section of multimodal projects was submitted. From this universe of sources, a comprehensive, classified summary of multimodal transportation partnerships has been prepared. The synthesis of the data available and analysis of key issues are reflected in the following section.

2.2 Data Synthesis

The main focus of the industry scan was two-fold: (1) to identify candidate multimodal transportation projects and planning activities in which some type partnership has been formed; and (2) to begin to collect normative and substantive data that would allow the project team to analyze multimodal transportation partnerships.

Project nominations and suggestions provide good regional coverage.

Most of the reviewed literature dates from the era prior to ISTEA and provides only general information for the specific focus of this research. Nevertheless, the literature is instructive. Table I shows a general comparison of selected partnership attributes before and after the passage of ISTEA. Data prior to 1991 came primarily from the literature. Data subsequent to 1991 were derived from project descriptions submitted by members of the study team and by several of the national organizations and TRB committees contacted. In our solicitation of project nominations from the constituent groups, we requested projects that were either in the planning, design, or construction stage, or projects that have been completed within the past five years. Many of the individuals contacted were unable to provide specific case-study nominations that would meet the criteria of our study. However, considerable interest and support for the project and its objectives were expressed even by those who could not contribute a project.

The data in Table 2, representing 58 projects, shows a balance of pre-and post-ISTEA projects and good geographical balance among the four AASHTO regions. A total of 19 states are represented in the data base, with no state having more than five individual projects listed.

Of the ten or so data elements included in this industry scan, three have been selected as consistent enough from both the pre- and post-ISTEA time

Table 1. Comparison of Partnership Attributes, Before and After ISTEA

Purposes Cited for Partnerships	
Pre-ISTEA	**Post-ISTEA**
■ Private sector provide design/construct/finance/operation ■ Design/Construct (mixed-use) ■ Development (development/construction) ■ Finance (funding), oversee construction, operate system ■ Provide access to island ■ Funding (8 projects) ■ Conduct study ■ Plan/design/construct/operate (initially) ■ Development of mixed-use transportation center ■ Integration of land use and transit ■ Funding development package, compliance with land use and environmental regulations ■ Funding/development ■ Supplement federal funding	■ Integrate traffic and transit system, better public transit utilization, communications ■ Insure inclusive participation by modes (2 projects) ■ Obtain adequate funding, further interagency cooperation for intermodal planning activity (2 projects) ■ Validate technology ■ Develop and manage facility (5 projects) ■ Productive use of property (2 projects) ■ Improve intercity mobility ■ Be accountable to the public ■ Obtain political support for project ■ Redevelopment ■ Complete a transportation improvement plan
Barriers to Successful Partnerships	
Pre-ISTEA	**Post-ISTEA**
■ RFP never issued in final form ■ Protests from property owners ■ Developers see transit as potential detriment, or at best, neutral element in project siting ■ Private sector perceives uncertainties, vacillation, delays in implementing through bureaucratic maze (in public sector) ■ Accomodating different perspectives of participants ■ Developing incentives for participation ■ Attitudes of developers (didn't realize direct benefit to them resulting from station redevelopment)	■ Government procurement regulations (3 projects) ■ Proprietary content of architectural firm's design work ■ Liability concerns ■ Diverse objectives and missions (2 projects) ■ Mechanism for sharing funding (3 projects) ■ Condition of project site ■ Unfamiliarity (of some partners) with transit development ■ Varying environmental procedures ■ Inadequate legislative/statutory authority ■ Time to adequately meet schedule (2 projects) ■ Support by succeeding administration (2 projects) ■ Inadequate funding

Table 1. Comparison of Partnership Attributes, Before and After ISTEA

Typical Evaluation Criteria	
Pre-ISTEA	**Post-ISTEA**
■ Extensive cooperation between the City, local businesses, and Downtown Progress Association ■ Need to actually and perceptually separate new service from existing TA operations ■ Keep TA from adverse revenue impacts ■ Keep transit workers from adverse employment actions ■ "Success became self-fulfilling prophecy" ■ Choose best team to develop concept, don't let concept drive selection ■ Philosophy of "ahead of schedule and under budget" ■ Use of fast-track private sector design-build technique from conception to completion ■ Land-use controls (force ridership) ■ Sharing of knowledge, understanding strengths of each partner ■ Realizing that partnerships require nurturing after creation ■ Negotiated agreements that recognize needs of all parties ■ Future improvements included in original agreement ■ All parties deem completed project as functional and aesthetic success - make them competitive with auto ■ Completion on time ■ Effective management of involved parties ■ Need early consideration of operational issues, ownership, easement negotiations	■ Effective communication system = key to success ■ Open architecture ■ Implementation of recommended improvements (2 projects) ■ Follow-up financing on implementation plan (2 projects) ■ Usefulness of report ■ Retention of technology ■ Deployment of technology elsewhere ■ Operational viability ■ Shorten development time ■ Maximize modes included in project ■ Component integration ■ Completion on time, within budget (2 projects) ■ Awarded franchise ■ Increased sales/ridership ■ Shared ownership and responsibility

frames to provide some insight into what issues affect multimodal partnerships. The three data elements are: (1) purpose cited for forming the partnership; (2) evaluation criteria for evaluating the success of the partnership; and (3) barriers to forming partnerships.

Transportation managers perceive broader transportation system and societal objectives for their projects subsequent to ISTEA.

Prior to the 1990's, it appears that a major emphasis of partnership formation was to secure funding from as many sources as possible. While that objective is undoubtedly still a major motivator, the reasons cited for **current** projects tend to be more related to societal or traveler needs and values. Typical objectives identified include integration of the highway and transit systems, public accountability, and productive use of available property.

In analyzing the literature and respondents' inputs concerning the "evaluation criteria to determine the partnership's success," it appears that there are as many criteria as there are projects. Before ISTEA, the sample of projects was balanced between project and partnership criteria. After ISTEA, however, there seems to be a much greater emphasis placed on a project's success from a technical or societal benefit perspective.

Barriers cited in both literature and respondent's evaluations show overwhelmingly that institutional issues form the major barriers to successful multimodal partnerships. Only two respondents cited technical issues inadequate site preparation and inadequate design. In the NCIT Final Report, the Commission stated the following, based on the testimony they had received: "as demand grows for both movement of goods and people, and as parts of the system reach capacity, transportation planners and decision makers must foster interrelationships between these two systems."[4]

[4]A7L Associates, *An Assessment of Technologies and Research Needs in Intermodal Transportation,* Cambridge, MA, June 1994, P 36

Table 2 Summary of Categorical Data from Literature Review and Industry Scan

Projects	Modes	Rural (R) Urban (U)	Large(L) Midsized (M) Urban	Freight (F) Passenger (P)	Planning (P) Design (D) Construction (C)	AASHTO Region 1,2,3,4	Public/Private Public (P) Community (C)	Begin Year
1. Houston Metro	bus	U	L	P	D	4	PP	86
2. New Jersey Secaucus	bus, hwy, ped, rail	U	L	P	C	1	PP	82
3. Irving, Texas Las Colinas APT	freeway waterway ped, street elevated people mover	U	M	P	C	4	PP	79
4. Las Vegas People Mover	hwy, people mvr (M-BAHN)	U	M	P	C	4	PP	85
5. Tampa People Mover	elevated people mover	U	M	P	C	2	PP	85
6 New Jersey Hudson Transitway	LRT	U	L	P	C	1	PP	
7. Atlantic City People Mover	people mover	U	M	P	C	1	PP	87
8. Manhattan Transitory	fixed guideway	U	L	P	P	1	P	
9. Dulles Corridor Rapid Transit	hwy, LRT,air, RT	U	L	P	P	2	PP	84
10. Denver Transit	fixed guideway	U	L	P	C	4	PP	87
11. Los Angeles Metro Rail	Metro, Hwy, Rail	U	L	P	C	4		92
12. San Diego MTS	Transp. Ctr., LRT bus, hwy	U	L	P	C	4	PP	90
13. Portland LRT	LRT, bus	U	M	P	C	4	PP	90
14. New Jersey - South Brunswick	shuttle bus, rail, hwy, transf. sta	U	M	P	C	1	PP	82
15. S. Anchorage Transit Center	Transit Center	U	M	P	C	4	PP	87
16 Boston South Piers	RT, commuter, expr bus	U	L	P	C	1	C	90 (?)
17 Houston RCTSS	bus, P&R	U	L	P	D	4	PP	93 (?)
18 Chicago Station Redev.	RT, bus, hwy (P&R)	U	L	P	C	3	PP	90 (?)

Table 2 Summary of Categorical Data from Literature Review and Industry Scan, Continued

Projects	Modes	Rural (R) Urban (U)	Large(L) Midsized (M) Urban	Freight (F) Passenger (P)	Planning (P) Design (D) Construction (C)	AASHTO Region 1,2,3,4	Public/Private Public (P) Community (C)	Begin Year
19. Los Angeles LAUPT	Metro Metro Link Amtrak busway, fway	U	L	P	D	4	PP	93
20 Orlando MagLev	MagLev air	U	M	P	P	4	P	91
21 Michigan HSPTC	train control, rail, hwy	Corridor	M	F/P	C	3	P (PP)	95
22. San Antonio TransGuide	TCC	U	L	P	C	4	PP	92
23. Denver Union Terminal	CR, mall shuttle, air, bus, Amtrak, interc. rail, LRT, hwy.	U	L	P	C	4	PP (?)	93
24. Pittsburgh Busway/HOV	transit, airport busway, HOV, P&R	U	L	P	C	1	P	89
25. Los Angeles Union Station Gateway	transit, auto, PK, ped, Amtrak	U	L	F/P	C	4	PP	93
26. Florida High Speed Rail	HSR, transit,bus hwy., connector rail	Corridor	L	P	C	2	PP	95
27 Florida I-95 ICS	frwy, inter-city rail, LRT, bus, Amtrak	U	L	P	C	2	P	94
28 North Carolina Global Transpark	air, rail, hwy, inland port	R		F	C	2	(P) PP	92
29. Cleveland Tower City Center	bus, air, LRT, HRT	U	L	P	C	3	PP	82
30. North Carolina Outer Banks	hwy, ferry	R		P	P	2	P	93
31. North Carolina Inner Sound Ferry	ferry (hydrofoil)	R		P	P	2	C	93
32. Kentucky -Toyota & Norfolk - Southern	rail and truck	R		F	C	2	PVT. - PVT.	<90

Table 2 Summary of Categorical Data from Literature Review and Industry Scan, Continued

Projects	Modes	Rural (R) Urban (U)	Large(L) Midsized (M) Urban	Freight (F) Passenger (P)	Planning (P) Design (D) Construction (C)	AASHTO Region 1,2,3,4	Public/Private Public (P) Community (C)	Begin Year
33 NY-Ontario Border Crossing (Niagra)	hwy, rail, bridge ped, bicycle, air transit, ferry, water taxi	U	L	F/P	C	1	P	94
34. Minnesota - ARTIC	transit, medical, dispatch, hwy. ptrl	R		P	C	3	PP	95
35 Minneapolis-Travlink	transit, HOV lane park and ride AVL and TMC	U	L	P	C	3	PP	95
36 Access Ohio	All	U/R	L/M	F/P	P	3	(P) PP	93
37. Atlanta (ACOG)	transit, hwy	U	L	P	P	2	C	93
38 Atlanta (ACEC)	transit, hwy	U	L	P	P	2	C	95
39. I-95 Coalition VSM\HAR	all hwy modes	U\R	L\M	F\P	D	1	P	94
40. I-95 Coalition Surveillance	all hwy. modes	U\R	L\M	F\P	D	1	P	94
41. I-95 Coalition Exchange	all modes	U	L	F\P	C	1	P	94
42. I-95 Coalition Incident Mgmt	all hwy modes	U\R	L\M	F\P	C	1	P	94
43 Denver ITS	public transit, HOV lane, auto, park & ride	U	L	P	P	4	PP	93
44. Glendale, CA ITS	hwy, LRT, transit bus, parking	U	M	P	P	4	P	95
45. Dulles Greenway Virginia	hwy, rail, airport, bus	U	L	P	C	2	PP	88
46. Colorado I-70	SOV, bus, carpool/vanpool, bicycle, ped	R		p	p	4	pp	95
47. NY-Ontario Border Crossing(Ogdensburg)	all hwy modes, rail	corridor		F/P	P	1	P	95
48 Michigan PTP	bus, rail	corridor		P	C	3	PP	84
49. Tijuana LRT	rail, fixed rt. cabs urban st.	U	M	P	C	4	PP	N/A

Table 2 Summary of Categorical Data from Literature Review and Industry Scan, Continued

Projects	Modes	Rural (R) Urban (U)	Large(L) Midsized (M) Urban	Freight (F) Passenger (P)	Planning (P) Design (D) Construction (C)	AASHTO Region 1,2,3,4	Public/Private Public (P) Community (C)	Begin Year
50. Advantage I-75	hwy	corridor		F	P	2,3	PP	90
51 Virginia Railway Express	heavy rail, transit terminals, parking	U	L	P	C	2	PP	88
52. Richmond Multimodal center study	rail, intercity bus, local transit, taxis	U	M	P	C	2	PP	94
53. Multimodal terminal-Lafayette, LA	rail, bus, truck taxi	U	M	F/P	P	2	C	88
54 Laredo Intermodal Transit Center	bus, van	U	M	P	PD	4	PP	88
55 Priority Treatment Network Coalition New York	hwy, transit, airport, seaport, ferry	U	L	P	P	1	P	94
56. ISTEOP - NY Metro Region	hwy,transit, truck, lt rail/subway, commuter rail	U	L	F/P	P	1	P	95
57. NYSDOT Downstate Telecommuting	SOV, telecommunication	U	L	P	P	1	PP	95
58. Nashville Land Port	commuter rail, bus shuttle, tour bus, taxi, heliport	U	M	P	P	2	P	90

CHAPTER 3.0

CASE STUDIES OF MULTIMODAL PARTNERSHIPS - SUMMARY

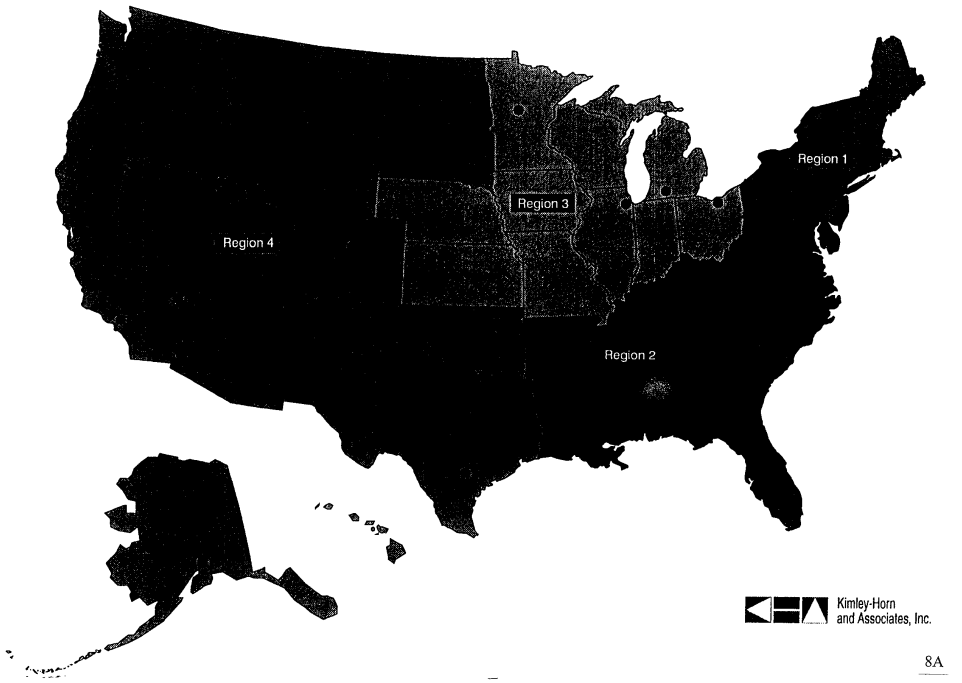
3.1 Context for the Recommended Projects

A total of 21 projects from the database were selected as recommendations to the project panel. The project locations are graphically displayed in Figure 2. Where a project represents a corridor, the location is shown at a more or less random point along the corridor, not necessarily the home location of the partnership responsible for the project. The 21 recommended projects were as follows:

- Irving, Texas - Las Colinas APT (File #3)
- Las Vegas People Mover (File #4)
- Portland, Oregon - LRT Extension (File # 13)
- South Anchorage Transit Center (File # *15)*
- Boston - MPTA South Piers (File #16)
- Chicago - Station Redevelopment (File # 18)
- Michigan Rail Corridor (File # 21)
- San Antonio TransGuide (File # 22)
- Pittsburgh Busway (File # 24)
- Los Angeles Union Station Gateway (File # 25)
- North Carolina Global TransPark (File # 28)
- Florida High Speed Rail (File # 26)
- Cleveland - Tower City Center (File # 29)
- North Carolina - Outer Banks Corridor (File # 30) and Inner Sound Ferry System (File # 31)
- Kentucky - Toyota/Norfolk and Southern (File #32)
- Minnesota - ARCTIC (File # 34)
- Atlanta - ACOG and ACEC (File # 37-3 8)
- I-95 Coalition (File # 41)
- Virginia - Dulles Greenway (File # 45) and Virginia Railway Express (Pilot Study)
- Colorado Summit Stage (File # 46)
- New York-Ontario Border Crossing (File # 47)

These 21 projects represent a cross section that includes both completed projects and those in progress, either in the feasibility study, planning, programming, design, or construction phase. In many cases, the specific project

Figure 2: Recommended Case Study Locations by AASHTO Region



cited is part of an even richer mix of multimodal projects that is underway in a given location at this time, or in the recent past.

The recommended projects have been chosen based on their own merits. In nearly all cases, data have been secured on the partnership from both literature and personal telephone contacts. Preliminary agreement to participate in the case studies was secured from several of the projects, although no specific effort has been undertaken to request that approval. The 21 projects are all at stages where they would present excellent scenarios of the types of partnerships that are being formed all across the country. In some cases, projects have been recommended as potential case studies due to a large number of multimodal projects in a given location.

The key *elements being studied are the not the projects.*

From this set of 21 recommended case studies, the NCHRP Project Panel selected an initial total of nine projects to be included in Task 5 of the project. In addition to these nine specific projects, three case studies were added since there were two projects in the same general locations that could be included in the study for a marginal additional effort. The three additional projects are located in coastal North Carolina, northern Virginia, and Atlanta.

A concurrent research study of the multimodal planning process was NCHRP Project 8-32(1). The orientation of the 8-32(1) project was toward **state and local agencies** and the **process** being followed for multimodal transportation planning. In this project, 8-32(4), the emphasis is on the **multimodal partnership,** irrespective of the stakeholders.

3.2 Methodology for Conducting Case Studies

There is a distinct difference anticipated in the results of the industry scan (Task 1) and the case studies (Task *5).* Table 3 represents the relative depth of information that was collected on the 58 partnerships in the database and the data collected during the case studies. The general approach to conducting the case studies was as follows:

1. Mobilize and plan logistical support.
2. Prepare Case Study Protocols.
   a. Initial telephone calls to key contacts.
   b. Development of "pilot" case study procedures.
   c. Pilot case study detailed planning.
3. Conduct pilot study and modify protocols as needed
4. Conduct remaining case studies.
5. Prepare case study trip reports.

Table 3 Relative Depth of Information Obtained in Industry Scan and Case Studies

	Task 1: Industry Scan	Task 5: Case Studies
General Information on Partnership	X	X
Project Information		
Description	X	X
Chronology		X
Status		X
Available Reports	(some)	X
Future Plans		X
Other Data		X
Role of Individuals and Corporate Stakeholders in Partnership	(some)	X
Partnership Evaluation		
Purpose	X	X
How it was formed		X
What worked/didn't		X
Problems	X	X
Outcomes		X

Twelve representative multimodal partnerships were studied in detail. The purpose of the case studies was to gather additional data on what makes partnerships work, and what hinders them from working efficiently. The twelve partnerships included in the case studies were:

- Outer Banks Transportation Study, North Carolina
- Summit Stage, Summit County, Colorado
- South Anchorage Transit Center, Alaska
- Tower City Center, Cleveland
- New York-Ontario International Border Crossing, Buffalo
- Norfolk Southern Intermodal Terminal, Georgetown, Kentucky
- Inner Sound High Speed Ferry System, North Carolina
- TransGuide ITS Project, San Antonio
- Atlanta Committee for the Olympic Games (ACOG)
- Atlanta Community Empowerment Corporation (ACEC)
- Virginia Railway Express, Northern Virginia
- Dulles Greenway, Northern Virginia

Additional data on these case studies is shown in Table 4. The Virginia Railway Express (VRE) was used as a pilot case study. Therefore, some of the interviews for the VRE were conducted early in the project in order to test initial case study protocols. From these early interviews in Virginia, the original interview outline and protocols were modified. The revised approach was developed to guide all remaining interviews in the twelve case studies. This final outline is shown in Figure 3.

Criteria for selecting the twelve case studies were:

- Mix of modes
- AASHTO Region
- Coverage (urban, rural, corridor)
- Population of the area, community form and composition
- Passenger or freight project
- Type of partnership (public-private, public-public, etc.)
- Phase of project (planning, design, construction, operations)
- Planning context (international, state, regional, local)
- Purpose of partnership (funding, regulation, management, implementation)

The focus of the case studies as a whole was on how the partnerships would be applicable and relevant to public sector practitioners. Detailed on-site interviews focused on institutional, technical, and legal mechanisms used in the various projects. A typical profile of the key partnership stakeholders interviewed included top management, public affairs officers, project managers

Table 4 Justification for Highly Recommended Projects

File No.	AASHTO Region	Project Name	Reasons for Priority Recommendation
30,31	2	N.C. Outer Banks Transportation Study and High Speed Ferry Planning Study	• strong example of public agency partnership • partnering process in the planning phase • rural area (recreation area)
47	1	N.Y. - Ontario International Border Crossing	• project currently under development • planning, study to be underway 1995 • numerous public agency involvements • public-public partnership
29	3	Cleveland Tower City Center	• strong public-private partnership • project construction completed • downtown redevelopment oriented • extremely successful partnership.
22	4	San Antonio Transguide	• includes all highway modes • high application of technology
32	2	Norfolk Southern Intermodal Facility	• only private-private partnership in database • all freight project
46	4	Colorado I-70 "Summit Stage"	• combination urban-rural corridor • high technology applications • pure planning project • public-private partnership • operational test potential
15	4	South Anchorage Transit Center	• only case study in the data base in a small to mid-sized city area • project completed • potential for future expansion • Anchorage has characteristics much like cities in the "lower 48"
37,38	2	Atlanta Committee for the Olympic Games and Atlanta Community Empowerment Corporation	only project with stated intent of strengthening public/community participation in major transportation improvements and the transportation planning process
45,52	2	Virginia Railway Express. and Dulles Greenway TRIP II	• unique partnerships with public-public partnership combined with public-private • easily accessible • high profile multimodal projects • public-private partnership legislation

Figure 3 Guideline for Case Studies

I. Project Information

A. Project description
B. Modes included
C. Total cost of project/cost-sharing arrangements
D. Current status of project
E. Future plans for project

II. Perspective on the Process of Developing the Partnership

A. Steps in developing the partnership
B. Partners: roles and responsibilities
C. Person/organization most responsible for development of partnership
D. Person/organization most responsible for maintenance of partnership
E. Organizations indirectly involved in partnership
F. Organizations that should be officially involved

III. Evaluating the Process of Developing and Maintaining the Partnership

A. Motivation behind formation of partnership
B. Goals of the partnership
C. Success in achieving goals
D. Legal issues encountered
E. Technical issues encountered
F. Institutional issues encountered
G. Barriers to forming the partnership that were overcome
H. Barriers that were NOT overcome
I. Favorable outcomes of project
J. Unfavorable outcomes of project
K. Changes in partnership arrangement that would have increased favorable outcomes
L. Applications of techniques/elements of partnership arrangement
M. Keys to the success of this partnership
N. Evaluation Criteria

and other supervisors, planners, designers, and developers. In each case study, all principal organizational stakeholders involved in each partnership were interviewed to assure a balanced view of the project and the partnership.

Case studies were completed during the months of July through September, 1995. They were conducted by Dr. Edd Hauser, Principal Investigator; Ms. Amy Breese, Research Assistant; Mr. Tommy Harrelson, consultant and former Secretary of Transportation in North Carolina; and Dr. Claude Barnes, professor of political science at N.C. A&T State University.

3.3 Criteria for Selecting Recommended Case Studies

The criteria for selecting the recommended case studies are outlined in Table 5. The criteria include agreements by project principals to participate.

Using the agreed-upon criteria, it was determined that there were projects in the panel's recommendations for case studies that meet the minimum criteria. The 21 projects meet all aspects of the criteria set out in this table. From this list of 21, the twelve case studies were selected for detailed, on-site interviews but the Project Panel.

TABLE 5 Criteria For Evaluating And Selecting Case Studies For On-Site Visits/Interviews

Criteria	Discriminators	Minimum Number
1. Willingness to participate	Must agree	
2. Mix of modes	•Primarily highway •Primarily transit •Primarily transfer facility	one one one
3. Region	4 AASHTO regions	one from each region
4. Coverage	•Urban •Rural •Corridor (U/R)	two one one
5. Load	•Passenger •Freight	two one
6. Partnership	•Public-Private •Public-Public •Private-Private •Strong community involvement	one one one one
7. Population	•< 250,000 •250,000 - 1,000,000 •> 1,000,000	one one one

CHAPTER 4.0

PARTNERSHIP ISSUES

4.1 Issues Affecting the Partnership

Table 6 illustrates the specific attributes or features of each partnership. Comparative data are shown on the factors that motivated the formation of the partnerships, barriers to creating the partnerships, basic processes of developing the partnerships, and the goals as conveyed by the stakeholders. The highlighted attributes in this table were taken from the data reported by interviewees, along with observations made by the case study investigators.

For the most part, stakeholders were focused on the capability of the partners working together to capture the unique strengths and missions of each member. In some cases, these unique strengths and the diverging missions of participants in a partnership created barriers to its own creation.

Like the process of developing partnerships, there were unique factors that distinguished each of the projects in operating or maintaining the partnerships. These distinguishing attributes or features are outlined in Table 7. The highlighted attributes in the maintenance or operational phase of a partnership include barriers to maintaining the partnerships, key outcomes, and keys to success (what makes the partnership work).

4.1.1 Legal issues

The legal research results thus far have made it apparent that the legal issues and obstacles relating to the implementation of ISTEA, particularly with respect to the formation of partnerships, are multi-faceted in that they require planners at the federal, state, MPO, and local level to examine legal ramifications throughout the life of a project.

Legal obstacles and issues vary depending on the composition of the partnership. Partnerships involving **public-private** entities frequently necessitate policy shifts and legislative initiatives which require political commitment for the partnership to succeed. The use of public funds to lease private lands or buildings, or underwrite private entrepreneurial ventures is subject to strict accountability. On the other hand, the criteria for the formation and function of a public/public partnership may involve legal issues that are particularly unique due to varied federal, state, and local regulatory and procedural issues.

Table 6
Developing Partnership - Distinguishing Characteristics

Project	Motivation	Barriers	Chronology	Goals
1. Outer Banks	• complexity of problem • inefficiency of env. review • shared funding • recognition that only a joint effort would work	• mistrust • political processes • unwillingness to take unilateral initiative • diverging missions	1. continuing relationships 2. issue ID 3. agreement on approach 4. partnering workshop 5. formal MOU 6. task force appointed 7. executive comm. formed	• common understanding of issues • clear communication • workable solutions • every agency involved
2. Colorado	• integration of all transportation systems • equitable service to residents and visitors • mix of funding	• incomplete communication • different perceptions of partnership organization • traditional approach to transportation planning	1. unilateral plan initiation 2. windfall funding avail. 3. plan dev. and review 4. informal partnership meetings	• flexibility for expansion • environmental improvements • improve communication systems • continue partnership
3. Alaska	• increased retail business patronage • equitable service for residents and visitors • improved general transit service • mix of funding	• perceived image of transit users • poor relationships between developer and other municipal agencies	1. locate site for multimodal facility 2. informal discussions 3. formal MOA	• multipurpose facility development • continuation of partnership • community improvement
4. Cleveland	• potential commercial value of facility • mix of funding • increased transit ridership • improved transit operations • recognition that only a joint effort would work	• lack of public support • diverging missions	1. concept definition by developer 2. development of common vision 3. agreement for joint development effort	• increased community investment • historic preservation • flexibility for future expansion (transit) • continuation of partnership

Table 6, Continued
Developing Partnerships — Distinguishing Characteristics

Project	Motivation	Barriers	Chronology	Goals
5. NY-Ontario	• complexity of problem • mixed funding • inefficiency of operations • NAFTA	• diverging missions	1. long standing relationships 2. issue ID 3. working committee appointed	• seamless border crossing • better organization of partnership • common understanding of perspectives and procedures
6. Kentucky	• economic incentive • utilization of strengths	• none identified	Partnership formed to support Toyota Manufacturing Plant	• maximizing profits • clear communications • quality improvements
7. Inner Sound	• economic incentive • recognition of regional development potential • recognition that only a joint effort would work	• lack of public support • lack of common vision	1. concept definition 2. regional economic development agency created 3. plan, development, and review 4. informal partnership meetings	• historic preservation • environmental preservation • mobility improvements
8. TransGuide	• complex problem • time constraints • risk-sharing	lack of local government support	1. long relationships 2. political support secured 3. funding received 4. planning and design 5. construction bids 6. partnering workshops	• flexibility for future expansion • total quality management • make decisions at lowest possible level • clear communications
9. ACOG (Atlanta)	• complex problem • international visibility	uneasy alliance between political leadership and corporate community	1. initial planning by MPO 2. partnership formed 3. federal, state, and private funding secured	• reduce commuter traffic • efficiently handle Olympic Games traffic

Table 6, Continued
Developing Partnerships — Distinguishing Characteristics

Project	Motivation	Barriers	Chronology	Goals
10. ACEC (Atlanta)	• federal support • complex problem	• mistrust of city officials • complexity of partnership	1. informal meetings 2. application process 3. funding secured 4. planning process	• community improvement • reduce urban poverty level • improve mobility
11. VRE	• extreme congestion problem across multiple jurisdictions • use of existing infrastructure • state support and involvement	• difficult negotiations for use of rail tracks	1. political support secured 2. regional transportation commissions created/designated 3. funding secured 4. MOU creating VRE 5. formal contracts for rail operations/access	• congestion, environmental improvements • effective policy board • improve communications on regional transportation issues
12. Dulles Greenway, TRIP II	• economic incentive • extremely congested corridor • environmental enhancement	• initial lack of financial backing	1. general partnership formed 2. general contractor added as limited partner 3. financing secured (all private)	• improve mobility • operate and maintain the facility • future expansion

Table 7
Maintaining Partnerships — Distinguishing Characteristics

Project	Barriers	Key Outcomes	Keys to Success
1. Outer Banks	• lack of federal funding • lack of adequate staff time • appropriate participation • political processes • diverging missions	• common understanding of issues and needs • higher degree of cooperation • agreement on priority of planning tasks • continuing state funding	• appropriate participation • continuity in membership • involvement of unbiased, neutral facilitator • creation and involvement of executive committee • long-standing relationships
2. Colorado	• incomplete agency involvement • lack of partnering process or ADR • inadequate marketing campaign • incomplete communication • different perceptions of partnership	incorporation of ITS technology in rural transportation project	• commitment and support of state transportation department • continued commitment and involvement of ITS consultant
3. Alaska	none identified	• multi-purpose facility completed • partnership continuing • community improvement phase	• personal relationships • economic incentive • attractive location and design
4. Cleveland	• uncoordinated actions by participants • complexity of problem • confusion due to number of agencies involved • inadequate communications • inconsistency of approval guidelines • lack of continuity in top management and policies • diverging missions	• historic preservation • flexibility for future transit expansion • continuation of partnership • increased community investment • increased ridership • success of office/retail aspects	• risk-taking by private developer • effectiveness of mixed-use concept • continuity and mutual trust of project managers • economic incentive

Table 7, Continued
Maintaining Partnerships — Distinguishing Characteristics

Project	Barriers	Key Outcomes	Keys to Success
5. NY- Ontario	• lack of decision-making body • lack of involvement by local elected officials • lack of shared information • diverging missions	• common understanding of issues and interests • agreement on priority of project implementation • funding mechanism developed	• long-standing relationships • commitment and persistence of partners • taking advantage of "windows of opportunity" • economic incentive
6. Kentucky	• limited interaction and communication at corporate level • strict contractor-client relationship • lack of formal review process	• profitable operation	• progressive management approach and philosophy • good communication between on-site managers • economic incentive
7. Inner Sound	• lack of political support • overly aggressive marketing campaign • competition between modes	• attraction of investors	• economic incentive • common vision • strong community involvement • risk-taking by private developer
8. TransGuide	• internal organizations politics	• effective decentralized decision-making • quick resolution of problems • hands-on involvement of owner	• high interest in project's success • highly successful partnering process • daily, open communications • risk-taking by private sector firms
9. ACOG (Atlanta)	• access to resources (funding, staff)	• high international visibility	• long-standing relationships • commitment and support of State DOT • risk-taking by private sector • recognition of concerns of affected parties • economic incentive

Table 7, Continued
Maintaining Partnerships – Distinguishing Characteristics

Project	Barriers	Key Outcomes	Keys to Success
10. ACEC (Atlanta)	• complexity of partnership • no permanent executive director	• successful application • workable plan	• history of successful partner • strong community involvement • attention to continuous monitoring and evaluation • willingness to accept criticism and new ideas
11. VRE	• limits of liability • cumbersome decision-making process • railroads typically work with state and federal agencies on agreements, rather than local governments • riders from counties outside the service area not represented and not paying	• commuter rail service exceeding projected ridership • no federal operating funds necessary • monthly meetings of operations board	• economic incentive - ready-made ridership market • successful marketing campaign • vision of top management • good communication among organizational staffs
12. Dulles Greenway, Trip II	• sufficient funding to build the ITS-AVI infrastructure • continuation of owner/builder relationship between partners	• tollroad completed six month ahead of schedule • 13 investors involved • no change orders or claims awarded to date	• small number of partners (3 plus the state) • high professional competence • fixed price construction contract • daily project management meetings • design-build contract

Whatever the composition of a partnership, the importance of early identification of potential legal issues cannot be overstated. The following list, although not exhaustive or necessarily applicable to every multimodal project, exemplifies the multifaceted and diverse legal issues that should be addressed:

- Statutory interpretations - issues specifically relating to federal legislation such as ISTEA, CAAA, NAFTA, etc. and subsequent guidelines and interpretations by state and local jurisdictions
- Jurisdictional disputes - issues of federal vs. state or administrative court jurisdiction over legal issues that arise, such as preemption issues.
- Conflict of law - relating to specific state laws that parties involved in litigation procedures and the courts will apply in the event of disputes.
- Labor compliance - relating to disputes on compliance with federal and state labor laws such as NLRA, DOL, OSHA, Right-to-work statutes, etc.
- Land acquisition and capital expenditures - in those projects involving right-of-way acquisition, condemnation proceedings, appraisals, etc.
- Federal preemption issues - in issues where both federal and state laws governing the same or similar concerns, generally the federal law will be determined as controlling.
- Intellectual property rights - issues arising from competing claims on intangible property, ownership and value of copyrights and patents.
- Liability concerns - relating to compliance with federal, state, or local regulations in connection with safety standards, and/or tort claims resulting from personal injury, property damage, regulatory takings, and environmental claims.
- Access issues - Americans with Disabilities Act (ADA)
- Civil Rights Act - pertaining to discrimination in hiring, contracting, promotion and discharge to gender, age or race bias, EEOC compliance, and the Family Leave Act.
- Bonding - contractural funding instruments entered into by public entities that pose potential legal issues especially when they involve joint ventures; obligations of the partners, indemnification, solvency, etc. are some of the issues involved.
- Risk allocation - pertaining to insurance law; the loss of property, casualty contemplated in a contract, and how such risks should be managed and allocated among stakeholders in a partnership.
- 1 st Amendment issues - involves restrictions on free speech and/or assembly on public vs. private property; presents unique problems where publicly-held property is utilized or controlled by a private entity.

These issues must be continuously addressed throughout the life of the project, but require particular attention during partnership development. Lastly, it is recommended that an expert in the field of dispute resolution be involved in early stages of partnership development to discuss the options available, and whether ADR should be formalized (i.e., contractually mandated or non-contractual).

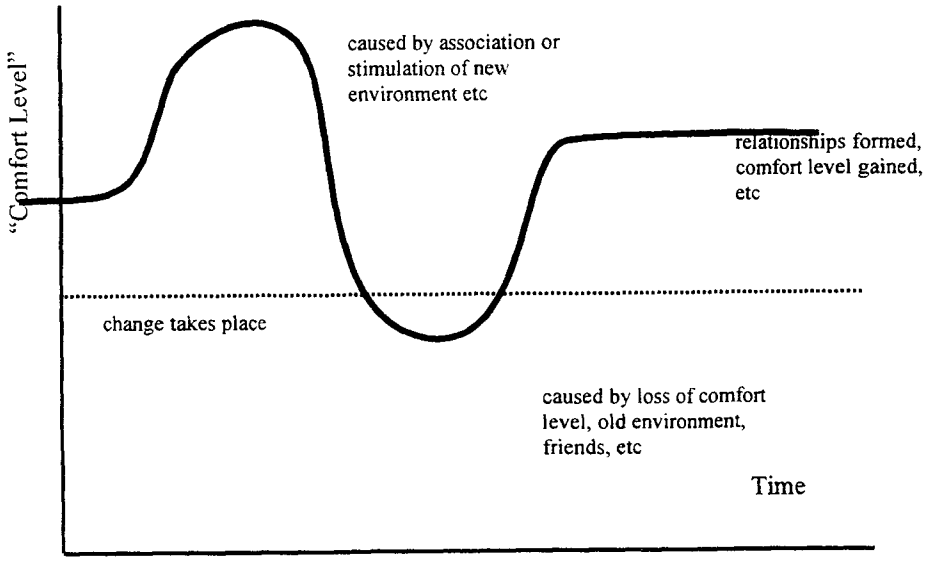
4.1.2 Institutional issues

Just as there are norms against which to assess physical health and norms against which to assess individual mental health, there are also norms with which to assess the health of partnerships. The Industry Scan (Task 1), the experience of the study team with public and private transportation organizations, and the case study data indicate that the "norms" or institutional marks of a successful partnership are:

- The "right" organizations and the "right" representatives of those organizations - partners must be compatible; representatives must have authority and ability to articulate policy and technical inputs.
- A dynamic vs. a static approach to issues.
- Purposeful, directed internal and external communications.
- The capacity to see differences of perspective as potentially enriching - the creative use of conflicting or dichotomous corporate cultures and *modus operandi.*
- Integrity in all dealings and all individual relationships.
- Patience with the process of planning and execution of the final results of the partnership - for further explanation, see Figure 4.

Figure 4. Model of the Impact of Change

The Menninger Morale Curve represents a model of the impact of change.



Healthy partnerships keep their focus on the job that is to be done, and use past experience as a learning mechanism to get better at what is yet to be done. If the leadership of the partnership can implement an ongoing evaluation process, then mistakes or problems can be resolved before blocking behavior sets in or before problems get out of hand, threatening the project's success.

The idea of "partnership" is bringing different, and possibly very diverse groups together to solve a common problem. This diversity introduces institutional issues that could potentially develop into barriers to the project itself. All partners should be aware of issues that commonly exist in partnership development:

- Diverging organizational missions (along with different clients, procedures, technologies).
- Adherence to individual corporate cultures (resistance to change).
- Uncommon "languages" in communications of public sector and private sector.
- Timely and/or incomplete communications on issues.
- Mistrust of other partnership members, particularly if partners have been competitors in other projects.
- Frustration between public and private sector partners in accommodating different approaches to project development: public sector emphasis on process, private sector focus on outcome.
- Lack of full support and involvement by all organizations needed for a complete partnership.
- Unwillingness of the partners to work out an acceptable arrangement for project accountability.
- Partnerships weaken control of the project's final outcome.

Of particular interest in public-private partnerships are the differences in character between the public and private sectors. Table 8 shows a comparison of these attributes.

In addition to those institutional issues that commonly exist in partnership development, the following issues may arise in later stages of the project:

- Adherence to individual corporate cultures (resistance to change).
- Diverging missions (along with different clients, procedures, technologies).
- Public sector processes take longer than private sector.
- Political influence.

Table 8
Attributes of Public and Private Sectors in Developing Multimodal Partnerships

Attributes	Private Sector	Public Sector
Stewardship	private investors	public trust, safety and welfare
Response mechanism	proactive	response to constituents
Work/ assignment orientation	outcome-oriented	process-oriented
Funding	investment	budgets, taxes, fees
Usual type service provided	specialized; short-term, high technology applications	normal engineering and design; emergency and incident management
Control systems	centralized	moving toward more decentralized
Major management functions	innovates, designs, moving toward operation and maintenance	directs, plans operates, maintains, regulates
Modus operandi	flexible	standardized, regulated
Efficiency	driven by competition	no competition, except within agencies and between agencies
Business orientation	profit-seeking. quality improvement-oriented	no profits public service-oriented
Production orientation	sets own pace, progress-oriented, tends to be exclusive	consensus decision-making process; slower procurement; inclusive

Source: Adapted from "Partnerships in the Implementation of ITS," prepared by Klick, Kent and Allen, Inc., for the Federal Highway Administration, September 1995.

- Uncommon "languages" of public and private sectors.
- Timely and/or incomplete communications on issues.
- Mistrust of other partnership members, particularly if partners have been competitors in other projects.
- Frustration between public and private sector partners in accommodating differing approaches to project development: public sector emphasis on process, private sector focus on outcome.
- Lack of full support and involvement by all organizations needed for a complete partnership.

4.2 Issues Affecting the Public (Community Involvement)

Among the issues that have risen to the top in the list of key issues to explore in more detail in our case studies is the perception and/or fact of different objectives from various stakeholders and affected groups. Completely different views of a project's worth and need are typically found by local community activists, elected officials, environmental groups, and project engineers.

A preliminary summary of those issues that illustrate how multimodal project partnerships affect the public include:

Equity and efficiency are key issues affecting partnerships ' impact on the public.

- Equity and efficiency - maintaining a balance between the efficiency or cost-effectiveness of the project and protection of the public welfare
- Participation - involving a much higher degree of citizen and stakeholder participation in the transportation planning process, particularly at the local or MPO level
- Shared information and facilities - at the point of exchange or interchange of travelers or goods, our society as a whole has a great potential to benefit from better access to information and seamless transportation facilities
- Innovation and excellence - continuous quality improvement efforts by partnerships means recognizing that **every** technological improvement is not necessarily a step toward excellence

Every partnership should consider how the project will impact various communities, groups, and the general public. It is not only important to make certain the pubic stays informed, but to actively solicit their input into political and decision-making processes.

A public involvement program is a necessary part of any transportation project. Public involvement is required by the "3-C" (Coordinated, Comprehensive, Continuing) planning process and in particular the additional emphasis given this element by ISTEA. Community involvement issues that are important for a partnership to consider in developing a multimodal transportation project include:

- Community redevelopment and renewal
- Improved overall mobility
- Access to job opportunities and community services
- Equitable distribution of transportation services
- Participation in community decision-making and political processes
- Provision of alternative modes in urban areas such as pedestrian walkways and bicycle paths, connectors to urban transit systems, ridesharing and paratransit services, etc.
- Openness to new and divergent ideas, ideologies, goals
- Protection of community environments
- Openness to different ways of solving problems

Community involvement can help ensure that all affected stakeholders in a project have an opportunity to provide their input. This is particularly important for those groups that are not directly involved in the partnership. The challenge for partnerships is to take an already complex process of communication and coordination among partners and reach out to the public. However, this challenge is a necessary one, as it produces a greater user satisfaction and is preventative maintenance for potential public opposition in later stages of the project.

The overall goal of a community involvement program is twofold: (1) to inform the public, and (2) allow the citizens the opportunity to be a part of the planning process. This can be accomplished in two ways: through an interactive public information and press coverage campaign, and a series of focus groups and community meetings. Table 9 illustrates a model community involvement program.

Table 9
Model Community Involvement Program

Elements	Public Information/Press	Focus Groups/Community Meetings
Target Market	• General public • System users	• Interest groups • Communities affected
Primary purposes	• Educate and inform	• Continuous feedback
Media	• Exhibits/kiosks • Newspaper inserts • Radio and TV • "Community bulletin board"	• Newsletters • Video • Phone trees
Venues	• High-use employment and shopping centers	• Common public meeting locations
Time	• Continous during project development	• Evenings
Representation	• Wide dissimenation	• 20 participants per group • Community/civic groups- as needed

CHAPTER 5.0

BARRIERS TO EFFECTIVE PARTNERSHIPS

5.1 Barriers to Developing and Maintaining Partnerships

Barriers were identified in nearly all the case studies (see Tables 6 and 7, section 4.1). A limited number of factors can be identified that occur repeatedly. Those recurring issues are shown in Table 10. Factors discussed in this section are as follows:

- Development Phase: motivation, barriers, goals
- Maintenance Phase: barriers and keys to success

These are the primary types of factors that directly relate to the functioning of the partnership. Other factors identified by the interviewees (development process, outcomes) relate more to the specific details of the project.

The relationship between the types of partnership agreements, the stage of development of the project, and the type of partnership is shown in Table 11. Conclusions drawn from the data in Tables 10 and 11 are:

- There are recurring issues that tend to surface no matter what type partnership is involved or what the stage of project development (e.g., communications).
- Public-private partnerships are commonly formed through some type of formal contract.
- Public-public partnerships are commonly formed with a slightly less formal instrument that binds the partnership together, such as a Memorandum of Understanding (MOU) or Partnering Agreement.
- In the early stages of a project's development (conceptual or planning stage), partnerships are commonly formed through verbal agreements between partners.
- The type of agreement relates to both the type of partnership and the stage of development of the partnership.

TABLE 10
RECURRING ISSUES IN CASE STUDY PARTNERSHIPS

PARTNERSHIPS	
DEVELOPING	**MAINTAINING**
Motivation Funding Inefficiency of operations Economic incentive Complexity of problem	Barriers Access to funding and staff Diverging missions Political processes Incomplete communication
Barriers Mistrust Incomplete communication Diverging missions Lack of government support	Keys to Success Economic incentive Risk-taking Open communications Willingness to compromise Continuity in participation Decision-making body Personal relationships
Goals Improved communication/awareness Quality improvement Common understanding/vision Continuation of partnership	

TABLE 11
TYPES OF PARTNERSHIP AGREEMENTS

Project	Type	Stage*	Type of Agreement
1. Outer Banks	Public	I	MOU
2. Summit Stage	Public-Private	B	Verbal
3. Alaska	Public-Private	C	Contract
4. Cleveland	Public-Private	C	Contract
5. NY-Ontario	Public	I	Mission/Vision statement
6. Kentucky	Private-Private	C	Contract
7. Inner Sound	Public-Private-Community	B	Verbal
8. TransGuide	Public-Private	C	Contract/Partnering Agreement
9. ACOG (Atlanta)	Public-Private-Community	I	Contract
10. ACEC (Atlanta)	Public-Private-Community	I	Contract
11. VRE	Public	C	MOA/Contract

* B - Beginning Stage
I - Intermediate
C - Continuing (operational)

- Effective partnerships can be developed and maintained by organizations and agencies with widely divergent missions and operating procedures.

- Partnerships formed by agencies and/or organizations that do have widely divergent missions can be effectively formed and maintained with the recognition of these realities:

  -- a recognition of major transportation problems and needs in an area, and
  -- a broader perspective of area-wide or regional issues or needs (environmental, economic development, etc.) that require some transportation solution

- Even with an almost universal reporting of communications being improved among partnership agencies and organizations in the case studies, communication problems (incomplete messages, lack of understanding of messages, lack of effective communications mediums, etc.) continue to recur even in successful partnerships.

5.2 Overcoming Barriers

The following features or characteristics are reported based on a more careful analysis of the case study data. These repetitive features might be called "underlying themes." Some of these themes were apparent from the initial analysis of the data in the partnership data base compiled in the early tasks of this study. Some of these themes are considered a part of the "common body of knowledge" of management Some themes were related in the Interim Report as having a strong likelihood of being present in any partnership. A few of these themes are perhaps unique findings of this research.

There are twelve "underlying themes" or barriers to be overcome in the formation and maintenance of partnerships. This section summarizes and defines these common, underlying themes of the partnerships included in the study, and relates some conclusions drawn from the observations.

5.2.1 Lack of initial consideration of legal issues

Few partnerships studied anticipated legal issues early in the projects, and as a result, very little consideration was given up front to potential legal ramifications But legal issues did seem to arise toward the end in some projects

as they grew more complex. The partnerships then experienced problems because they had not identified possible legal issues or developed a strategy for dealing with them in the beginning.

Conclusion: Public-private partnerships underestimate legal complexity at the beginning, which causes problems at the end. Partnerships need to be aware of **potential** legal problems and plan for them accordingly.

5.2.2 Lack of timely local government involvement

There typically seems to have been some difficulty getting local city and county governments involved early-on in the planning process. This reflects the widespread dichotomy where transportation decisions are made. State and federal agencies primarily control funding, while land-use decisions are primarily made by local governments. The lack of involvement of local government often results in permitting delays.

Conclusion: To minimize delays in the planning, design, and implementation time of projects, **local governments should be included in the planning process at the beginning, even** if they are minor partners in funding the project, or do not provide funding at all.

5.2.3 Importance ofprivate sector involvement

Similar to the situation related above concerning the lack of early local government involvement with state agencies in developing multimodal plans and projects, state and local agencies both seemed reluctant, even in 1995, to involve the private sector productively in the early stages of project development. Part of this reluctance probably is due to the fact that they don't have the necessary legal authority to form partnerships with the private sector. However, the **importance** of early private sector involvement in projects was widely recognized by public agencies.

Conclusion: A number of techniques for early involvement of the private sector in multimodal project development are available to take advantage of windows of opportunity in the planning process. Mechanisms and forums for involving the private sector in the project development process, recognizing the constraints and limitations that must be observed to maintain a competitive contracting procedure, need to be considered at the very beginning of project planning. Some mechanisms for achieving this include the issuance of Requests

for Qualifications (RFQ), Requests for Information (RFI), and public information programs announcing strategic plans that indicate that the formation of public-private partnerships are of interest to the public agency. Some states such as Pennsylvania, Arizona and Virginia have passed specific legislation to encourage the formation of public-private partnerships that are considered applicable to multimodal projects.

5.2.4 Needforflexible procurement processes

This research shows that public agencies traditionally rely on "arms length" negotiations to ensure that all parties are treated fairly. It was found in the case studies that agreements between public agencies and private organizations were secured through formal contracts (plus other mechanisms in some cases). Agreements among public agencies are more commonly secured through interagency agreements, Memoranda of Understanding, etc. The greater degree of formality and detail in procurement and partnership procedures, the more difficult to achieve the close interaction needed between public and private sectors.

Conclusion. Innovative procurement arrangements are helpful in achieving working relationships as true partners rather than a strict owner-client relationships. Detailed documentation is of course necessary to have a clear understanding of the technical and administrative specifications of a **project.** However, those specifications and plans can be supplemented by processes such as well-defined alternate dispute resolution (ADR) processes within contracts, and/or supplemented with separate Partnering Processes. Such innovations commonly increase the level of trust and mutually productive working arrangements among **partners.**

5.2.5 Lack of a regional perspective

The multimodal projects studied were not always seen as uniformly needed or effective throughout the entire region in which the projects had impacts. Local government leaders do not always appreciate the benefits a project might have on their individual communities. Pro-active support is often absent for a regional improvement that might have only an indirect benefit to a particular community.

Conclusion: Partnerships do have a tendency to bring out a dialogue that encourages regional thinking, a more comprehensive analysis of alternatives

and impacts, and better regional planning and coordination. For this reason, the spirit and intent of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) should be used to encourage the development of partnerships.

5.2.6 Use of "Partnering" as a management tool

Partnering is often a very effective approach to achieving a higher degree of quality on complex projects such as multimodal transportation systems. The key to successfully applying this approach to managing a project is knowing when to use it. Partnering is the proper approach when there is some type of "over-arching" vision: a common good that is **widely recognized as** needing to be achieved. Partnering does not work where single issues dominate or in win-lose scenarios. When parties involved cannot go beyond a "business as usual" mind-set, and move toward becoming pro-active partners, issues that are not easily solved have to be settled in the political arena or in the courts.

Conclusions For partnerships to work, attitudes of flexibility and compromise are needed from the beginning. Partners also need to know and understand other partners' perspectives. The Partnering Process is gaining widespread acceptance in developing and maintaining partnerships, particularly for complex projects such as Intelligent Transportation System (ITS) deployments and multimodal projects.

5.2. 7 Needfor a neutralfacilitator

There is a paradox present in creating and maintaining partnerships: the need for a strong, but neutral champion to stress the validity and the steps of partnership development and operation without influencing the outcome of the partnership. This research showed that very often the lead person responsible for developing and maintaining the partnership was from the lead agency involved. To the extent that this champion was able to understand, accept, and promote the goals of all the partners, the partnerships were successful. In others, where the issues were more complex, an outside neutral facilitator was employed with considerable success. The outsider was able to enjoy the trust of the parties involved without being perceived as biased toward any particular outcome.

Conclusion. Decisions in a partnership ideally need to move toward building a consensus and "buy-in" so that each member feels an ownership of the project. There is a need in most partnerships for an unbiased facilitator who

is a champion only for the **process** of achieving a successful outcome, but **not** being a champion for a specific outcome.

5.2.8 Complexity in coordination increases with partnership size

Somewhat as a corollary to the previously-described observations, the case study data indicate that with the increase in the number of participants in a partnership, there is a not unexpected increase in the level of communications and coordination effort required. More partners simply means a more complex project. However, in the case studies, not one interviewee indicated that their partnership had too many members given the project at hand. Several, on the other hand, indicated that they had (perhaps inadvertently) left some organization or agency out of their partnership in the early stages.

Conclusion. While there is a very important requirement to include all necessary elements of a partnership from the beginning of project development, an appropriate amount of staff time and budget needs to be dedicated just to effectively manage the partnership organization and activities undertaken as a partnership.

5.2.9 Needfor planned communications

This research shows that in general, at the lowest level of responsibility for a project (i.e. project managers, operations supervisors, project planners or engineers, etc.), communications were open and continuous. At higher levels of organizations involved in a partnership, effectiveness of dialogue and trust among the partners was diminished, unless there were mechanisms in place to force continuing communications.

Conclusion. Thought must be given in the partnership development and maintenance to assure that information to upper management is carefully planned as to relevance and timeliness, particularly where decisions might be needed fairly quickly. It would seem that the better the planning of communications to top management, the more confidence management would have in empowering those most involved

5.2.10 Needfor authority at the lowest possible levels

This research shows that where the members representing the various organizations in a partnership were empowered to make decisions and speak with authority for their respective organizations, the partnership worked well. If a working-level group did not have this authority, partnerships could still function well if an executive or steering committee is actively involved in the planning of the partnership.

Conclusions. Decision-making should be delegated to the lowest responsible level and those individuals should be empowered to speak for their respective organization in matters affecting the partnership. Where higher levels of decision-making are necessary in a partnership due to the sensitivity of a particular project or program, there is a need to create an oversight, executive, or policy committee of the partnership.

5.2.11 Need to accommodate each partner's organizational culture

There is a common, natural tendency to use established, internal corporate or organizational culture (i.e., policies and procedures). Often this extends to the operation of a partnership, where members continue to follow the "status quo" rather than compromising individual cultures with a new paradigm specifically established for the partnership.

Conclusion: Management training that encourages "paradigm shifts" continues to be necessary in the development and maintenance of partnerships.Joint training programs among partners help create attitudes of compromise and accommodation.

5.2.12 Increased quality resulting from effective partnerships

There is a continuing trend in government agencies, and an equally strong effort by the private sector, to implement quality improvement training, procedures, and programs. Such efforts should continuously analyze why things are done as they are and how improvements can be made.

Conclusion: Specific mechanisms and joint training programs within partnerships need to focus in part on continuous quality improvement and on developing a "marketing approach" that meets the customer's needs (i.e., the traveling public).

CHAPTER 6.0

STEPS TO FORMING AND MAINTAINING SUCCESSFUL PARTNERSHIPS

6.1 What makes partnerships successful?

There are a number of front-end elements in developing a partnership that must be present to some degree before responsible stakeholders are in a comfort zone that prompts them to participate in a partnership. It should be pointed out that not every multimodal project is right for the formation of a partnership. Although partnerships are common in the planning and development of multimodal projects, each situation is different, and the need for a partnership depends on the project.

Table 12 presents a typology of successful partnerships, developed specifically as a means of identifying those factors that lead to a successful partnership. These factors are compared with a typology concerning the "Rules of Successful Collaboration," taken from a book by Shrage, *Shared Minds.* There is a high degree of correlation between these typologies. The list by Shrage is presented in a somewhat cryptic manner to allow this comparison.

6.2 Partnership Development Strategies

Planning the partnership is as important as planning the project.

This section describes activities recommended to help prevent common problems and barriers that may develop in the process of partnership development and maintenance. Included are suggestions on:

(1) agencies and organizations to consider in forming a partnership,
(2) appropriate steps to get the partnership started,
(3) organizational models for partnerships, and
(4) how to explore the various issues involved in partnership development. Issues are categorized as legal, institutional, and community involvement.

A more complete description of how to develop and maintain partnerships is contained in Volume I, "Guidelines."

Table 12: Preliminary Typology of Successful Partnerships - Input - What Makes Partnerships Successful?

Input Components of a Successful Multimodal Partnership	Rules of Successful Collaboration*
1. Effectively involves more than one mode 2. Takes into account regional/environmental differences	Many forms of representation
3. Efficiency of the project 4. Variety of partners - evidence of: accommodation, accomplishment, compromise 5. Appropriate response to documented need 6. Performance measures established and understood	Mutual respect, tolerance, trust Creation and use of shared spaces (resources) "Play" with all representations
7. Mix of funding 8. Levels of government effectively involved 9. Involvement of partners commensurate with investment level and project's impact	Clear lines of responsiblility; no restrictive boundaries Decision-making process; but not necessarily by consensus
10. Understanding of each partner's motives/goal 11. Recognition of expertise (who does what best)	Competence
12. Clear goals and objectives from the outset 13. Project goals, approach, and scope understood by all stake	Common, understood goal Continuous, but not continual, communications
14. All community values considered 15. Public perception consistent with reality 16. Shared Vision of project outcomes	Formal and informal environments

* Source: Schrage, Michael, *Shared Minds,* Random House, New York, 1990.

6.2.1 Getting started

It is assumed that top management within an organization has identified an individual or group within the organization to explore the need for establishing multimodal partnerships. This role might be assumed by a member of the top-management team or delegated to others in the organization. Therefore, a clear understanding of who will take on the start-up responsibilities must be established.

A suggested model for developing a partnership would include a number of important start-up tasks. Early consideration of the actual need for a partnership, according to project specifics, will increase the probability of success. As with any activity, establishing a partnership requires careful planning to ensure a strong foundation.

6.2.2 Identifying stakeholders

Careful consideration should be given to including the right **organizations** and the right people in the partnership. A rather large number of entities should be reviewed and considered as **potential** partners. The final group of participants in a partnership varies for each particular case.

To minimize prolonging the planning, design, and implementation time for projects, all **necessary** organizations should be involved in the planning process from the beginning, even if they are minor partners in funding the project, or do not participate in funding at all. It is important to realize that partners, in many cases, are not necessarily "cash contributors" to the partnership. In-kind services, for example, are often as critical to success as funding. In some cases, providing in-kind services helps a stakeholder buy into a project. Keep in mind, however, that as the number of partners increases, difficulty in communicating and coordinating activities increases.

6.2.3 Kick-off workshop

An early "kick-off" workshop is recommended as an initial step in establishing a partnership. This could be an organizational meeting for the project itself or the partnership. It may be determined that an initial, information-sharing meeting is appropriate before making the final decision on which agencies or organizations should be officially included in the partnership.

Such a meeting would be an open forum for potential partners, with no commitments at this point in the partnership development process.

Partner selection criteria should be refined, based on the project's goals and requirements. Requirements could include such elements as management and/or technological experience and financial stability.

The key outcome of the kick-off workshop is an action plan for handling issues and planning for dispute resolution.

Following a clear decision concerning partnership participants, a kick-off workshop with all partners should be held at the beginning of the planning, design, or construction phase of a project. A workshop format rather than a meeting format will help all parties to get acquainted with the project and with each partner's role in the project. This workshop should also be approached as a working session to develop an **action plan,** rather than simply a meeting where issues are discussed but no plan is developed for follow-up and continuation of partnership development or work tasks.

The Partnering Process has been found to be an effective model for decision-making throughout the life of a project, not only at the beginning. It is currently being used to some extent by 90 percent of our state DOTs.

6.2.4 Organizational models for partnerships

Four **general** organizational models, or strategies, have been developed based on the case studies conducted as a part of this NCHRP project. Every partnership included in this study is different, and the variations of each of these four basic models are shown in more specific detail in Volume I. The four generalized models shown in Table 13 are examples of partnership organization in terms of: partnership function (purpose of partnership), partners (who is involved), roles of partners, and the type of binding agreement used.

6.2.5 Legal strategies

In partnership formation, specific attention needs to be placed on potential legal issues that are often not anticipated in the initial phases of a multimodal project. Early identification of potential legal concerns is not only beneficial from a cost-benefit perspective, but is imperative given the funding mandates prescribed by ISTEA. These mandates encourage participation by non-traditional stakeholders. Legal issues must be addressed at each stage partnership formation and throughout the life of the project. Legal issues must

Table 13
Models for the Development and Maintenance of Partnerships

Why? Function	Who? Partners		What? Role	How? Instrument
I. Three general models for public-private partnerships				
Planning	State DOT	→	Funding	Informal Agreement, MOU/MOA, Partnering Process
	MPO/local govt.*	→	Planning	
	Private firms	→	Technological assistance	
	Environmental agencies	→	Review	
	Federal Agencies	→	Planning guidelines	
Design, Construction	Federal Agencies	→	Funding	Design-Build Contract, Partnering Process
	State DOT*	→	Design, constr. mgmt.	
	Developer	→	Land lease, facilities	
	Metro/regional transit*	→	Transit improvements	
	Private firms	→	Design, construction	
Operations	State DOT (central)	→	Oversight, policy	O&M Contract, Partnering Process
	Local agencies*	→	Coordination	
	State DOT (regional)*	→	Maintenance, operations	
	Private firms	→	Management, maintenance	
	*Note: indicates usual lead roles, depending on the project			
II. A sample model for public-public partnerships**				
Planning, Design, Implementation/ Construction, Operations	FHWA	→	Funding	Interagency Agreement, Shared Resources, Partnering Process
	State DOT	→	Planning, design, matching funds, construction mgmt.	
	State Ferry Div	→	Planning, operations	
	State, Federal permitting agencies	→	Joint development planning	
	University	→	Research, database development	

**Note: this example would have many variations, depending on the project; for details of this particular partnership model, see the case study on the Outer Banks Transportation Study

be identified as early as possible in order to reduce or avoid escalated transaction costs resulting from disputes and/or litigation.

6.2.6 Institutional Strategies

The concept of "partnership" is bringing diverse groups together to solve a common problem. This diversity introduces institutional issues that could potentially develop into barriers to the project itself. All partners should be aware of institutional issues that commonly exist in partnership development.

6.2.7 Community Involvement

Every partnership should consider how the project will impact various communities, groups, and the general public. It is not only important to make certain the pubic stays informed, but to actively solicit their input into political and decision-making processes. A public involvement plan is a necessary part of any transportation project. Public involvement is required by the "3-C" (Coordinated, Comprehensive, Continuing) planning process. ISTEA gave this process additional emphasis.

6.3 Partnership Maintenance Strategies

The following sections describe activities suggested to help prevent common problems and barriers associated with maintaining a partnership. This section starts with guidelines concerning communication **within** partnerships, and then covers how partnerships can track their progress during the continuing activities of carrying out the work. Then, like the previous section on developing partnerships, this section concludes with coverage of legal and institutional issues, and those activities to be carried out as part of a community involvement program. Again, for more detail, the reader is directed to Volume I: Guidelines for Developing and Maintaining Multimodal Transportation Projects.

6.3.1 Communications within partnerships

A partnership's continued success depends greatly on both the quantity and quality of communications among partners The following elements of an internal partnership communications plan should be considered:

- Media
- Content
- Frequency
- Shared databases and information

6.3.2 Tracking progress

Part of the database management system for any partnership is used for providing information to evaluate the success of the project, as well as provide some indication of how well the partnership itself is managing the project. Other elements of tracking progress are through partnership meetings and a continuous partnership evaluation and quality improvement process.

The ultimate purpose of evaluating the partnership itself is to make commensurate improvements in the project. A suggested partnership evaluation form is shown in Table 14. This evaluation process is considered appropriate at certain milestones or on some regular, periodic basis throughout the life of a partnership or project. For most projects, perhaps quarterly or every six months would be an appropriate interval between check-ups. In periods of intense activity, perhaps monthly would be appropriate.

6.3.3 Legal Strategies

Due to the need for inclusiveness in multimodal transportation projects, the likelihood of legal issues arising out of differing agendas or opposing views requires stakeholders to expeditiously resolve legal claims while affording all parties due process. Therefore, adoption of Alternative Dispute Resolution (ADR) Techniques must be considered and incorporated by the partnership at the conception of the project.

The dispute resolution model adopted may vary from project to project, involve only certain stakeholders within the project, or require modification during the life of the project. Selection of the ADR model during partnership development is in fact a process that will likely provide stakeholders an early opportunity to function as a partnership.

The following are optional Alternative Dispute Resolution (ADR) techniques that may be applicable during the continuation or maintenance stage of a partnership, and do not involve the courts.

Table 14
Partnership Evaluation Form

Ratings: 0- not applicable 3- satisfactory
1- unsatisfactory 4- good
2- needs improvement 5- excellent

Performance Factors	Rating (0-->5)	Comments/explanation	Recommended Action
1. Membership			
A. All stakeholders represented			
B. Appropriate level of representation			
2. Internal Communications			
A.Coordination			
B. Shared databases/ information			
3. Community Involvement			
4. Political Support			
5. Consensus Building			
6. Decision Making			
7. Accountability			
8. Issue/Conflict Resolution			
A. Partnering Process			
B. ADR techniques			
9. Joint Planning			
10. Shared Capabilities			
11. Cost Sharing			
12. Benefit Sharing			

TOTAL _____
AVERAGE _____

- Negotiation - adoption of a process by all stakeholders during the negotiation stage to provide for cooperative and equitable resolution of conflict with or without the assistance from a neutral third party.
- Change orders - negotiated methodology usually set by the owner/client
- Claims procedures - methods to resolve potential claims at the lowest possible level and avoid escalation.
- Mediation - development of a solution to disputes using services of a neutral third party, predicated on the **best interests of the parties** of all parties rather than their legal rights, and thus presents a broader range of solutions than typically addressed in arbitration or adjudicatory forums.
- Dispute Resolution Board - selected panel of experts agreed upon by conflicting parties to assess facts and provide a resolution based on probable outcomes; can be binding (no appeals) or non-binding
- Arbitration - third party intervention with arbitrator selected by all parties to receive evidence and render decisions on the rights of each party; as above, decision can be binding with no appeal process or non-binding
- Mediation-Arbitration - an ADR process that resolves disputes through conventional mediation but arbitration is followed if an empasse develops

6.4 Criteria for Determining Success

The second way that one might look at the criteria for success is as evaluative criteria: during and at the conclusion of a project. One body of knowledge that has been used as a comparison with "Outcomes of a Successful Multimodal Partnership" in Table 15 is the accumulation of experience by numerous infrastructure builders in this country and elsewhere with the partnering process. Included among the entities that have used this process are the Corps of Engineers and several state and local transportation departments.

Among the national leaders in the field of management consulting that have worked with these agencies in facilitating the partnering process, there is a common body of knowledge among project managers that are used as criteria for evaluating a successful partnership. Those factors are also shown in Table 15 as a comparison to the typology for successful multimodal partnerships.

Table 15 Preliminary Typology of Successful Partnerships - Outcomes: How Do We Know If Our Partnership Is Successful?

Outcomes of a Successful Multimodal Partnership	Project Managers Guidelines *
1. Efficient 2. Cost-effective 3. Fair return for investment (partners)	On time Within budget, at a lower transaction cost
4. Need was satisfied 5. Increased mobility 6. Improved accessibility (people without autos) 7. Safer freight/passenger transport	Few, or no unnecessary conflicts Public acceptance
8. Provides a useful transport or shipment service 9. Increased productivity and throughput 10. Increased competitiveness 11. Stimulates the economy	Public "good satisfied Each stakeholder's objectives are optimized
12. All community values reflected in completed project 13. Social costs/impacts optimized: community special interest groups environment	Protects existing communities and the environment

* Source: *"Guidelines for Partnering Workshops,"* Steve A. Martin, Inc., Winston-Salem, North Carolina, 1989.

CHAPTER 7.0

RECOMMENDATIONS FOR FOLLOW-UP ACTIONS

7.1 Implementation Plan

Implementation of the results of this research involve seven different components. These components are:

- Education and training on multimodal partnerships
- Presentation to local, regional, and national professional groups
- Preparation and distribution of a video on multimodal partnerships
- Development and maintenance of a Home Page on Internet
- Published articles in selected publications
- Evaluation of the guidelines document, Volume I
- Development of project statements for further research and development of a strategy for conducting those studies

The last two components will be described in more detail in Section 7.2 and Section 7.3. Together with these two components, the first five complete the proposed implementation plan.

7.1.1 Education and training

Several recent initiatives have been undertaken at the national level to initiate education and training programs that would further the principles set forth by ISTEA. Included among these initiatives are two parallel proposals on Intelligent Transportation Systems (ITS) by the Federal Highway Administration and by ITS-America. Some of the elements of those proposals will incorporate training on partnerships, the partnering process, and multimodal ITS projects. There should be an effort by AASHTO to coordinate these ITS initiatives, as well as the recommendations for education and training on multimodal projects.

The following topics should be emphasized in an education and training program on partnerships for multimodal transportation projects:

- Developing and maintaining public-public partnerships
- Developing and maintaining public-private partnerships
- Partnering process & alternate dispute resolution (ADR)
- Developing a strong community involvement program
- Evaluating partnerships

There are several possible models for presenting these topics either in existing or new educational programs. Existing programs that could accommodate these components include the following:

- AASHTO Management Training programs
- National Highway Institute (NHI)
- Community Transportation Association of America (CTAA)
- Local Transportation Assistance Programs (LTAP) in educational institutions in all fifty states
- Workshops at the ITS Centers of Excellence at universities
- Elements of ITS Short Courses at universities

Educational programs on multimodal partnerships could also be developed as part of new initiatives by several organizations, including:

- ITS-America (as described above)
- Institute of Transportation Engineers (ITE)
- TRB Multimodal Task Force
- American Public Transit Association (APTA)
- National Association of Regional Councils (NARC)

The format for these educational and training programs could vary from a two-hour class offering to perhaps a week-long short course.

7.1.2 Presentations to groups

In addition to the above more formalized training programs, informal presentations would also help to educate professional and community groups on multimodal partnerships. The following are examples of target groups for presentation:

- Student chapters of professional organizations
- Construction industry groups
- Planning and design professional groups
- TRB Annual Meeting and mid-year meetings
- ITS-America and state chapter meetings
- ITE Annual, District, and Section meetings
- Women's Transportation Seminar
- AASHTO Annual Meeting and meetings of the four regional associations
- American Consulting Engineers Council

- American Management Association
- American Public Works Association
- American Road and Transportation Builders Association
- American Society for Public Administration
- American Trucking Associations
- Associated General Contractors
- International Bridge, Tunnel, and Turnpike Association
- International Downtown Association
- National Association of Counties
- National Association of Regional Councils
- National Conference of Mayors
- National League of Cities
- National Private Truck Council
- Permanent International Association of Road Congresses
- Urban Land Institute

Several more organizations and associations could be added to this list. Presentations that summarize the processes of developing and maintaining multimodal partnerships would highlight lessons learned and keys to success from the case studies; institutional, legal, and community involvement issues; and how to overcome barriers. These presentations could range from twenty minutes to two hours in length, depending on the format of the meeting.

7.1.3 Video on multimodalpartnerships

A video that portrays some of the multimodal project partnerships included in this study would offer an excellent opportunity to instill the principles and concepts of the guidelines document to a larger audience than would be possible otherwise.

Such a production would include a narrative, shorter version of the guidelines document as an instructional video for top management and middle management in state transportation departments, MPOs, local governments, and the private sector.

The emphasis of the video would be on the case study projects more than the narrative in the guidelines. Interviews with principals involved in the various partnerships would enhance the interest level by relating first-hand experiences in developing or maintaining those partnerships. The overall flow of the information would be similar to that shown in the guidelines.

The video is envisioned as perhaps a ten- to fifteen-minute production. The proportion of time spent on interviews with multimodal project managers versus instructional narrative from the guidelines is envisioned as perhaps three times more interview coverage than the actual guidelines.

7.1.4 Internet Home Page

A home page on the Internet is so common an element of nationwide and world-wide advertising that it is recommended as an "early implementation element" of any research and development program. A Home Page on "Successful Partnerships for a Better Tomorrow: How to Form Partnerships for Multimodal Transportation Projects" would contain a list of contacts and brief project descriptions of the case study partnerships. It would also have a reference to other projects contained in the NCHRP Project 8-32(4) interactive database. An additional need in this implementation component would be a mechanism to update with additional references as new multimodal projects are planned or completed.

7.1.5 Published articles in professional journals

One of the primary ways to publicize the results of research is to write and produce refereed or invited journal articles. The target audience for this medium is the professional community, researchers, and academia. However, this too serves a very useful educational function.

Some journals are targeted toward top level management in government and industry. Such popular journals as *Governing, Traffic Quarterly, ITS Review,* and *Transportation* would be considered appropriate publication sources for the results of this research, in addition to the TRB publication series. These four journals are by no means an exhaustive list for publishing articles on the results of this research.

7.2 Evaluation Mechanisms

The following paragraphs explain how to evaluate the guidelines document (Volume I), who should be involved, and a timetable for carrying out the evaluation.

7.2.1 How to evaluate

There are two basic approaches to evaluating the Volume I guidelines document. The first is an evaluation of the major sections of the document itself, while the second involves an assessment of the overall value of the ideas presented in the document. To conduct a section-by-section evaluation, the following matrix could be used:

Figure 5
Evaluation of Guidelines by Section

	Complete	Clearly Written	Understandable	Useful
Section I				
Section II				
Section III				
Helpful Hints				
References				
Appendix A				
Appendix B				
Appendix C				

Each section of the report would be evaluated on a scale of 1-5.

Additional comments on each section should also be accommodated in this evaluation. The questions that should be used to evaluate the overall value of the guidelines document would include, as a minimum, those shown in Figure 6.

Figure 6
Assessment of Overall Value of the Guidelines Document

1. Is it applicable to a broad range of multimodal projects?

2. Is it helpful:
   (a) in forming partnerships?
   (b) in maintaining partnerships?

3. Does it help in understanding issues involved:
   (a) in developing partnerships?
   (b) in maintaining partnerships?

4. Does it contain practical examples to help resolve issues and remove barriers?

5. Is it helpful to DOT/MPO personnel in.
   (a) top management
   (b) middle management

6. Is it helpful to the private sector:
   (a) service providers
   (b) infrastructure builders
   (c) consultants
   (d) associations

7. How easy (or difficult) are the guidelines to follow and use in developing or maintaining multimodal partnerships?
   _____Easy to follow and understand
   _____Okay (not easy, not difficult)
   _____Difficult to follow and understand

8. Are there any additional components that should have been included in these guidelines? If so, what are they?

9. Is there any information in the guidelines that is not helpful or not needed? If so, what is it?

7.2.2 Who will evaluate

There are four approaches suggested for evaluating the guidelines. The approaches would include reviews by **existing partnerships,** specifically those studied in this research project. Other methods would extend the evaluation to a **larger target audience.** These reviews would be conducted by the following groups:

- *Group I.* The first should be a thorough review in a workshop format by the NCHRP Project Panel working with the Project Team.

- *Group II.* Case Study partnerships included in this research study - This review would be conducted by individuals who are more familiar with the research project since they were involved in personal interviews during on-site visits.

- *Group III.* Partnerships included in the database - This review by approximately sixty partnerships would be conducted by individuals with less familiarity of the project; on the other hand, they would have a certain degree of interest in partnerships and in this study, since their project was nominated as a candidate case study during Task 1 of this research.

- *Group IV.* An overall general review by organizations without regard to a specific project or partnership. Such a review should be undertaken by the following organizations:

  __ State Departments of Transportation
  __ Metropolitan Planning Organizations
  __ Smaller municipalities
  __ Counties and other local governments
  __ Private sector organizations and firms

7.2.3 Evaluation timetable

The first review is recommended as an add-on task to the current research project. A short term evaluation by Groups II and III should be conducted within the next six months. An additional three months should then be allowed for revision of the guidelines based on the review.

A separate research project or further extension to allow the Group IV organizations to actually **apply** the guidelines would take an additional fifteen to eighteen months. This would complete a very thorough assessment of the guidelines within approximately two years.

7.3 Future Research needs

There are five recommended research projects resulting from this study:

- Evaluation of Volume I, guidelines
- Multiple in-depth case studies of comparable projects
- Investigation of relationships between partnership effectiveness and project phase
- Additional investigation over time of selected case studies
- Self-test of partnership performance

The evaluation of the guidelines is explained in Section 7.2. The following subsections provide a description of and support for the latter four recommendations.

7.3.1 In-depth case studies of comparable projects

This project is recommended because there is currently a limited body of knowledge that is **documented** on what approaches work most effectively in multimodal partnerships. In-depth case studies of comparable projects would allow for a control and limitation of the variables studied, giving a better comparison of partnership approaches and methods.

To conduct this research, two or three project types should be selected for further investigation. For example, the project types would be selected, as an example, from two or three of the following:

- Multimodal passenger transfer facilities
- Intermodal freight transfer facilities
- Toll roads and bridges
- Commuter rail services
- Projects involving sensitive environmental issues
- Projects involving critical community involvement components
- Traveler and tourist information systems

- Advanced Traffic Management Systems with associated traffic and transit operations centers
- Advanced Traveler and Tourist Information Systems and associated programs

This research study should involve case studies of between ten and fifteen multimodal projects nationwide.

As an example of this, in order to limit the number of variables for those projects in the project database representing large, urban, passenger transfer facilities, the following projects are recommended to be included in a continued series of case studies:

- Metro Transit Center, San Diego (File 12)
- South Station Transportation Center, Boston (File 16)
- Los Angeles Union Passenger Terminal (File 19) and
- Union Station Gateway (File 25)
- Denver Union Terminal (File 23)
- Tower City Center, Cleveland (File 29)

These projects are included because they are alike in that each involves a central city transfer facility, they are in large metropolitan areas, and they serve several modes of transportation.

Similar groupings of comparable projects could be easily identified in the remaining categories. The projected outcome of this research is more in-depth knowledge of specific aspects of particular types of projects. Another result would be a recommendation of partnership organizational models.

7.3.2 Investigation of project phases

This research would investigate which project phases work best using a partnership approach. This research is needed because there is limited **documented** knowledge of the relationship between partnership effectiveness and project phase.

The approach to this study would include a survey of existing partnerships with specific, objective questions. The survey would provide a quantified measure of partnership effectiveness. Project phases to be investigated include:

- Planning and design
- Construction or implementation
- Operations and maintenance

Variables to be isolated in evaluating partnership effectiveness include:

- People involved
- Form of binding agreement
- Political structure
- Levels of government involved
- Private sector involvement
- Character of area (urban/rural, size, etc.)
- Financial mechanism
- Modes included
- Previous experience with partnerships
- Previous projects involving same partners

The outcome of this research will be an in-depth knowledge of factors that contribute to a partnership's success at different phases.

7.3.3 Long-term study of partnerships

The objective of this research is to explore over time what happens to selected case studies that were included in this project. A time frame of three to four years is recommended to carry out this analysis. The reason for conducting this research is that there is limited **documented** knowledge that identifies how successful partnerships are maintained or if they do maintain themselves successfully over time.

From the case studies included in this project, the following multimodal partnerships are recommended for further study:

- *Rural project:* Outer Banks Task Force (planning partnership)
- *Urban project:* Dulles Greenway, TRIP II (design, construction)
- *Multimodal transfer facility'* Cleveland Tower City Center (redevelopment project)
- *ITS project.* San Antonio TransGuide (design and construction)
- *International project:* Niagara Border Crossing ITS Technology Committee (planning and design)

The output of this research will be a better understanding of maintaining partnerships.

7.3.4 Partnership self-test

This research would involve a widespread distribution of a "Partnership Evaluation Self-Test" form to a large number of organizations. Distribution would be made to selected cities and counties, and to all MPOs and state DOTs. In addition, other organizations, private firms, and TRB Committees included in the Multimodal Partnership Database would be included in the self-test.

The suggested partnership evaluation form is shown in Table 14, section 6.3.2. The objective of this research is to conduct a larger scale test of the evaluation instrument as a self-testing approach by public and private sector organizations involved in partnerships.

CHAPTER 8.0

CONCLUSIONS

This study has documented the results of a nationwide survey of multimodal partnerships. After building a database of some sixty multimodal transportation projects, a series of case studies was conducted to provide in-depth information on selected partnerships. The partnerships included in the case studies ranged from preliminary planning to construction and on-going operations of major multimodal transportation facilities.

A number of lessons have been learned from the literature review and case study analysis. The first is that most multimodal transportation projects are most effective when carried out through some type of partnership arrangement. At the same time, there is little available literature or guidelines to provide public and private sector partners examples of how to successfully form and maintain partnerships. Therefore, the provision of a set of guidelines (Volume I) for this purpose as produced by this research can satisfy an important need.

The second lesson learned is that every multimodal partnership has a number of unique features, but also a number of similarities. Due to the unique features, it is impractical to attempt to formulate specific organizational models that could apply to partnerships universally. However, there are factors involved in both successful and unsuccessful partnerships that can provide valuable insights for organizations that are planning multimodal partnerships. Therefore, the provision of detailed case study reports (Volume III) as produced by this research should be of great interest to both public and private sector organizations.

A number of important keys to success of partnerships included in this study can be summarized as follows:

- Use of the Partnering Process for project planning, design, construction, and operations.
- Finding a "comfort level" in public organizations to incorporate the ability of the private sector to take risks in project planning, design, etc.
- Developing a method to establish and preserve open and honest communications among partners.

- Taking advantage of specific strengths and technical capabilities of each member of a partnership.
- Establishing, understanding, and playing clearly defined roles.
- Developing a willingness and ability to compromise and adapt varying organizational cultures into an effective **team.**
- Maintaining continuity of participation in partnership activities among organizations, as well as representatives from these organizations.
- Providing an effective decision-making process within partnerships, such as the creation and effective use of an Executive Committee.

A final, but very important key to effectively developing and maintaining partnerships is the need to assure that a strong, unbiased leader is the facilitator of the partnership. This is a necessary feature that is often overlooked in the formative stages of partnerships. In addition, the importance of a **neutral** facilitator is often underestimated. This research has shown that those partnerships that follow a partnering process have a higher degree of success. Where a partnering process uses an outside facilitator to manage the partnering process, an even higher degree of success is achieved.

A 1995 FHWA study by Trauner & Associates has shown that at least forty-five states are currently using the partnering process to some degree, but mostly in the construction phase of projects. The conclusion of this research is that the partnering process is an effective tool in multimodal planning. Therefore, current practice should be extended more toward utilizing partnering in the planning process as well.

Appendix A

Organization Contact List

ORGANIZATION CONTACT LIST

AAA Foundation for Traffic Safety
AASHTO
Advanced Transit Association (ATRA)
Air Transport Assocation of America
Airport Ground Transportation Association (AGTA)
American Association of Airport Executives (AAAE)
American Association of Port Authorities (AAPA)
American Bus Association (ABA)
American Legislative Exchange Council (ALEC)
American Management Association (AMA)
American Pedestrian Association (APA)
American Planning Association (APA)
American President Co., Ltd.
American Public Transit Association (APTA)
American Public Works Association (APWA)
American Road and Transportation Builders Association (ARTBA)
American Society for Public Administration (ASPA)
American Society of Civil Engineers (ASCE)
American Society of Transportation and Logistics (ASTL)
American Traffic Safety Services Association (ATSSA)
American Trucking Assocation (ATA)
Associated General Contractors (AGC)
Association for Commuter Transportation (ACT)
Association of American Railroads (AAR)
Association of Transportation Practitioners (ATP)
Better Roads and Transportation Council (BR&TC)
Bicycle Federation of America (PROBIKE)
Carnegie-Mellon University
Center for Advanced Transportation Systems Research (CATSR)
Committee for Better Transit (CBT)
Community Transportation Association of America (CTAA)
Council of Logistics Management
Council of State Governments (CSG)
Council of University Transportation Centers
EG&G Dynatrend
Eno Transportation Foundation
FHWA
Georgia Institute of Technology

HELP, Inc. (Lockheed)
High Speed Rail/Magnetic Levitation Assoc.
Highway Users Federation for Safety and Mobility (HUF)
Institute for Transportation and Development Policy (ITDP)
Institute of Electrical & Electronics Engineers (IEEE)
Institute of Transportation Engineers (ITE)
Insurance Institute for Highway Safety (IIHS)
International Bridge, Tunnel, and Turnpike Association (IBTTA)
International Downtown Association (IDA)
International Rail Transport Committee (CIT)
International Road Federation (IRF)
International Taxicab and Livery Association (ITLA)
ITS-America
IVHS Consortium, Inc.
Joint Center for Political & Economic Studies
Light Rail Transit Association (LRTA)
Metro-North Commuter Railroad
Metropolitan Transit Authority
Metropolitan Transportation Commission
Monorail Society
National Air Transportation Association (NATA)
National Association of Counties (NAC)
National Association of County Engineers (NACE)
National Association of Minority Contractors (NAMC)
National Association of Railroad Passengers (NARP)
National Association of Regional Councils (NARC)
National Conference of Mayors
National Conference of State Transportation Specialists
National Conference of State Legislators (NCSL)
National League of Cities (NLC)
National Parking Association (NPA)
National Private Truck Council (NPTC)
NCDOT
Office of the Secretary of Transportation
Parsons Brinckerhoff
Permanent International Association of Road Congress (PIARC)
Port Authority Allegheny County
Port Authority of New York and New Jersey
Rails to Trails Conservancy (RTC)
San Diego Metro Transit Development Board
Sierra Club
Society of Automotive Engineers (SAE)
Southeastern PA Transportation Authority (SEPTA)

Surface Transportation Policy Project (STPP)
The Nature Conservancy
The Road Information Program (TRIP)
Transit Cooperative Research Program (TCRP)
Transportation Planning Division, APA
Transportation Research Board (TRB)
Transportation Research Forum (TRF)
Transportation Systems Institute
Travel Industry Association of America (TIA)
U.S. Chamber of Commerce
University of Texas at Austin
Urban and Regional Information Systems Assoc. (UREA)
Urban Institute
Urban Land Institute (ULI)
Urban Mobility Corporation
US Advisory Committee on Intergovernmental Relations
Vickerman-Zachary-Miller
Women's Transportation Seminar (WTS)

Appendix B

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