VOLUME III – TABLE OF CONTENTS

SECTION 1: TECHNICAL ISSUE PAPERS

Analysis of the Current Status of System

2006 C&P Findings: Highway Conditions and Performance (Paper 2A-01) 2006 C&P Findings: Transit Conditions and Performance (Paper 2B-01) Highway and Transit Conditions and Performance: Beyond the 2006 C&P Report (Paper 2C-01)

Conditions and Performance of the Freight Rail System (Paper 2D-01)

Conditions and Performance of the Intercity Passenger Rail System (Paper 2D-02) Conditions and Performance of Other Components of the Surface Transportation System (Paper 2E-01)

Analysis of Baseline Revenues and System Needs

2006 C&P Findings: Highway and Bridge Finance (Paper 3A-01)

2006 C&P Findings: Current Transit Funding (Paper 3B-01)

2006 C&P Findings: Future Highway Investment Needs (Paper 3C-01)

2006 C&P Findings: Future Investment Needs on the National Highway System and the Interstate System (Paper 3C-02)

2006 C&P Findings: Future Transit Investment Needs (Paper 3D-01)

2006 C&P Findings: Impact of Alternative Assumptions on Future Highway and Transit Needs (Paper 3E-01)

Highway and Transit Funding Information Supplemental to the 2006 C&P (Paper 3F-01) Baseline Highway Needs Assessment (Paper 3G-01)

- Baseline Highway Needs Assessment: Additional Benchmarks and Analyses of System Components (Paper 3G-02)
- Baseline Transit Needs Assessment (Paper 3H-01)
- Current Financing and Future Needs of the Freight and Passenger Rail System (Paper 3I-01)
- Current Financing and Future Needs of other Components of the Surface Transportation System (Paper 3J-01)

Analysis of Future Issues and Changing Demands on the System

Part A. Demographic Changes: Impacts on Passenger Travel

Analysis of Changing Relationships Among Population Growth, Passenger Travel Growth, and Vehicle Miles Traveled Growth for Different Modes (Paper 4A-01) Implication of Aging Population on Passenger Travel Demand for Different Modes (Paper 4A-02)

Implication of Alternative Assumptions Concerning Future Immigration on Travel Demand for Different Modes (Paper 4A-03)

Implications of Regional Migration on Passenger Travel Demand (Paper 4A-04) Implications of Rural/Urban Development Patterns on Passenger Travel Demand (Paper 4A-05)

Implications of Rising Household Income on Passenger Travel Demand (Paper 4A-06) Implications of Work and Non-Work Travel Patterns on Passenger Travel Demand (Paper 4A-07)

Part B. Changes in the Nature of the Economy: Impacts on Passenger/ Freight Transportation Implications of International Trade and Port Capacity for Freight Transportation (Paper 4B-01)

- Traffic From West Coast Ports to East Coast Ports (Paper 4B-02) Implications if a Larger Share of Imports Comes Through Mexican and Canadian Ports and is Transferred to Rail/Trucks for Transport into the United States (Paper 4B-03)
- Impacts of Changes in Business Practices and Industrial Logistics on Freight Movement,
- Modal Demand and Transportation Industry Structure (Paper 4B-04) Impacts of Just-In-Time Freight Logistics (Paper 4B-05)
- Forecasts of Economic Variables that Impact Passenger and Freight Demand and the Implication of Alternative Economic Assumptions on Modal Travel Demand (Paper 4B-06)
- Driving Factors and Potential Impacts of Future Increases in Transit's Share of Passenger Travel (Paper 4B-07)
- Driving Factors and Potential Impacts of Future Increases in Rail's Share of Intercity Passenger Travel (Paper 4B-08)
- Driving Factors and Potential Impacts of Future Increases in Short Sea/Inland Waterway's Share of Total Freight Movements (Paper 4B-09)
- Forecasts of Future Freight Flows by Commodity and Origin/Destination and Factors that Could Affect the Level, Distribution, and Mode Split of Future Freight Flows (Paper 4B-10)
- Issues and Options Related to Passenger and Freight Traffic Sharing the Same Facilities (Paper 4B-11)

Part C. Potential Energy Issues and Concerns

- Assessment of the Ability of Traditional and Unconventional Energy Sources to Meet the Demands of Transportation Systems (Paper 4C-01)
- Implications of Potential Petroleum Scarcity on Surface Transportation in the Short and Long Term (Paper 4C-02)
- Analysis of Potential Impacts of Higher Fuel Prices and Fuel Economy Standards on Transportation Demand and Surface Transportation Revenues (Paper 4C-03)
- Implications of Higher Energy Costs/Energy Scarcity on Transportation Mode Splits (Passengers and Freight) (Paper 4C-05)
- Assessment Of Conventional, Non-Conventional, And Alternative Fuels' Ability To Meet Transportation Energy Demand (Paper 4C-06)

Part D. Alternatives to Address Environmental Concerns

- Potential Impacts of Climate Change on Surface Transportation Infrastructure Design (Paper 4D-01)
- Evaluation of Potential Impacts of Policy Responses to Climate Change on Transportation Revenue Mechanisms (Paper 4D-02)
- Evaluation of Surface Transportation-related Strategies to Reduce Mobile Source Greenhouse Gas Emissions (Paper 4D-03)
- Impacts of Surface Transportation Infrastructure Development on Habitat Connectivity and Resilience (Paper 4D-04)
- Evaluation of Transportation Conformity and Implications for Surface Transportation Infrastructure (Paper 4D-05)
- Documentation of Impacts of Vehicle Air Toxic Emissions on Public Health (Paper 4D-06)
- Identification of the Relationships Among Surface Transportation Infrastructure Design, Land Use and Public Health (Paper 4D-07)
- Implications of Alternative Land Use Policies on Future Passenger Travel Demand (Paper 4D-08)
- Evaluation of Species Protection and Wetland Preservation Strategies and Implications for Surface Transportation Infrastructure (Paper 4D-09)

Part E. Security and Emergency Management

Evaluation of the System's Ability to Support Safe Evacuation of Citizens During Times of Emergency (Paper 4E-01) Evaluation of System's Available Redundancy to Compensate For Loss of Transportation Assets Resulting from Natural Disaster or Terrorist Attacks (Paper 4E-02)
Evaluation of the Potential Use of All Modes in Evacuations During Times of Emergencies (Paper 4E-03)

Part F. Military Deployment Support

Military Deployment Support: Evaluation of the System's Ability to Support Future Military Deployment Needs (Paper 4F-01)

Part G. Current and Future Traffic/Transit Operations/Performance Capabilities

Evaluation of the Potential for Intelligent Transportation Systems Deployment and Operational Strategies to Increase Effective System Capacity and Safety (Paper 4G-01)

Evaluation Of The Potential Impacts Of Operational Vehicle Infrastructure Integration Technologies (Paper 4G-02)

Evaluation Of The Potential Applicability And Impacts Of Truck-Only Facilities (Paper 4G-03)

Evaluation of Potential Applicability of HOV, HOT, and BRT Lanes (Paper 4G-04)

Part H. Travel Demand Management

Potential Impacts of Increased Telecommuting on Passenger Travel Demand (Paper 4H-01)

- Potential Impacts of Flexible Work Schedules on Passenger Travel Demand (Paper 4H-02)
- Market-Based Parking Fees for Employees and Other Parking Pricing Strategies (Paper 4H-03)

Potential Impacts on Transit Systems of Increased Demand Resulting from TDM Strategies (Paper 4H-04)

Part I. Advanced Materials, Asset Preservation and Aging Infrastructure

The Potential of Advanced Construction Materials Techniques and Technologies to Allow Capacity Increases with Reduced Community Disruption (Paper 4I-01) The Role of Asset Management in the Surface Transportation System (Paper 4I-02) Implications of Aging Infrastructure on Long Term Preservation and Reconstruction Needs (Paper 4I-03)

Part J. Future Infrastructure Design Policies and Standards

Implications Of Potential Strategies And Revisions To Infrastructure Design Standards To Improve Safety (Paper 4J-01)

Implications of Potential Revisions to Truck Size and Weight Standards (Paper 4J-02) Benefits and costs of Potential Revisions to Transit Vehicle and Infrastructure Design Policies and Standards (Paper 4J-03)

Efficacy of Revisions to Infrastructure Design Standards to Mitigate Environmental Impacts (Paper 4J-05)

Future Trends in Vehicle Regulation (Paper 4J-06)

Efficacy of Changes to Design Policies and Standards to Accommodate Elderly Users of the Transportation System (Paper 4J-07)

Part K. Planning and Implementation of Transportation Infrastructure Projects

Evaluation of Time Currently Required to Implement Rail, Highway, Transit, and Port Projects from "First Thought" to Operation (Paper 4K-01)

Evaluation of Alternative Approaches to Improve the Efficiency of Existing Processes and Reduce the Amount of Time Required to Implement Projects (Paper 4K-02)

Evaluation of Methods to Incorporate Projects with National Transportation Benefits Into Local Planning Processes (Paper 4K-03) Evaluation of Methods to Engage Private Sector in MPO and State Planning Processes (Paper 4K-04)

Benefit-Cost Analysis In Public Sector Infrastructure Investment Decisions (Paper 4K-05) Economic Impact Analysis in Public Sector Infrastructure Investment Decisions (Paper 4K-06)

Part L. Targeted Investments in Addressing Bottlenecks and Critical Corridors

Evaluation of Core Capacity Deficiencies' Impact on "Crowding Out" Economic Growth and on Shifting Economic Growth to Outlying Areas (Paper 4L-01)

Implications of Investment in Corridors of National Significance (Paper 4L-02) Implications of Investments Targeted at Reducing Highway Passenger and Freight Bottlenecks (Paper 4L-03)

Implications of Investments Targeted at Reducing Transit Passenger Bottlenecks (Paper 4L-04)

Implications of Investments Targeted at Reducing Rail, Rail/Highway, Rail/Port, Highway/Port, Rail/Barge, and Highway/Barge Freight Bottlenecks (Paper 4L-07)

Part M. Significant Systematic Changes to Transportation Infrastructure Capacity

Review of Proposals and Alternative Concepts for Significant Systematic Expansions to U.S. Ports and Waterway Infrastructure (Paper 4M-01)

Comparative Global Performance Trends (Paper 4M-02)

Assessment of Integration of U.S. Surface Transportation Infrastructure with Global Trends (Paper 4M-03)

Review of Proposals and Alternative Concepts for Significant Systematic Expansions to the U.S. Highway Infrastructure (Paper 4M-04)

Long Term Transit Expansion Prospects (Paper 4M-05)

Review of Proposals and Alternative Concepts for Significant Systematic Expansions to the U.S. Freight Rail and Passenger Rail Infrastructure (Paper 4M-06)

Analysis of Alternative Financing Mechanisms and Institutional Options Part A. Advantages and Disadvantages of Alternative Revenue Sources

Trends and Projections of Current Revenue Sources for Highways and Transit (Paper 5A-01)

Evaluation of Fuel Taxes as a Transportation Revenue Source (Paper 5A-02) Evaluation of Motor Vehicle Fees as a Transportation Revenue Source (Paper 5A-03)

Evaluation of Tolls as a Transportation Revenue Source (Paper 5A-04) Evaluation of Fares as a Transportation Revenue Source (Paper 5A-05)

Evaluation of Container Charges and Other Direct User Fees as a Transportation Revenue Source (Paper 5A-06)

Evaluation of VMT Charges as a Transportation Revenue Source (Paper 5A-07) Congestion Pricing: Revenue Potential (Paper 5A-08)

Evaluation of Property Taxes, Sales Taxes, and General Revenues as Transportation Revenue Sources (Paper 5A-10)

Evaluation of Impact Fees and Value Capture Techniques (Paper 5A-11)

Traditional Debt Financing as a Transportation Financing Mechanism (Paper 5A-12) Evaluation of Innovative Finance Tools as a Transportation Financing Mechanism

(Paper 5A-13)

Evaluation of Tax-Preferred Investment Products as a Transportation Financing Mechanism (Paper 5A-14)

Evaluation of Private Investment and the Potential for Public-Private Partnerships for Highways, Transit, Freight Rail, and Intermodal Facilities (Paper 5A-15)

Overview of the Sustainability of Current Revenue Sources for Highways and Transit (Paper 5A-16)

Overview of Sustainability of Current Revenue Sources for Railroads and Intermodal Facilities (Paper 5A-17)

Part B. Transition Plan from Current Revenue to Potential New Revenue Sources

- Assessment of International Experience in Transitioning to New Transportation Revenue Sources (Paper 5B-01)
- Assessment of Potential Challenges in Phasing In of New Financing Mechanisms for Highways and Transit (Paper 5B-02)
- Assessment of Potential Challenges in Phasing In of New Financing Mechanisms for Passenger Rail, Freight Rail, Intermodal Facilities, and Other Modes (Paper 5B-03) Identification of Alternate Approaches for Phasing In of New Revenue Sources at the Federal Level (Paper 5B-04)
- Identification of Alternate Approaches for Phasing In of New Revenue Sources at the State and Local Levels (Paper 5B-05)

Part C. Alternative Future Federal Roles

Evolution Of The Federal Role In Surface Transportation (Paper 5C-01) Characteristics Of The Federal-Aid Surface Transportation Program (Paper 5C-02) Development Of Future Federal Surface Transportation Program Options (Paper 5C-03) Identification of Opportunities to Improve the Leveraging Potential of Federal Transportation Funding with Other Public Sector and Private Sector Resources

(Paper 5C-04)

Current Mechanisms Through which the Federal Interest in Transportation is Exerted (Paper 5C-05)

SECTION 2: SCENARIO ANALYSES OF SYSTEM NEEDS

Base Case Needs Assessment: Highways (Paper 6A-01) Observations on Scenario 1: Maximum Operations (Paper 6B-01) Observations on Scenario 2: Travel Demand and Energy Efficiency (Paper 6B-02) Observations on Scenario 3: Aggressive System Expansion (Paper 6B-03) Observations on Scenario 4: Exclusive Passenger and Freight Facilities (Paper 6B-04) Observations on Scenario 5: Maximum Technology (Paper 6B-05) Safety Performance of Analysis Scenarios: All Scenarios (Paper 6B-06) Scenario Findings: Guide to the Tables (Paper 6C-01) Scenario Findings: Funding Levels by Type of Improvement (Paper 6C-02) Scenario Findings: Highway Components Subsets (Paper 6C-03) Revenue Implications of Scenarios: Highways (Paper 6C-04) Current Capital Funding: Guide to Charts (Paper 6D-01)

SECTION 3: SPECIAL ISSUES ANALYSES

Implications of Aging Infrastructure on Federal Lands Highways (Paper 8A-01) Current Financing and Future Needs of the Federal Lands Highway Program (Paper 8A-02)

Federal Standards Regarding the Functional and Physical Design Lives of Surface Transportation Infrastructure (Paper 8A-03)

Impact of Lane Additions on Highway Safety (Paper 8A-04)

FTA Processes Pertaining to Major New Fixed Guideway Capital Project Development and Funding (Paper 8B-01)

The U.S. Freight Rail System: Structure, Finance, and Emerging Issues (Paper 8C-01) Options for Reducing Project Delivery Times (Paper 8D-01)

Issues and Options for Surface Transportation Program Reform (Paper 8D-02) Estimates of Potential proceeds from Alternative Federal, State, and Local Revenue Options (Paper 8E-01)

Models for an Independent Surface Transportation Governance Commission (Paper 8F-01)

Key Terms of the Chicago Skyway and Indian Toll Road Concession Agreements Public Interest Parameters of Public Private Partnerships Estimates of Administrative Costs for VMT

SECTION 4: PUBLIC SESSIONS AND OUTREACH MEETINGS

May 24, 2006 – Washington, D.C. June 26-27, 2006 – Washington, D.C. July 25-26, 2006 - Washington, D.C. October 18, 2006 – Washington, D.C. January 17, 2007 – Washington, D.C. March 20-21, 2007 – Washington, D.C. June 20, 2007 – Washington, D.C.

SECTION 5: FIELD HEARINGS

September 20-21, 2006 – Dallas, Texas October 27, 2006 – Portland, Oregon November 15-16, 2006 – New York City, New York November 15, 2006 – Memphis, Tennessee February 21-22, 2007 – Los Angeles, California February 21, 2007 – Atlanta, Georgia February 23, 2007 - Las Vegas, Nevada March 19, 2007 – Washington, D.C. April 18, 2007 – Minneapolis/St. Paul, Minnesota April 18-19, 2007 – Chicago, Illinois

SECTION 6: SUBMISSIONS SPONSORED BY COMMISSIONERS

Future Options for the National System of Interstate and Defense Highways, Vice Chairman Jack Schenendorf

Public Transportation, Commissioner Paul Weyrich

Metropolitan Mobility, Commissioner Steve Heminger

National Rail Freight Infrastructure Capacity and Investment Study, The Association of American Railroads, Commissioner Matt Rose

Vision for the Future: U.S. Intercity Passenger Rail Network Through 2050, Passenger Rail Working Group, Commissioner Frank Busalacchi

A National Freight System Concept, Commissioner Steve Odland with the assistance of Commission Staff

Achieving a Flexible, Customer-Oriented Transportation System, Commissioner Rick Geddes

SECTION 7: SUBMISSIONS by the BLUE RIBBON PANEL OF TRANSPORTATION EXPERTS

- A Proposed National System of Interstate and Defense Railroads, as an Infrastructure Project for the Next Fifty Years. J. William Vigrass, (February 2007), submitted by J. William Vigrass
- A Proposed Method to Electrify All Surface Modes of Transportation in the United States Using Superconducting Magnetic Energy Storage Devices, Willard Cooper and J. William Vigrass, (February 2007), submitted by J. William Vigrass
- A Proposed National Freight System Based upon a National System of Interstate and Defense Railroads, J. William Vigrass, (March 2007), submitted by J. William Vigrass
- A Vision That Requires Transformation of Our Approach to the U.S. Transportation System, Thomas A. Till, (March 2007), submitted by Thomas A. Till

Reinventing the Future of the Highway Program, C. Kenneth Orski, (April 2007), submitted by C. Kenneth Orski

Integrated Intermodal Interstate Transportation System (I³TS) Kumares C. Sinha,

Olson Distinguished Professor of Civil Engineering, Purdue University, (April 2007), submitted by Kumares C. Sinha

Intelligent Transportation Society of America Policy Concepts for Consideration, (February 2007), submitted by Neil Schuster

The National Marine Container Transportation System: A Call to Action, The Waterfront Coalition – (May 2005) Submitted by Robin Lanier

Delta Regional Authority's Vision for Our Transportation Future, submitted by Pete Johnson, Federal Co-Chair, Delta Regional Authority

Intermodal Passenger Network, Submitted by Jack Haugsland, (April 2007)

Integrated Corridor Management, Submitted Robert Zerrillo

Significant Systematic Changes to Transportation Infrastructure Capacity, Submitted by Victoria Cross Kelly (March 2007)

Operation FreeFlow, by Steve Adams, Submitted by William Brooks

SECTION 8: BACKGROUND MATERIAL

Letter to U.S. Senate on Highway Trust Fund Shortfall (August 9, 2007)

Letter to U.S. House of Representatives on Highway Trust Fund Shortfall (August 9, 2007)

A New Vision for the 21st Century, American Association of State Highway and Transportation Officials Presentation (July 26, 2007)

AASHTO Report Series - Transportation: Invest in Our Future

American Public Transportation Association Presentation (July 25, 2007)

American Public Transportation Association Response to Questions Raised in its July 25, 2007 Presentation, (American Public Transportation Association, August 2007)

A Decade of Growth in Domestic Freight (Bureau of Transportation Statistics, July 2007) The Oregon Road User Fee Concept and Pilot Program: A Primer (James M. Whitty, July 2007) Surface Transportation Innovation, Robert Poole (July 2007) How Freight Moves: Estimating Mileage and Routes Using an Innovative GIS Tool (Bureau of

How Freight Moves: Estimating Mileage and Routes Using an Innovative GIS Tool (Bureau of Transportation Statistics Technical Report, June 2007)

Congestion Relief: Assessing the Case for Road Tolls in Canada (Robin Lindsey, May 2007) Congressional Testimony from Assistant Secretary Tyler Duvall on Public-Private Partnerships (February 2007)

New Starts Program Assessment Final Report (February 2007)

Your Driving Costs 2006 (American Automobile Association Report)

Future Financing Options to Meet Highway and Transit Needs (NCHRP Report, December 2006) America 2050: A Prospectus (Regional Plan Association, September 2006)

- The Effect of Government Highway Spending on Road Users' Congestion Costs (Clifford Winston and Ashley Langer, May 2006)
- On the Social Desirability of Urban Rail Transit Systems, Clifford Winston and Ashley Langer (July 2006)
- Financing of the National Highway Development Programme: Report of the Core Group (Government of India, 2006)

Traffic Safety Facts 2005, (National Highway Traffic Safety Administration)

Current Practices in Public-Private Partnerships for Highways (Maryland Transportation Authority, Maryland Department of Transportation, Maryland State Highway Administration, KCI Technologies, Inc., July 2005)

Transportation Public-Private Partnership Guidelines (Maryland Transportation Authority)

Connecting East Asia: A New Framework for Infrastructure (Asian Development Bank, Japan Bank for International Cooperation, World Bank, March, 2005

Firm Inventory Behavior and the Returns from Highway Infrastructure Investments (Chad Shirley and Clifford Winston, November 2003)

Transit-Oriented Development and Joint Development in the United States: A Literature Review (Transit Cooperative Research Program, October 2002)

Toll Road Securitization in China, (Alfred Nickesen and Mitchel Stanfield, February 2000)

It's Time for Interstate II, Remarks by Gil Carmichael (May 1999)

SECTION 9: HISTORICAL DOCUMENTS

Compendium of Papers (492 pages) Relating to the Evolution of the Federal Role in Surface Transportation

A 10-Year National Highway Program-A Report To The President, The President's Advisory Committee On A National Highway Program (Clay Committee) (1955)

Report to Congress on the Needs of the Highway Systems, 1955-1984, (1954)

Report to Congress on the Highway Needs of the National Defense, (1949)

Report to Congress on Interregional Roads, (1944)

Report to Congress on Toll Roads and Free Roads, (1939)

Mason, Phillip, *The League of American Wheelmen and the Good Roads Movement 1890-1905, Part V*, M.A. Thesis, The American University, 1957.

The Common Roads, N.S. Shaler, Scribner's Magazine, (October 1889)