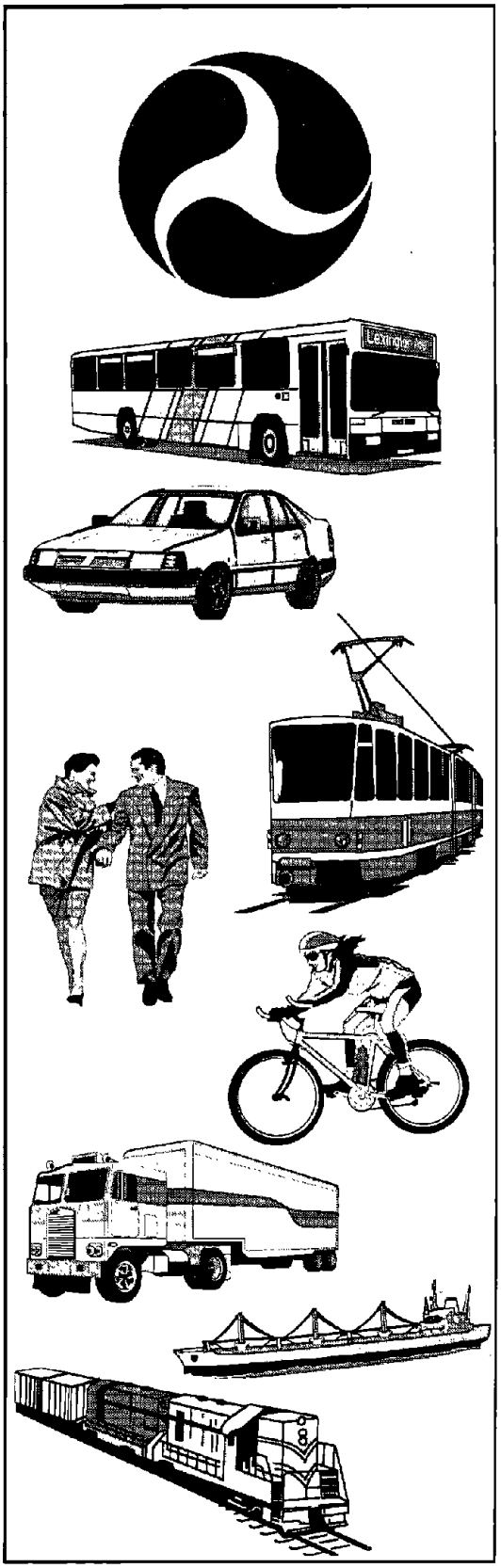

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Enhanced Planning Review of the Seattle-Tacoma-Everett Metropolitan Area

Final Report

May 1996

prepared for:
U.S. Department of Transportation
Federal Transit Administration
Office of Planning
and
Federal Highway Administration
Office of Environment and Planning

prepared by:
U.S. Department of Transportation
Research and Special Programs Administration
Volpe National Transportation Systems Center

ENHANCED PLANNING REVIEW OF THE SEATTLE-TACOMA-EVERETT METROPOLITAN AREA

May 1996

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ACKNOWLEDGMENTS

This report is the sixth in a series of Enhanced Planning Reviews (EPRs) of major metropolitan areas produced for the Federal Transit Administration (FTA) and the Federal Highway Administration (FHWA) by the Volpe National Transportation Systems Center (Volpe Center), Research and Special Programs Administration, U.S. Department of Transportation (US DOT). An earlier series of nine independent planning reviews of major metropolitan areas was published by the Volpe Center for the FHWA and FTA in 1994.

William Lyons is the Volpe Center Project Manager for the EPRs. Melissa M. Laube was the lead author and analyst for this report. Other contributors included Beverly R. Silverberg, under contract to the Volpe Center, Terrence F. Smith of the Volpe Center, and D.Tilly Chang of the Center for Transportation Studies, Massachusetts Institute of Technology.

Overall guidance for the EPRs, including production of this report, was provided by the Program Manager, Deborah Burns, and Sam Zimmerman, Director, both from the Office of Planning Operations, FTA; and Sheldon Edner and Barna Juhasz, Chief, both from the Metropolitan Planning Division, FHWA.

The federal review team--consisting of staff from FTA Headquarters and Region X Offices; FHWA Headquarters, Region 10, and the Washington Division; the Volpe Center; US DOT Office of Intermodalism; and US DOT Maritime Administration--participated in all aspects of the EPR, including reviewing drafts of this report.

A draft of the Overview Report was provided to the Puget Sound Regional Council, which is the Metropolitan Planning Organization for the Seattle-Tacoma-Everett metropolitan area, and other participating major transportation agencies in the metropolitan area for review and comment. The Final Report adds background information for the observations and recommendations in the Overview Report and is written for public distribution. The assistance of local agency staff throughout the EPR is gratefully acknowledged. The Final Report, which was not reviewed in its entirety by the local agencies, is the responsibility of the federal agencies. Participating federal review team members are listed in the Introduction, and state, regional, and local staff are listed in Appendix B.

Copies of the other reports can be requested from: US DOT/Volpe Center, fax (617) 494-3260.

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Glossary of Acronyms and Abbreviations

ADA	Americans with Disabilities Act
AVI	Automatic Vehicle Identification
CAAA	Clean Air Act Amendments of 1990
CMS	Congestion Management System
CMAQ	Congestion Mitigation and Air Quality Program
CO	Carbon Monoxide
FHWA	Federal Highway Administration, US Department of Transportation
FTA	Federal Transit Administration, US Department of Transportation
GMA	Growth Management Act
HOV	High Occupancy Vehicle
IMS	Intermodal Management System
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITS	Intelligent Transportation Systems
MIS	Major Investment Study
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Plan
NEPA	National Environmental Protection Act
NHS	National Highway System
PSCOG	Puget Sound Council of Governments
PSRC	Puget Sound Regional Council
PSTP	Puget Sound Transportation Panel
PTMS	Public Transit Facility Maintenance System
RTA	Regional Transit Authority
RTPO	Regional Transportation Planning Organization
SEPA	State Environmental Planning Act
SIP	State Implementation Plan
STP	Surface Transportation Program
TIP	Transportation Improvement Program
TCM	Transportation Control Measure
TDM	Transportation Demand Management
TSM	Transportation System Management
UPWP	Unified Planning Work Program
V/C	Volume-to-Capacity
VMT	Vehicle Miles Traveled
Volpe Center	Volpe National Transportation Systems Center, US Dept. of Transportation
WSDOT	Washington State Department of Transportation

Executive Summary

The Federal Transit Administration (FTA) and Federal Highway Administration (FHWA) have initiated a series of joint Enhanced Planning Reviews (EPRs) to assess the impact of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) on the planning processes conducted by the transportation agencies serving metropolitan areas. The EPRs also are intended to determine the effects of planning on transportation investment processes. The information collected in the EPRs is intended to be of assistance to individual metropolitan areas in their continuing efforts to improve transportation planning practice, and to federal agencies in formulating policy and identifying technical assistance needs among agencies engaged in metropolitan planning.

The EPR for Seattle-Tacoma-Everett included a federal site visit from May 8 through May11, 1995. At the conclusion of the site visit, the federal review team presented preliminary observations and recommendations to the local agencies taking part in the review. The team then formulated several additional observations as a result of the further review of documents and notes. These observations were incorporated into a draft Overview Report which was distributed for review and comment to the Puget Sound Regional Council (PSRC), which is the Metropolitan Planning Organization (MPO) for the Seattle-Tacoma-Everett metropolitan area, and other local participants in the EPR. The Overview Report formed the basis for this Final Report, which describes the EPR in greater depth and is intended for public distribution.

The following is the summary conclusion and a complete set of observations and recommendations presented in the Overview Report. The section where the observations and recommendations are discussed in context are noted in parentheses.

PSRC and its partner agencies have responded to the challenges of ISTEA and state law by establishing a process that integrates transportation within its broader environmental and socioeconomic context. This process, which is still evolving, has resulted in innovative planning approaches, including: creation of a Freight Mobility Round Table; development of plans for a nonmotorized transportation network of bicycle and pedestrian facilities; adoption of an incentive program to encourage the use of alternatives to drive-alone automobile travel; development of active partnerships with community and interest groups; and incorporation of land use and environmental considerations as fundamental elements of transportation planning. A framework for Major Investment Studies and updating of interagency agreements are needed to clarify roles and responsibilities for a number of key planning functions. A potential area of improvement would be the strengthening of PSRC's role in the programming of transit and state-administered funds. In the future, PSRC will face the crucial test of maintaining public support and obtaining necessary funding as broad visions of the region's future are translated into specific projects and programs.

A. Organization and Management of the Planning Process

1. Interagency Coordination and Cooperation: PSRC and its state and local partners in the planning process should continue working together to establish cooperative relationships, building upon the substantial progress achieved over the last several years. As part of this effort, agreements among participating agencies should be updated to define their respective roles in the transportation planning process. (III)

B. Development of the Plan, Transportation Improvement Program (TIP), and Work Program

1. Evolution of the Planning Process: The planning process for the metropolitan area currently is a work in progress, developing on the unique foundation of the VISION 2020 long-range growth and transportation strategy. The comprehensive approach to land use and transportation planning set forth in VISION 2020 reflects the mandates of the State Environmental Planning Act and Growth Management Act, which together establish a context in which planning addresses both the physical and social consequences of growth. (IV. A)

2. Transportation/Land Use Linkages: As the land use planning process is brought to completion, the PSRC will more fully establish the linkage between land use priorities and transportation improvements. The transportation planning process should reflect this linkage in developing regional transportation improvements and establishing investment priorities among projects included on the supplementary list to the Metropolitan Transportation Plan. (IV. A)

3. Transportation Improvement Program (TIP): Development of the TIP follows an open and systematic process for Surface Transportation Program (STP) and Congestion Management and Air Quality (CMAQ) funds, which are managed directly by the MPO. This process would be stronger if extended to include projects selected by the State and transit agencies from other funding sources, which would provide for a more comprehensive approach to TIP development. (IV.B)

C. Financial Planning and Constraint

1. Scope of Financial Analysis: Financial planning is unusually comprehensive, in that it reflects a special effort to account realistically for operating and maintenance costs. Over time this effort will require additional refinement in terms of new funding sources and more comprehensive integration of programs administered by transit agencies and the State. Another strength of the financial analysis is the evaluation of pricing strategies. (V. A)

D. Major Investment Studies (MIS)

1. MIS Process: The MPO is just starting to integrate MIS into the planning process. A generic framework that identifies roles and responsibilities of the parties to the process is needed to facilitate cooperative MIS efforts. The MPO is encouraged to work collaboratively with its partners in defining the MIS process. This effort will help the participants identify additional opportunities to make the MIS process serve regional needs. (V. B)

2. Relationship to Congestion Management System: The integration of the MIS process and development of the CMS will add to the strength of the regional planning process. (V. B)

E. Congestion Management System and Other ISTEA Management Systems

1. Further Development: PSRC's work on the CMS has focused thus far on conceptual development. Substantial additional effort is necessary to translate this strong foundation into a fully operational system. (V.C)

F. Air Quality and Conformity

1. General: Air quality planning is technically sound, and the MPO works effectively with state air quality agencies. (V. D)

G. Public Involvement

1. Proactive Public Involvement: The MPO has successfully identified target audiences, with whom it has developed effective two-way channels of communication, including electronic bulletin boards, information centers, and hotlines, as well as more traditional forms of information dissemination. (V. E)

2. Effective Partnerships: Active partnerships have been formed with community and special interest groups, including advocates for bicycle facilities and the freight industry. (V. E)

3. Evaluation: A continuing performance evaluation would help the MPO to identify opportunities for strengthening its public involvement effort. (V. E)

H. ISTEA Fifteen Factors

1. State and Local Policies: In responding to the policies articulated in state Growth Management Act and State Environmental Planning Act, which emphasize the relationship of transportation to socioeconomic conditions and the physical environment, the planning process is structured to address many of the central concerns embodied in the fifteen factors. Any future documentation of the MPO's response to the fifteen factors would be improved by elaborating upon the ways in which PSRC's planning approach relates to this unique context. (V. F)

I. Integration of Strategic Transportation Planning

1. Potential Changes in Plan: Any major change in the planned Regional Transit Authority (RTA) system may create the need to reconsider MTP investment strategies planned in fulfillment of VISION 2020 transportation and land use policies. (VI. A)

2. Intermodal Initiative: PSRC's work in establishing and supporting the Regional Freight Mobility Roundtable represents a significant initiative and starting point for addressing goods movement needs as part of the planning process. A key aspect of this effort is the progress that has been achieved in freight data analysis. (VI. B)

J. Travel Demand Forecasting

1. Technical Development: The MPO is engaged in aggressive development of its transportation forecasting capabilities, which should serve to reinforce its technical leadership among the agencies involved in planning for the region and strengthen the region's contribution to the continuing enhancement of the practice. (VII)

I. Introduction

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) significantly changed the law governing metropolitan transportation planning. In response to the changes introduced by ISTEA, the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) issued revised planning regulations on October 28, 1993, setting new requirements for the transportation planning process. The requirements are presented in 23 CFR Part 450 and 49 CFR Part 613, Statewide and Metropolitan Planning Final Rule. The Clean Air Act Amendments of 1990 (CAAA) also imposed rigorous new transportation planning requirements in metropolitan areas, particularly those that are designated nonattainment or maintenance areas for air quality.

In support of the implementation of revised regulations, FHWA and FTA jointly established a schedule of Enhanced Planning Reviews (EPR). The EPRs are intended to determine the impact of planning on transportation investment processes. The EPRs also provide a technical assessment of the transportation planning and programming processes, including consideration of the six focal points identified by the FHWA and FTA Administrators for certification. The six focal points are: Financial Constraint and Financial Planning; Major Investment Studies; Congestion Management Systems; the Planning Process and Links to the Conformity Requirements of the Clean Air Act Amendments of 1990; the Public Involvement Process; and the ISTEA Fifteen Planning Factors.[1] Of equal importance, EPRs will provide a forum for dialogue and the exchange of information on perspectives and concerns related to ISTEA between FTA and FHWA headquarters and field staff, and state and local officials responsible for metropolitan area transportation planning.

Additionally, EPRs will provide information for future long-term federal policy-making, including possible legislative and regulatory changes; identify national issues and trends; and document national case studies of best professional practice. This information also will be used to help identify how future federal technical assistance programs can best assist Metropolitan Planning Organizations (MPOs) and other planning agencies in carrying out the requirements of ISTEA. Finally, EPRs are intended to support progress toward meeting ISTEA requirements.

The EPR has four parts: a review of planning documents, a site visit to the area, a summary draft Overview Report, and the issuance of this Final Report. At the conclusion of the site visit, the federal agency participants in the EPR presented preliminary observations and recommendations to the local agencies taking part in the review. The team then formulated several additional observations as a result of the further review of documents and notes. These observations were incorporated into a draft Overview Report distributed for review and comment to the MPO and other local participants in the EPR for review and comment. The Overview Report formed the

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[1] An additional factor was added to the original fifteen factors identified in the Metropolitan Planning Final Rule after the Seattle-Tacoma-Everett EPR site visit was conducted.

basis for this Final Report, which describes the EPR in greater depth and is intended for public distribution.

This report presents the results of the EPR conducted jointly by FHWA and FTA in the Seattle-Tacoma-Everett metropolitan area. This report considers the regional transportation planning process as it existed at the time of the site visit as well as future trends. The review team acknowledges that this is an evolving process.

A federal review team consisting of FHWA and FTA headquarters and regional staff, FHWA division staff, and US DOT/Volpe Center staff conducted the site visit on May 8 through May 11, 1995. The federal team consisted of:

Federal Transit Administration
Deborah Burns, Office of Planning
Patricia Levine, Region X

Federal Highway Administration
Sheldon Edner, Office of Environment and Planning
Carl Armbrister, Region 10
Lisa Hanf, Region 10
William Kappus, Washington Division

Office of Intermodalism
Mark Sullivan

Maritime Administration
Richard Walker, Office of Intermodal Development
Lyn McClellan, Western Region

USDOT/Volpe Center
Melissa M.Laube, Project Staff
Beverly R. Silverberg, Contractor
Terrence F. Smith, Project Staff

Research assistance was provided by D.Tilly Chang and Karen Koh of the Massachusetts Institute of Technology, Center for Transportation Studies. William Lyons is the Volpe Center project manager for the Enhanced Planning Reviews. Local participants in the site visit included the Puget Sound Regional Council (PSRC), which is the MPO serving the Seattle-Tacoma-Everett metropolitan area; the Washington Department of Transportation; state and city agencies; and the region's transit operators. The review team also met with local elected officials and representatives of the general public.

A list of MPO members, the agenda for the site visit, and a list of documents reviewed are provided in Appendices A, B, and C.

II. Local Conditions

A. Metropolitan Area Characteristics

The Seattle-Tacoma-Everett metropolitan area encompasses King, Kitsap, Pierce, and Snohomish Counties, which constitute the Central Puget Sound Region. Seattle is located approximately mid-way between the cities of Everett and Tacoma, which represent the northern and southern limits of the area. The metropolitan area also includes the cities of Bellevue and Bremerton, which flank Seattle to the east and west. (A map of the metropolitan area is provided in Figure 1).

The 1990 population for the entire metropolitan area was 2.75 million, following a thirty-year period in which population growth averaged about 2 percent per year. Annual growth rates are expected to decline to 1.4 percent over the 20-year period beginning in 1990, resulting in a population increase of 1.4 million, or 51 percent, by the year 2010. Growth in employment has outpaced increases in population over the last 30 years, averaging 3.6 percent annually. Future employment increases are expected to match the 1.4 percent annual growth rate for population.

B. Regional Transportation System

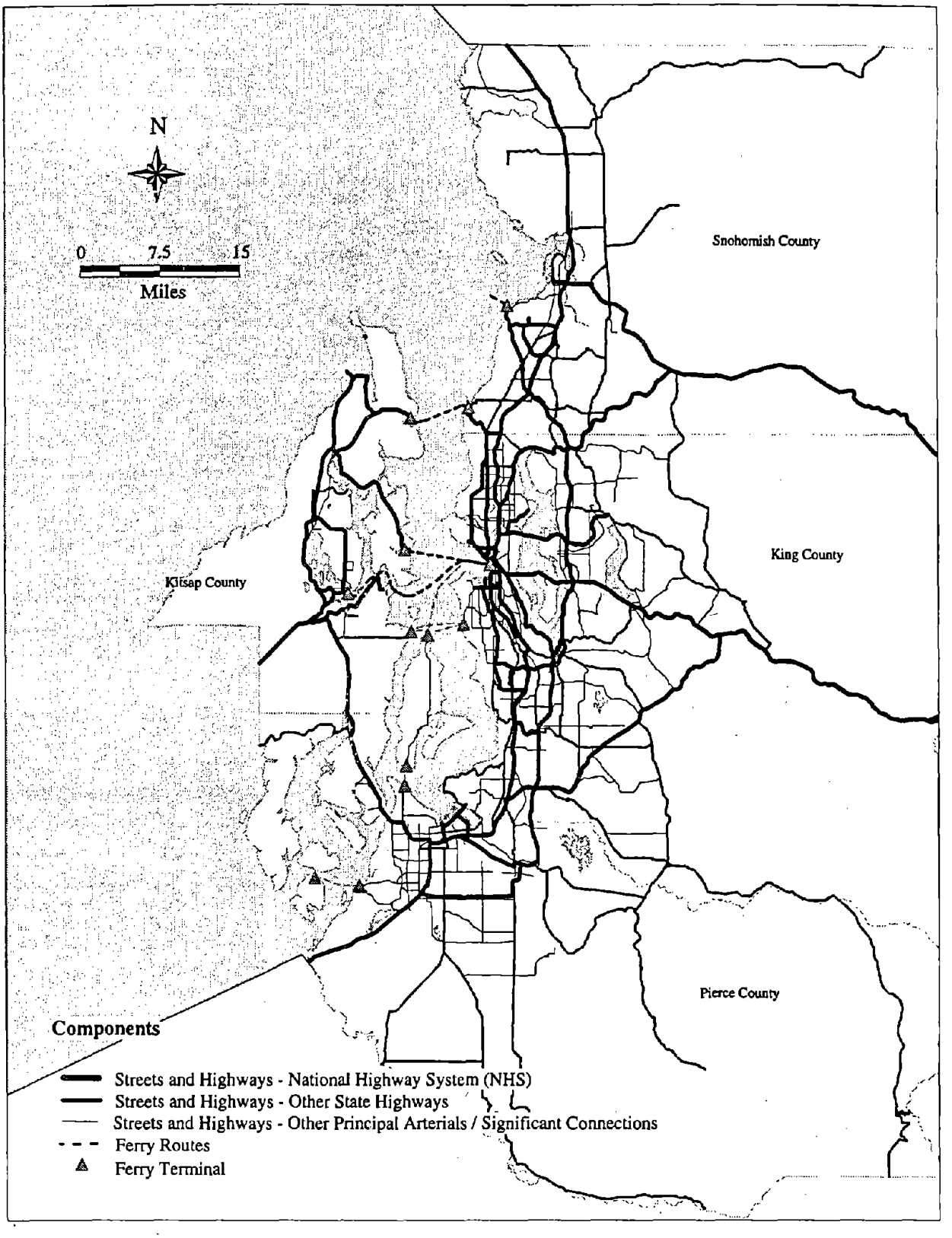
Automobile travel in the metropolitan area is growing much faster than population and employment. Over the ten-year period from 1980 to 1990, Vehicle Miles Traveled (VMT) increased by 80 percent, which was double the pace of employment growth, and four times the rate of increase in population. One of the principal factors underlying this trend is the decentralization of urban development, which has resulted in increasing dependency on automobile travel.

The principal components of the transportation network serving the Seattle-Tacoma-Everett metropolitan area are described below.

Highways: I-5 runs the length of the metropolitan area, connecting Tacoma, Seattle, Everett, and points beyond. To the east of Seattle, across Lake Washington, I-405 parallels I-5. I-90 and state highway 520 provide east-west connections between Seattle and Bellevue, which is across the lake.

Public Transit: Bus, paratransit, and ridesharing services are provided by five public transit operators in the four-county area: Metro, in King County; Pierce Transit, in Pierce County; Everett Transit and Community Transit in Snohomish County; and Kitsap Transit in Kitsap County. The Marine Division of the Washington State Department of Transportation, Pierce County, and a private operator provide ferry services across Puget Sound. While there are currently no rail transit services in the area, a Regional Transit Authority (RTA) was created that has developed a master plan for a passenger rail and feeder bus system.

Aviation: The regional aviation system includes a number of county and municipal airports and two military airports. Seattle-Tacoma International Airport, which is operated by the Port of



Source: Puget Sound Regional Council, 1995 MTP.

Figure 1. Map of the Seattle-Tacoma-Everett Metropolitan Area

Seattle, serves most of the commercial passenger and cargo aviation needs for the region and much of the state. Following upon the recommendations of an aviation planning study conducted by the MPO in cooperation with the Port of Seattle, the addition of a third airport runway is under review to address future growth. PSRC's Executive Board also has recommended the development of inter-regional ground transportation options, including high-speed rail, to relieve demand pressures at Seattle-Tacoma International Airport. PSRC projects that annual passenger volumes and air cargo activity in the region will double by the year 2020. The number of flights is forecast to increase by only 30 percent, however, due to increased use of higher-capacity aircraft.

Freight Transportation: A multimodal network consisting of ports, highways, and railroads serves freight movement in the region. Over 2 million sea-going containers move through the region each year.

Bicycles and Pedestrians: Survey data indicate that in 1994 between four and five percent of regional trips were made by walking or using bicycles. PSRC has developed a plan for a non-motorized transportation system that it estimates will help to triple the percentage of pedestrian and bicycle trips by the year 2020.

III. Organization and Management of the Planning Process

PSRC was created in 1991, replacing the Puget Sound Council of Governments (PSCOG), the former MPO for the Central Puget Sound Region. In the face of disputes with local jurisdictions and waning support from its membership, the PSCOG was replaced by PSRC, which was created through State enabling legislation. Compared with its predecessor agency, PSRC has a more clearly defined and narrowly focused mandate, which is limited to planning functions related to regional transportation and growth management.

The State of Washington's Growth Management Act (GMA), adopted in 1990 and amended in 1991 and 1994, establishes a framework for the integration of transportation and land use planning in which regional transportation agencies play a prominent role. In accordance with the GMA framework, PSRC serves as a forum for collaborative work on the continuing development and implementation of the region's growth and transportation strategy, as set forth in the regional plan, VISION 2020. VISION 2020 articulates a public policy foundation for regional planning that promotes compact patterns of urban growth and the development of a compatible transportation network. Solutions to congestion problems and mobility needs emphasize transit, ridesharing, demand management, and the maintenance of current facilities, rather that continuing expansion of highway capacity for single-occupant vehicles.

Multi-county policies contained in VISION 2020 build on countywide planning policies and comprehensive plans developed by member governments, and are designed to provide guidance to agencies and local jurisdictions on issues related to the region's economy, transportation, and environment. The approach to planning embodied in the GMA and VISION 2020, and followed by PSRC, reflects the tradition in the state of "bottom-up" decision-making, in which local jurisdictions lead the process, which is coordinated at the regional level in compliance with statewide policies. In seeking to build an inclusive institutional framework for the planning process, PSRC actively pursues partnerships with public agencies and private organizations that have an interest in transportation decision-making.

PSRC is responsible for conducting and supporting numerous state and federal planning, compliance and certification programs, including federal requirements under ISTEA and the Clean Air Act Amendments of 1990. An Interlocal Agreement between PSRC and its member governments establishes the agency's responsibilities, which include:

- developing a regional transportation plan and programming federal transportation funds through the Transportation Improvement Program (TIP);

- fulfilling the responsibilities of a Regional Transportation Planning Organization (RTPO) established under state law, including certification that all transportation projects and transportation elements of local comprehensive plans are consistent with the regional plan;

- maintaining the adopted regional growth and transportation strategy, as set forth in the regional plan, VISION 2020;

- forecasting and monitoring of economic, demographic and travel conditions and maintaining a regional database, which provide a technical foundation for local and regional planning;

- providing technical assistance to local, state and federal government agencies and business and community organizations.

Agreements between PSRC and the Washington State Department of Transportation (WSDOT), as well as the transit agencies serving the metropolitan area, date from the PSCOG era. PSRC plans to update these agreements to establish interagency responsibilities and relationships on an official basis. WSDOT has established an Office of Urban Mobility that serves as the primary link between the State and local governments, coordinating state-level programming for the metropolitan area with PSRC, through frequent interaction between the staffs of both agencies.

The membership of PSRC includes the four counties in the Central Puget Sound Region; 56 cities within those four counties; the ports of Seattle, Tacoma, and Everett; WSDOT; and the state Transportation Commission. Island County, the Thurston Regional Planning Council, and the Port of Bremerton are associate members. A General Assembly and an Executive Board govern the PSRC. The General Assembly is composed of all Council members and meets at least once annually to determine the agency's budget and decide on major policy issues. Assembly members cast 1150 votes, which are weighted proportionally according to the population of each jurisdiction. The General Assembly appoints the 26-member Executive Board, which represents the General Assembly's constituencies on a proportional basis and meets monthly to execute delegated responsibilities. Executive Board membership includes the Washington State Transportation Commission and the Port of Seattle, but none of the area's transit authorities. Transit agency representation is provided, however, as a result of the requirement that one-half of the local elected officials serving on the Executive Board also be members of one of the areas' transit boards.

A Transportation Policy Board and a Growth Management Board, which advise the Executive Board, include member jurisdictions and ex-officio members from business, labor, civic, and environmental groups. Both boards are supported by technical committees: the Growth Management Staff Advisory Committee supports the Growth Management Policy Board; the Transportation Operators, Regional Project Evaluation, Transportation Enhancements, and Transportation Air Quality committees support the Transportation Policy Board; and the Regional Technical Committee supports both boards. The Chair of the Transportation Operators Committee is an ex officio member of the Transportation Policy Board.

Observations and Recommendations

1. Interagency Coordination and Cooperation: The MPO is building a cooperative effort with its state and local partners in the planning process, consistent with requirements established at the state level. As part of the further development of cooperative interagency relationships as envisioned under ISTEA, agreements among participating agencies should be updated to define their respective roles in the transportation planning process.

IV. Development of the Plan, TIP, and Work Program

A. Transportation Plan

The Metropolitan Transportation Plan (MTP) identifies long-range transportation strategies and investments for the Seattle-Tacoma-Everett metropolitan area, developing in greater detail the policies set forth in VISION 2020, the region's long-range growth management, economic, and transportation strategy. This MTP is the first transportation plan for the region developed to meet ISTEA requirements.

VISION 2020 was adopted in 1990, preceding the State of Washington's GMA, and has been updated several times. The 1995 update incorporates the MTP as its transportation component. A guiding principle of VISION 2020 is to support the concentration of growth in urban areas for the purpose of conserving open space and resource lands, including farmlands and forests. This principle is the foundation of the multicounty policies that are required under the GMA, and which form the basis of the MTP.

The VISION 2020 multicounty transportation policies are presented in the MTP as objectives to be addressed through the planning process. These policies are as follows: Optimize and Manage the Use of Transportation Facilities and Services; Manage Travel Demand Addressing Traffic Congestion and Environmental Objectives; Focus Transportation Investments Supporting Transit and Pedestrian-Oriented Land Use Patterns; and Expand Transportation Capacity Offering Greater Mobility Options through development of multimodal facilities.

A framework for future investment is presented that is intended to provide for improved transportation, consistent with the four-part policy framework identified above. The categories of planned investment are as follows:

- Maintenance and Preservation: This category includes system and asset management systems, and retrofitting of roadways to incorporate transit and nonmotorized travel facilities.

- Transportation System Management: Projects in this category are intended to improve the efficiency of existing facilities or add operational capacity without major investments in additional infrastructure. The Congestion Management System, Intelligent Transportation Systems, flexible work hours, ridesharing, land use strategies, and transportation pricing are included.

- Nonmotorized Transportation: The region plans to increase investment in facilities and programs that support pedestrian and bicycle travel, including a regional network linking communities and concentrations of activity such as major residential, employment, shopping, and recreational centers.

- Infrastructure Investments and Service Improvements: The Plan emphasizes expansion of capacity in public transit, pedestrian, and bicycle facilities to support the use of alternatives to automobile travel. In the near term, the program includes Phase I of the Regional Transit Authority's rail/bus system plan, extensive HOV system development, completion of some "missing links" in the highway system, and expansion of local transit service. Longer range plans involve further transit development and completion of additional highway links, development of freight facilities, and implementation of the nonmotorized transportation network.

- Ferry Infrastructure and Service: This category includes coordinated interagency planning on projects providing for increased service and improved intermodal access.

- Freight and Goods Mobility: Improvements in freight movement will be pursued through a regional freight mobility strategy.

- Aviation Program: Major initiatives include pursuing a third runway for Seattle-Tacoma International Airport and developing inter-regional ground transportation options.

The MTP identifies actions and programs in each of the above component areas, specific capital projects, and criteria by which capital projects are chosen for inclusion in the plan. The MTP distinguishes candidate and approved projects and identifies separate sets of qualitative criteria for including projects in each of these two categories. One of the criteria for designation as an approved project is consistency with the policies of VISION 2020 and the MTP. The document also notes the start and end date, estimated cost, and funding source for each candidate and approved project.

The only capital projects included in the current MTP are major regional system projects that have been planned extensively by WSDOT and the RTA. PSRC has compiled a supplementary list of projects that has been subjected to conformity and financial analysis. Projects from this list will be added in future MTP updates as local growth management plans are completed and integrated at the regional level. All of the projects have been modeled and have been determined to meet air quality conformity requirements.

The MTP includes a financial analysis that indicates that revenues from existing sources will be sufficient to meet the maintenance and preservation needs of the existing transportation system, but not to fund substantial capacity expansion. A number of potential new financing options are discussed, including modification of the local and state tax structures and transportation pricing.

PSRC is developing a monitoring system to track progress toward achieving the objectives of VISION 2020. The system will consist of both implementation and performance monitoring. Implementation monitoring is intended to track how local agencies are applying VISION 2020 policies. The performance monitoring system will focus on five key bench mark objectives: growth, housing, the environment, the economy, and transportation. The Congestion

Management System will be a key component of the transportation monitoring effort, which will address the mobility of both people and goods. The first part of this process, which is now under way, involves establishing the indicators by which implementation and performance can be tracked and measured.

Observations and Recommendations

1. Evolution of the Planning Process: The planning process for the metropolitan area currently is a work in progress, developing on the unique foundation of the VISION 2020 long-range growth and transportation strategy. The comprehensive approach to land use and transportation planning set forth in VISION 2020 reflects the mandates of the State Environmental Planning Act and Growth Management Act, which together establish a context in which planning addresses both the physical and social consequences of growth.

2. Transportation/Land Use Linkages: As the land use planning process is brought to completion, the PSRC will more fully establish the linkage between land use priorities and transportation improvements. The transportation planning process should reflect this linkage in developing regional transportation improvements and establishing investment priorities among projects included on the supplementary list to the MTP.

B. Transportation Improvement Program (TIP)

The current TIP covers the period from 1994 through 1996. This version of the TIP was developed prior to the MTP. A Policy Framework designed to be consistent with ISTEA objectives was used, however, to prioritize and select projects funded through MPO programs. The categories of funding programmed by the PSRC are Surface Transportation Program (STP) funds distributed by formula to the Seattle-Tacoma-Everett metropolitan area, Congestion Mitigation and Air Quality (CMAQ), and FTA Section 3 and Section 9 funds. PSRC's responsibility for transit programming is executed in the review of projects selected for funding by the region's transit operators.

The State has a separate process for selecting projects funded through the programs under its purview, which include Interstate Maintenance, Interstate Completion, National Highway System, Bridge, STP/Safety and Section 1064/Ferry Boat funds. WSDOT's Office of Urban Mobility works closely with PSRC to confirm that State programs for the Central Puget Sound Region conform with VISION 2020. VISION 2020 provides a framework for much of the State programming effort, which focuses on HOV development and highway reconstruction and redevelopment.

The most recent Policy Framework for development of the next TIP specifies a separate prioritization process for three different categories of projects programmed by PSRC: larger-scale regional projects, countywide projects, and FTA-funded projects. A two-stage process will be used for the review of regional projects. During the first phase, project sponsors will submit a

2-3 page prospectus, which will be screened by PSRC's Regional Project Evaluation Committee and approved by its Transportation Policy Board. The composition of the Evaluation Committee for the next TIP may be similar to that for the existing TIP, which consisted of staff from local planning and public works departments, transit agencies, WSDOT, the ports, and a representative of PSRC's Transportation Enhancement Committee, and totaled 55 volunteers in 13 teams. PSRC has identified suggested screening questions, which include consideration of impacts on system performance, consistency with VISION 2020 objectives, air quality impacts, and modal characteristics. Projects recommended for continued consideration during the second stage of review will be evaluated through a point-scoring system. The Policy Framework recommends that the criteria in this quantitative evaluation phase address such basic MTP objectives as preservation and maintenance, accessibility, and environmental benefit.

For county-based projects, each county must develop a prioritization and selection process that is subject to review and approval by PSRC. Proposed processes must address such ISTEA requirements as consideration of the fifteen planning factors and consistency with the MTP. Development and prioritization of FTA-funded projects are the responsibility of the transit operators in each county and are subject to PSRC review and financial analysis.

The existing TIP includes all regionally significant projects, regardless of funding source. Most of the projects funded through the PSRC selection process are organized by county. A dozen projects are identified as being regional in nature, and numerous projects are designated as WSDOT projects. Over 15 percent of the regional STP/CMAQ funds are recommended for transit projects, 26 percent for nonmotorized-projects, 7 percent for intermodal projects, 9 percent for innovative projects--including Transportation Demand Management--and just over 40 percent for roadway projects. The vast majority of funds are programmed, however, by the State and local governments. For the three-year period covered by the 1994-96 TIP, the STP and CMAQ programs account for approximately 17 percent of the federal funding included in the TIP. The greater share of this 17 percent is allocated to the county-based projects, the programming of which involved PSRC only in an indirect oversight role, following an initial screening of potential projects.

The TIP demonstrates financial constraint. This finding is predicated, however, on full authorization of Section 3 fixed guideway and Section 9 funds or Section 3 discretionary funds sufficient to cover the cost of several regional projects, which exceed the level that would be predicted through the extrapolation of historical trends.

Observations and Recommendations

1. TIP: Development of the TIP follows an open and systematic process for STP and CMAQ funds, which are managed directly by the MPO. This process would be more effective if extended to include projects selected by the State and transit agencies from other funding sources, which would provide for a more comprehensive approach to TIP development.

C. Unified Planning Work Program

PSRC prepares a document entitled "Budget and Work Program," in compliance with federal requirements for a Unified Planning Work Program (UPWP). The current work program is for fiscal year 1996, beginning in July 1995. Work elements are organized into four program areas: Regional Planning, Implementation, Data Services, and Administrative Services. Some of the principal work elements for each program area are as follows:

- Regional Planning: Vision 2020 Maintenance and Refinement, which includes development of a process for siting regional capital facilities, developing a regional greenspace strategy, and providing technical assistance in support of public forums related to VISION 2020; Transportation Development by Design, which entails working with local jurisdictions in the development of transportation-related land use design guidelines; and MTP Maintenance and Refinement, covering an update of the MTP, with a significant emphasis on freight, financial analysis, and nonmotorized transportation; and development of Major Investment Study procedures;

- Implementation: VISION 2020 implementation; Management Systems, including development of the Congestion Management System and coordination with WSDOT on other required management systems; TIP;

- Data Services: primary data collection; completion of the development program for travel demand models; technical assistance; computer services; the Puget Sound Transportation Panel, which is a continuing household survey of travel patterns and attitudes;

- Administrative Services: public involvement; Council support.

The UPWP provides substantial information on each work element, including objectives, detailed task descriptions, a budget analysis, a list of major milestones and products, staffing levels in fiscal year 1995, interagency participation, policy direction, and a discussion of state and federal emphasis areas where applicable. A summary table in one of the document's appendices identifies the planning projects to be undertaken in the metropolitan area by agencies other than PSRC. WSDOT's Office of Urban Mobility prepares a separate UPWP.

V. FHWA and FTA Administrators' Focal Points

The FHWA and FTA Administrators have identified six focal points for the federal certification reviews being conducted in metropolitan areas. One objective of the EPRs is to provide a base of information that will serve as a prelude to the certification reviews. The focal points are:

- Financial Planning and Constraint
- Major Investment Studies
- Congestion Management Systems and other ISTEA Management Systems
- Air Quality and Conformity
- Public Involvement
- ISTEA Fifteen Factors

The following sections describe how the regional transportation process in Seattle-Tacoma-Everett is addressing each of the focal points.

A. Financial Planning and Constraint

Financial analysis performed by PSRC indicates that current revenue sources, with no tax increases, can fund little more than maintenance and preservation of the existing transportation system on a long-term basis. Maintenance and preservation costs are projected to be $36.9 billion over the MTP horizon of 25 years, which reflects current annual costs for these purposes of almost $1.5 billion. Planned expansion projects total an additional $21.4 billion, for a total future cost of $58.3 billion.

PSRC projects that $36.9 billion in revenues will be generated between 1996 and 2020, from existing tax and operating revenue sources. This estimate reflects some increase in the tax base, due to population and economic growth, but no increases in tax rates. A decline in constant dollar revenues from the Motor Fuels Tax is forecast, due to inflation and increasing fuel-economy, despite a projected increase of over 5 million daily trips.

Comparison of total projected costs and revenues results in a shortfall of over $21 billion. Public transit projects account for about half this shortfall, and highway projects contribute about 37 percent. The balance is freight and nonmotorized-transportation projects and programs. Transit costs correspond to the financing requirements of the regional rail system identified in the RTA Master Plan. Highway projects would expand the capacity of the existing roadway network, primarily in the form of HOV lanes and local roads. PSRC's analysis shows that increases in motor fuels and sales taxes consistent with historic trends could reduce the revenue shortfall to $5.6 billion for the 25-year planning horizon. The electorate defeated a referendum on March 14, 1995, which would have increased the local sales tax by 0.4 cent and the local motor vehicle excise tax by 0.3 cents, to fund development of the regional rail and bus transit system.

The MTP financial strategy is structured into short- and long-term phases. During the first phase, which extends through 2005, the shortfall is projected at $4.4 billion, assuming no tax increases. The greatest share of the shortfall would materialize in the period from 2006 through 2020. When tax rates are assumed to increase at historical rates, the short-range deficit is eliminated, and the long-range deficit is reduced to $5.6 million. The MTP identifies three options for eliminating the projected revenue shortfall: (1) reducing costs, through improved design and more efficient maintenance practices; (2) postponing improvements; and (3) increasing revenues. Potential new revenue sources include regionwide implementation of parking taxes and motor vehicle license charges, which currently are authorized for use by local governments; increasing the percentage of motor fuels tax allocated to the region; inflation-adjusting the motor fuels tax; and implementing pricing measures, such as additional fuel taxes, vehicle registration fees, parking fees, and congestion road pricing.

Observations and Recommendations

1. Scope of Financial Analysis: Financial planning is unusually comprehensive, in that it reflects a special effort to account realistically for operating and maintenance costs. Over time this effort will require additional refinement in terms of the analysis of new funding sources and more comprehensive integration of programs administered by transit agencies and the State. Another strength of the financial analysis is the evaluation of pricing strategies.

B. Major Investment Studies

PSRC is in the process of developing regional guidelines for preparation of MIS. Several MIS currently are underway. The listing of capital projects in the MTP identifies the projects for which MIS are planned. These include a number of projects described as widening or new construction to accommodate HOV or in a few cases, general-purpose lanes. PSRC explained during the site visit that each MIS will evaluate the individual projects identified in the MTP as one of a number of multimodal alternatives to be considered in a particular corridor, although this broader MIS context is not mentioned in the MTP. Project sponsors generally will have responsibility for preparing the MIS; PSRC's role will consist, in large part, of screening for consistency with MTP policies and the Transportation Plan.

PSRC staff said that they view the MIS as a means of streamlining compliance with National Environmental Protection Act (NEPA) requirements and also as a bridge between short- and long-range projects. PSRC aims to integrate MIS into the larger planning process. The scope of MIS will be at the sub-area, corridor, or sub-corridor level and will address the relationship between proposed major improvements and local projects. PSRC anticipates that the Congestion Management System, as well as specific project proposals and needs identified by state and local governments, will trigger MIS.

A 1994 Memorandum of Understanding (MOU) for Planning Coordination and Cooperation between PSRC and the RTA stipulates that the two agencies will work cooperatively on MIS. PSRC's work program includes an item for MIS that provides for the documentation of procedures, updating of the list of potential MIS projects, development of an MIS tracking system, and participation in and support of selected MIS.

Observations and Recommendations

1. MIS Process: The MPO is just starting to integrate MIS into the planning process. A generic framework that identifies roles and responsibilities of the parties to the process is needed to facilitate cooperative MIS efforts. The MPO is encouraged to work collaboratively with its partners in defining the MIS process. This effort will help the participants to identify additional opportunities to make the MIS process serve regional needs.

2. Relationship to Congestion Management System: The integration of the MIS process and development of the CMS will add to the strength of the regional planning process.

C. Congestion Management System and Other ISTEA Management Systems

A work program for the Congestion Management System (CMS) was prepared by PSRC to meet the federal October 1994 deadline in the ISTEA rule. PSRC was selected by the U.S. Department of Transportation to conduct one of four national case studies examining the integration of Intelligent Transportation Systems (ITS) in the CMS. PSRC's approach emphasizes integration of the CMS in the planning process and analysis of congestion within a multimodal context. The relationship of congestion management to land use planning also will be addressed in compliance with the GMA concurrency requirement mandating that "land development and the transportation network be mutually compatible." The CMS will play a key role in the performance monitoring effort planned in conjunction with VISION 2020 and suggested in the GMA.

PSRC has a two-phase approach to CMS development. During the first phase, the system's network of facilities will include National Highway System (NHS) routes, auto ferry routes, and major transit (i.e., bus and HOV) commuter routes over NHS and parallel roadways. The principle performance measure to be used in this phase is the volume-to-capacity (V/C) ratio, with roadways having a V/C over 0.9 being considered unduly congested. It is state policy to tolerate some congestion as a means of motivating people to use alternate modes of transportation. The initial data collection effort for the CMS, which currently is under way, will cover roadway volumes and capacities, as required to construct V/C ratios, as well as other data related to the NHS network, including bus operations, freight movement volumes and delays, and vehicle occupancies. Data collection is intentionally non-intensive, relying primarily on existing sources. The second phase, which is anticipated to begin in 1996, will rely on travel time, monitored using Automatic Vehicle Identification (AVI) technology, as the major performance measure. According to the CMS work plan, AVI will be used to monitor travel times for all forms of surface transportation.

A wide range of transportation demand management (TDM) and transportation systems management (TSM) strategies will be considered under the CMS. The CMS work plan includes a preliminary list of agency responsibilities for the CMS, in which each of eleven different tasks are identified as responsibilities of the cities, counties, transit agencies, PSRC, WSDOT, or other agencies. According to the work plan, MOUs are being developed between PSRC and each public transit agency in the metropolitan area.

PSRC's fiscal year 1996 work program provides for refinement of the CMS work plan, initiation of Phase 1 performance measure data collection, and implementation of the full CMS. A related task identified in the document is coordination with WSDOT in developing the Public Transportation Management System (PTMS) and Intermodal Management System (IMS). A Request for Proposals had been issued at the time of the site visit for a consultant to develop the first phase of the CMS.

WSDOT is leading the development of the PTMS, in cooperation with the state's transit operators, and the IMS. WSDOT staff at the site visit indicated that the state does not perceive that it has a strong decision-making role in relation to the PTMS, which it views as being more appropriately a transit agency responsibility.

Observations and Recommendations

1. Further Development: PSRC's work on the CMS has focused thus far on conceptual development. Substantial additional effort is necessary to translate this strong foundation into a fully operational system.

D. Air Quality and Conformity

All or parts of the metropolitan area currently are in nonattainment for carbon monoxide (CO), ozone, and fine particulates (PM_{10}), as follows:

- CO: Moderate plus (recent emissions levels or design values over 12.7 parts per million but less that 16.4 parts per million)

- Ozone: Marginal

- PM_{10}: Three areas within the region are designated as being nonattainment: Seattle Duwamish River industrial area, Kent Valley industrial area, and Tacoma Tideflats.

Monitored data show that the region's nonattainment areas have met National Ambient Air Quality Standards. The State Department of Ecology has submitted maintenance plans to the US Environmental Protection Agency (EPA). EPA's approval of these plans is required before a region can be formally redesignated as attaining federal air quality standards. The most recent CO and ozone State Implementation Plans do not contain any Transportation Control Measures

(TCMs), because of the pending change in the status of the areas currently in nonattainment. The forecasted improvement in air quality results primarily from the implementation of state-mandated vehicle inspection and maintenance programs and the use of oxygenated fuels during the winter.

The MPO has developed a model which is used by jurisdictions within the metropolitan area to evaluate the air quality impacts of locally-sponsored projects.

Observations and Recommendations

1. General: Air quality planning is technically sound, and the MPO works effectively with state air quality agencies.

E. Public Involvement

The foundation for PSRC's public involvement process was established with the development and subsequent updating of VISION 2020. The original version of VISION 2020 was adopted after three years of briefings, public meetings, symposiums, surveys, newspaper tabloid inserts, workshops, and open houses. PSRC used many of the same types of public involvement activities in preparing the MTP. During the summer and fall of 1994, in preparation for release and public review of the initial MTP draft, PSRC conducted meetings with member jurisdictions, public workshops on specific issues, and open houses in each of the four counties within the region.

The context in which PSRC approaches public involvement is important in several respects. In the wake of PSCOG's demise, PSRC is an institution acutely sensitive to the prerogatives of its members. As such, the agency is careful to provide for active participation by the public without crossing into the domains of state and local jurisdictions. Another important factor is the positive attitude cultivated by PSRC's staff directors, which has set a tone throughout the agency that values and validates public involvement. PSRC's public involvement efforts also reflect public review requirements established in Washington's State Environmental Protection Act (SEPA).

PSRC's Public Participation Plan, adopted in 1994, provides a framework for public notification, outreach, and participation. This plan sets forth seven guiding principles for public involvement that provide the basis for an effective public participation program. The principles range from an acknowledgment that transportation "professionals do not have a monopoly on good solutions" to the reality that effective public participation is costly, yet "essential to sound decision-making."

The major elements included in the plan are as follows:

- Meetings: The meetings of the Executive Board, Transportation Policy Board, and the Operations Committee usually occur on a monthly basis. The meetings are open to the public, which is given notice at least 10 days prior to each meeting. A public comment period is provided during each of these meetings, as well as at meetings of the General Assembly. PSRC provides opportunities for public involvement in the early stages of

MTP and TIP approval and other key areas of decision-making. These opportunities include workshops, open houses, and other public forums. PSRC complies with GMA procedures,which require public hearings for the development and adoption of multicounty policies.

- Publications: PSRC publishes a monthly newsletter that provides information about the agency's programs, upcoming meetings, activities, and possible decisions and actions, along with PSRC's address and the phone numbers of staff who can provide additional information. The newsletter is available free of charge and is sent to every individual and group that requests to be included on PSRC's mailing lists. PSRC also sends news releases on its programs, activities, and upcoming actions to news media in the region. In addition, PSRC produces a wide variety of reports, maps, brochures, and other publications providing technical and policy information.

- Organizational and Community Liaison: PSRC participates in advisory committees and makes presentations to civic groups. PSRC also works with local jurisdictions to ensure that effective opportunities are provided for early and continuous participation at the local level.

PSRC's reputation as an innovator in public participation results primarily from the creativity demonstrated in implementing the Public Participation Plan, rather than in the specific contents of the plan itself. The public notification time frames that the plan stipulates are bare minimums of ten days, although the practice generally exceeds the minimum requirements. The following are noteworthy examples of the initiative PSRC has demonstrated:

- Two videos have been produced, entitled "Let's Get Moving," and more recently, "Vision 2020: Region at a Crossroads," which provide a polished and interesting presentation of regional transportation issues oriented to an audience of non-professionals. They have been used extensively at meetings to facilitate understanding and to engage the general public and are available to individuals at libraries and the PSRC office.

- There has been a major emphasis on establishing partnerships with special interest groups, such as pedestrians,bicyclists, and freight handlers. Outreach has taken the form of seeking out existing organizations, providing speakers for meetings, and developing handouts and materials of specific interest to targeted groups. Conscientious attempts by PSRC to involve Native American tribes have met with limited success. The contributions of citizens on PSRC's policy boards have proved to be useful in guiding the development of plans and programs early in their development.

- PSRC's Information Center gives the public access to studies, reports, maps, videos, planning documents, and other material. An electronic bulletin board provides useful and timely information for those who travel on the information highway.

- PSRC provides information to the media in a variety of formats, from press releases to op ed articles. Upcoming opportunities for public involvement, meeting schedules, and planning events are communicated through various means, including faxes and personal contact. PSRC works to maintain effective channels of communication with radio stations and newspapers that serve minority and non-English speaking audiences.

- In early January 1995, PSRC held a conference entitled, "Telecommunities-Global Connections, Local Impacts," as a means of reaching a previously untapped audience of current and potential telecommuters. The emphasis was on examining the relationship between telecommunications and surface travel.

One critical aspect of public involvement that PSRC has not addressed is performance evaluation, in the sense of assessing the impacts of its efforts. This type of evaluation could involve establishing benchmarks for success and performance measures at the outset of a public involvement initiative.

Observations and Recommendations

1. Proactive Public Involvement: The MPO has successfully identified target audiences, with whom it has developed effective two-way channels of communication, including electronic bulletin boards, information centers, and hotlines, as well as more traditional forms of information dissemination.

2. Effective Partnerships: Active partnerships have been formed with community and special interest groups, including advocates for bicycle facilities and the freight industry.

3. Evaluation: A continuing performance evaluation would help the MPO to identify opportunities for strengthening its public involvement effort.

F. ISTEA Fifteen Factors

PSRC's planning process reflects substantial progress in addressing the fifteen factors. The foundations of this process in VISION 2020, the GMA, and the SEPA provide for the integration of transportation into a broad socioeconomic and environmental context, which is consistent with the objectives of ISTEA. The MTP is a component of VISION 2020 and is conceived as an integral part of the region's growth management strategy.

Factors that are particular strengths of the planning process include the following:

- *Preservation and Efficient Use of Existing Facilities:* The MTP recommends that nearly all existing transportation revenues be used for maintenance and preservation of existing systems.

- *Energy Conservation:* The objectives of reducing VMT through demand management and encouraging transit and HOV use serve the purpose of energy conservation, in addition to environmental protection and growth management. The MTP cites the CMS, RTA's Master Plan, and WSDOT's Core HOV system.

- *Consistency with and Impact on Land Use Plans:* The MTP links regional growth management objectives and policies with transportation programs as required by the state's GMA. PSRC has worked with local governments to develop a review and certification process to ensure conformity of local transportation and land use plans with VISION 2020 and the MTP.

- *Expenditure on Transportation Enhancements:* The nonmotorized-transportation system will serve as a framework for the identification of significant enhancement projects and establishment of priorities among proposed improvements. Substantial federal funding has been programmed for nonmotorized facilities.

- *Enhanced Movement of Freight:* PSRC has established a freight task force as an advisory group; the MTP contains a substantial freight and goods mobility component.

- *Use of Life-Cycle Costs for Tunnels, Bridges, and Pavement:* The MTP reflects consideration of state requirements for Least Cost Planning, which shares features in common with life-cycle costing.

- *Overall Social, Economic, Energy, and Environmental Effects:* The MTP has been developed in coordination with the growth management and economic components of VISION 2020 and in fulfillment of GMA and SEPA requirements.

- *Expand and Enhance Transit Service:* The MTP recommends significant expansion of transit services, extensive HOV development, and growth management policies that support increased use of transit.

These factors are integral to PSRC's planning process. Additional factors also have received considerable attention as part of MTP development.

Observations and Recommendations

1. State and Local Policies: In responding to the policies articulated in the GMA and SEPA, which emphasize the relationship of transportation to socioeconomic conditions and the physical environment, the planning process is structured to address many of the central concerns embodied in the fifteen factors. Any future documentation prepared by PSRC showing how the metropolitan planning process responds to the fifteen factors should address the unique context created by the GMA and SEPA.

VI. Integration of Strategic Transportation Planning

A. Transit

The principal forum for coordination among the transit agencies serving the metropolitan area is PSRC's Transportation Operators Technical Committee, which advises the Executive Board. The major incentive for coordinating planning efforts is PSRC's administration of federal funds used for transit projects, particularly through the TIP. The transit operators noted during the site visit that the CMAQ program has facilitated multi-county projects, and that their interests had broadened to become more regional in scope. They also expressed some reservations about the fact that the transit agencies have no direct vote on the Executive Board.

The MTP incorporates the services proposed in the RTA Master Plan as a principal component of its infrastructure investment strategy. This strategy combines the regional transit plan with WSDOT's HOV development plans, completion of critical links in the highway network, and development of an integrated nonmotorized-transportation network of pedestrian and bicycle facilities. The RTA Master Plan and the MTP infrastructure investment strategy provide for coordinated, phased expenditure, and system implementation. Phase I provides for the implementation of a light rail system connecting downtown Seattle to the north, south, and east; a commuter rail system operating on existing tracks between Everett and Lakewood, which is south of Seattle; and local feeder bus service to support the rail system. In Phase II, the rail lines would be extended to other urban centers.

A referendum to fund the RTA system was defeated by the voters in March 1995. At the time of the EPR site visit, the RTA planned to bring the system plan before the voters again, probably in a somewhat scaled-back and less costly form.

Observations and Recommendations

1. Potential Changes in Plan: Any major change in the planned RTA system may create the need to reconsider MTP investment strategies planned in fulfillment of VISION 2020 transportation and land use policies.

B. Freight

The ports of Seattle and Tacoma constitute the nation's second-largest load center for containerized cargo, serving as a major gateway to the Pacific Rim. International trade is a key sector of the regional economy, and the area's continued success as a center of trade is threatened by congestion on the roadway and rail facilities providing access to the ports. Rail lines, which currently are used nearly to capacity, are perceived as a particularly severe constraint on growth. Without improvements in port access and mainline rail capacity, the region will be at a disadvantage in competing with ports in California and Vancouver, British Columbia.

Responding to ISTEA requirements for freight transportation planning, PSRC has organized a Regional Freight Mobility Roundtable composed of representatives of the railroads, ports, motor carriers, air freight companies, and shippers, which is working in partnership with PSRC on the development of a freight mobility strategy. The strategy will provide recommendations for public and private sector organizations regarding operational, institutional, and financial initiatives as well as infrastructure investments. The Action Element of the MTP includes items for developing freight mobility performance measures and maintaining a freight mobility database, the purposes of which are to establish how the existing system is constituted and help in identifying needed improvements.

In addition to port access, a number of key issues have been identified by the Regional Freight Mobility Roundtable:

- rail grade separations;
- retaining freight service on rail lines if commuter service is implemented;
- provision of freight access as part of a proposed high-speed rail system;
- need for improved design of highway exits and entrances;
- operational concerns, such as restrictions on night deliveries and freight rail speeds, and needs associated with movement of aircraft parts in oversized loads;
- effect of carpool lanes in constraining capacity for truck movements;
- need for improved regional transit connections, which divert motorists from roadways, thereby improving travel conditions for trucks;
- border crossing delays; an accord between Canada and the U.S. will help to alleviate current problems through a number of measures, including pass programs that will allow frequent travelers to pass through border crossings in express lanes, automatic entry devices in some remote border areas, and the introduction of electronic clearance of commercial goods. A related north-south goods movement concept is creation of a borderless "Cascadia" region in which transportation infrastructure facilitates commerce throughout an area extending from Vancouver, British Columbia, to Eugene, Oregon.

Observations and Recommendations

1. Initiative: PSRC's work in establishing and supporting the Regional Freight Mobility Roundtable represents a significant initiative and starting point for addressing goods movement needs as part of the planning process. A key aspect of this effort is the progress that has been achieved in freight data analysis.

VII. Travel Demand Forecasting

PSRC's forecasting process has been undergoing substantial development since a technical review by FHWA in 1992. The FHWA review identified several problems and areas where updating was required, including the models used for trip generation, trip distribution, and mode split. PSRC has addressed the deficiencies identified in the review and is undertaking corrective action in these areas. PSRC also has initiated a more far-reaching effort, in coordination with the U.S. DOT-sponsored TRANSIMS development program, the aim of which is to advance state-of-the-art transportation forecasting by developing dynamic travel behavior models. This approach would address changes in activity and travel patterns in their entirety, rather than on a trip-by-trip basis, as is done in conventional models.

PSRC's involvement with dynamic travel behavior modeling follows from its pioneering work with longitudinal travel behavior surveys. Since 1989, PSRC has administered the Puget Sound Transportation Panel (PSTP), which is the only large-scale general purpose transportation panel in the United States. PSTP provides time series data that can be used to determine how such characteristics of individual travel behavior as trip generation, distribution, and choice of mode change over time in response to specific socioeconomic conditions. Another important feature of PSRC's forecasting process is its use of an econometric model, STEP94, to generate long-range economic and demographic forecasts. These projections serve as the primary input to the travel demand models.

The PSRC model and data set are used by a number of other agencies and organizations, including counties and cities in the region, WSDOT, Metro, RTA, the University of Washington, and transportation consultants. RTA and Metro maintain consistency with PSRC data sets. PSRC-generated trip tables are used by RTA to develop transit ridership estimates for different transit scenarios using an incremental mode choice model. RTA provides the selected transit system for incorporation into PSRC planning studies. Both PSRC and RTA use the software package, EMME/2.

Observations and Recommendations

1. Technical Development: The MPO is engaged in aggressive development of its transportation forecasting capabilities, which should serve to reinforce its technical leadership among the agencies involved in planning for the region and strengthen the region's contribution to the continuing enhancement of the practice.

VIII. Meetings with Representatives of the General Public and Elected Officials

A. General Public

The EPR site visit included a meeting of the federal team with two groups of citizens who are active in the transportation planning process: members of the Regional Freight Mobility Roundtable and representatives of advocacy groups for bicycle transportation. A common theme of these two groups was appreciation for PSRC's efforts in "bringing them to the table" to participate in the planning process. As reasons for supporting the process, both the freight industry representatives and bicycle advocates cited growing official recognition and understanding of their concerns, as well as the availability of a forum in which they can make their views known.

In relation to freight transportation, it was noted that ISTEA shifted the focal point for port-related issues from WSDOT to the MPO. The representative from the Port of Tacoma noted that despite initial skepticism, he has come to see value in the Round Table, which has fostered a better understanding of how different types of freight movement relate to the transportation system as a whole.

Bicycle advocates noted increasing attention to bicycle and pedestrian planning by both the MPO and WSDOT, which they characterized as the "institutionalization of bicycle and pedestrian activity." At the same time, they expressed the need for an even greater emphasis on nonmotorized transportation. There was an objection to categorizing nonmotorized projects as "enhancements," because they should be regarded as integral to the transportation system. It was noted that bicycle mode splits in some sections of Seattle are in double-digits. Consideration of bicycle and pedestrian issues is being incorporated into the planning process at the local level. WSDOT also has gone through significant changes in how it perceives transportation issues, having established a position for a bicycle and pedestrian coordinator prior to ISTEA. Bicycle interests are well-organized and have had a much greater impact on the process than have those concerned with pedestrian issues.

B. Local Elected Officials

The Federal Team met with three municipal and county elected officials who are members of the Executive Board and then with the members in attendance at a regular Transportation Policy Board meeting. The Board Members' principal comments were as follows.

- The transportation planning process is working well in the region, primarily as a result of PSRC's structure and the excellent quality of the staff. Another strong point is intergovernmental cooperation, as exemplified in the relationship between PSRC and WSDOT. The enhancement program also has worked well.

- Funding projects of regional significance is a problem, because it requires a shift of funds allocated to local jurisdictions. Some type of set aside may be necessary. PSRC's role is perceived by some jurisdictions as being threatening.

- The public involvement process has been successful in most respects, and has generated no broad complaints. One problem is the limited range of participants, who have tended to be those interested in a particular topic, rather than the community at large. The challenge is to make transportation comprehensible and relevant to the public, perhaps by illustrating concepts through specific examples of good projects that have been funded through ISTEA. The public most often reacts only when conditions deteriorate to an intolerable state.

- The Executive Board needs to strike a balance between reflecting the public will and demonstrating leadership. While PSRC does an excellent job of presenting information to the public in a form that is understandable, improved public education still is needed. Local officials and the U.S. Department of Transportation also must work to educate recently elected U.S. Representatives about transportation.

Conclusions

PSRC and its partner agencies have responded to the challenges of ISTEA and state law by establishing a process that integrates transportation within its broader environmental and socioeconomic context. This process, which is still evolving, has resulted in innovative planning approaches, including: creation of a Freight Mobility Round Table; development of plans for a nonmotorized transportation network of bicycle and pedestrian facilities; adoption of an incentive program to encourage the use of alternatives to drive-alone automobile travel; development of active partnerships with community groups and interest groups; and incorporation of land use and environmental considerations as fundamental elements of transportation planning. A framework for Major Investment Studies and updating of interagency agreements are needed to clarify roles and responsibilities for a number of key planning functions. A potential area of improvement would be the strengthening of PSRC's role in the programming of transit and state-administered funds. In the future, PSRC will face the crucial test of maintaining public support and obtaining necessary funding as broad visions of the region's future are translated into specific projects and programs.

Appendix A
PSRC Executive Board

Member Jurisdiction	Representatives	Weighted Votes
King County	4	268.5
Largest City (Seattle)	3	130.6
Other Cities/Towns	3	137.9
Kitsap County	1	36
Cities/Towns	1	36
Pierce County	2	109
Largest City (Tacoma)	2	76
Other Cities/Towns	1	33
Snohomish County	2	86.5
Largest City (Everett)	1	27
Other Cities/Towns	1	59.5
Member Jurisdiction Totals	21	1000
Port of Seattle	1	50
Port of Tacoma	1	30
Port of Everett	1	10
State Transportation Commission	1	30
State Department of Transportation	1	30
Statutory Member Totals	5	150
Grand Totals	26	1150

Appendix B
Agenda

FHWA/FTA Enhanced Planning Review of the
Seattle-Tacoma-Everett Metropolitan Area

Puget Sound Regional Council
1011 Western Avenue, Suite 500
Seattle, WA

Monday, May 8, 1995

8:30 - 10:30 Federal Team Meeting

10:30 - 11:00 Introductions--Objectives of the Enhanced Planning Review

Deborah Burns, FTA Headquarters
Sheldon Edner, FHWA Headquarters

Federal Team
Bill Kappus, FHWA Washington Division
Pat Levine, FTA Region X
Carl Armbrister and Lisa Hanf, FHWA Region 10
Sheldon Edner, FHWA Headquarters
Deborah Burns, FTA Headquarters
Bob Wheeler, FHWA
Richard Walker, MARAD
Lyn McClelland, MARAD
Mark Sullivan, OST, Office of Intermodalism
Melissa Laube and Terrence Smith, US DOT/Volpe Center
Beverly Silverberg, Consultant

Local Participants
Puget Sound Regional Council:
Executive Bob Drewel
Councilmember Maggi Fimia
Councilmember Martha Choe
Councilmember Jim Street
Don Bullard, Chair, Transportation Enhancements Committee
Mary McCumber, Executive Director
King Cushman, Director of Transportation Planning

Mark Gulbranson
Ralph Cipriani
Richard Milne
Steve Fitzroy
Jerry Dinndorf
Pete Beaulieu
Don Pethick
Karen Richter
Bob Sicko
Tony Liekteig
Ned Conroy
Don Nelson, Washington State Department of Transportation
Mike Partridge, Washington State Department of Transportation
Phil Miller, King County Department of Public Works
Peter Lagerwey, City of Seattle
Kirk McKinley, City of Bellevue
Ron Posthuma, King Co. Metro
Chuck Kirchner, Regional Transit Authority
Ken Stanley, Pierce Transit
Charles Pestrud, Community Transit
Richard Hayes, Kitsap Transit
Steve Elmer, Port of Seattle
Paul Chitcote, Port of Tacoma
Dan O'Neal, Freight Mobility Roundtable
Gene Questad, Boeing Corp.
Janet Neely, TNT Reddaway Truck Line
John Ficker, Weyerhaeuser Line Co.
Susie Stephens, Northwest Bicycle Foundation
Aaron Ostrom, Alt-Trans

11:00 - 12:00 Regional Transportation Issues

Federal Team Discussion Leader
Bill Kappus

Local ParticipantsStatus/Update/Discussion

Appendix B (continued)

1:30 - 3:00 Organization of the Planning Process and Integration of Planning Activities

Federal Team Discussion Leader
Pat Levine
Local Participants Status/Update/Discussion

Tuesday, May 9, 1995

8:30 - 10:00 Public Involvement Process

Federal Team Discussion Leader
Beverly Silverberg

Local Participants Status/Update/Discussion

10:00 - 12:00 Breakout Session with US DOT's Public Involvement Consultant

Federal Team Discussion Leader
Beverly Silverberg

Local Participants Status/Update/Discussion

10:00 - 12:00 Financial Planning and Financial Constraint

Federal Team Discussion Leader
Pat Levine

Local Participants Status/Update/Discussion

1:30 - 2:30 Travel Demand Forecasting

Federal Team Discussion Leader
Bill Kappus

Local Participants Status/Update/Discussion

Appendix B (continued)

2:30 - 3:30 Air Quality

Federal Team Discussion Leader
Bill Kappus

Local Participants Status/Update/Discussion

3:30 - 4:30 Congestion Management Systems and Other Management Systems

Federal Team Discussion Leader
Bill Kappus

Local Participants Status/Update/Discussion

Wednesday, May 10, 1995

8:30 - 10:30 Consideration of the Fifteen Factors

Federal Team Discussion Leader
Sheldon Edner

Local Participants Status/Update/Discussion

10:30 - 12:00 Major Investment Studies

Federal Team Discussion Leader
Pat Levine

Local Participants Status/Update/Discussion

1:00 - 4:30 Meetings with Citizens/Agency Representatives/Transit Operators

Appendix B (continued)

1:00 - 2:15 Freight and Goods Planning

Federal Team Discussion Leader
Bill Kappus

Local Participants Status/Update/Discussion

2:15 - 3:30 Nonmotorized Planning

Federal Team Discussion Leader
Deborah Burns

Local Participants Status/Update/Discussion

3:30 - 4:30 Transit

Federal Team Discussion Leader
Pat Levine

Local Participants Status/Update/Discussion

Thursday, May 11, 1995

8:30 - 9:30 Meeting with Local Officials

Federal Team Discussion Leader
Sheldon Edner

(9:30 - 11:30) PSRC Transportation Policy Board Meeting

10:00 - 10:40 Discussion with Policy Board Members

Federal Team Discussion Leader
Sheldon Edner

10:40 - 1:30 Federal Team Meeting

2:00 - 3:00 Federal Team Presentation of Preliminary Findings and MPO Response

Federal Team
Local Participants

Appendix C
List of Documents Reviewed

Budget and Work Program, Fiscal Year 1996, Puget Sound Regional Council, February 28, 1995.

Community Transit Comprehensive Plan 2001, Plan Report, Community Transit, July 1989.

Everett Transit 1994 Comprehensive Plan, Prepared for the City of Everett by KJS Associates, September 1994.

Kitsap Transit Long Range Plan, Kitsap Transit, April 6, 1994.

Memorandum of Understanding for Planning and Cooperation Between the Puget Sound Regional Council and the Regional Transit Authority, August 26, 1994.

Metropolitan Transportation Plan, Puget Sound Regional Council, 1995.

Pierce Transit System Plan, Pierce Transit, December 1992.

Policy Framework for 1995 ISTEA TIP Process, Puget Sound Regional Council, Adopted January 26, 1995.

Public Participation Plan for the Puget Sound Regional Council, Puget Sound Regional Council, Adopted May 1994.

Regional Transportation Improvement Program, Puget Sound Regional Council, October 28, 1993, as corrected and amended through October 19, 1994.

Vision 2020, Growth and Transportation Strategy for the Central Puget Sound Region, October 1990.

Vision 2020, Multicounty Planning Policies for King, Kitsap, Pierce ,and Snohomish Counties, March 1993.

Vision 2020 Update, Public Review Draft, Puget Sound Regional Council, December 6, 1994.