STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 95-2123 FOR THE PURPOSE OF ENDORSING THE CITIZENS ADVISORY COMMITTEE FOR THE UPDATE OF THE 1996 REGIONAL TRANSPORTATION PLAN

Date: March 23, 1995 Presented by: Andrew Cotugno

PROPOSED ACTION

This resolution would endorse the Citizens Advisory Committee (CAC) for the update of the 1996 Regional Transportation Plan (RTP). The RTP CAC will provide a broad based, long-range and regional citizens perspective on regional transportation planning issues during the process of updating the RTP and will be advisory to the Metro Council and the Metro Joint Policy Advisory Committee on Transportation (JPACT).

TPAC reviewed composition of the Citizens Advisory Committee for the RTP Update at its March 31, 1995 meeting and unanimously endorsed Resolution 95-2123.

BACKGROUND AND FACTUAL ANALYSIS

Background

The RTP CAC is one component of a comprehensive public involvement strategy that includes a wide variety of techniques to inform, involve and receive input from the public during the process of updating the RTP. The CAC will also provide a broad based, long-range and regional citizens perspective on regional transportation planning issues during the update. The CAC will provide for continuing public involvement in key decisions related to the development of the RTP as required by the federal Intermodal Surface Transportation Efficiency Act (ISTEA). The RTP CAC will be advisory to the Metro Council and the Metro Joint Policy Advisory Committee on Transportation (JPACT) and will review recommendations made by the RTP work teams.

The public involvement strategy for the 1996 RTP update and the RTP CAC mission, charge, structure, and nominations and appointments process were reviewed by the Metro Committee for Citizen Involvement (MCCI) and the Metro Council. (See Attachment A for a full description of the committee and an application form.) The 21 member RTP CAC, as reviewed by the Metro Council and MCCI, included 12 community delegates and nine at-large delegates. The community delegates include resident delegates and business delegates from the Cities of Multnomah County, Multnomah County, the City of Portland, the Cities of Clackamas County, Clackamas County, the Cities of Washington County, Washington County, and Clark County. The at-large delegates include one Metro Committee for Citizen Involvement member, two alternative mode delegates, a high school/youth delegate, a freight delegate, a senior citizen,

a member of the academic community (This position was replaced by a motorist at-large delegate by the nominations committee; an explanation is included in the Nomination Process section of this report.), an environmental interest group delegate and a transit union delegate.

The CAC will meet monthly or at intervals as needed to adequately respond to the release of products and information. The committee will have full access to information related to the RTP update, including background materials, draft documents, informational briefings and presentations from technical staff.

The CAC will generally adhere to Robert's Rules of Order with the objective of creating a forum for open and free discussion. The CAC will select their own chair and vice-chair, set a regular monthly meeting time, and will develop appropriate administrative by-laws. CAC meetings will follow Oregon open meeting requirements and will provide time for public comment at every meeting. If a member of the CAC is unable to fulfill their term, JPACT and the Metro Council will appoint a replacement.

Nominations Process

Nominees were solicited through newspaper advertisements; notices to local governments and neighborhood, community, business, and modal interest groups; and at "The Choices We Make," a regional transportation fair and open house held in January 1995. RTP CAC community and at-large delegates were nominated through a joint effort of local jurisdictions and Metro. A nominations committee was formed which included members of the Metro Council, the Joint Policy Advisory Committee on Transportation (JPACT), the Transportation Policy Alternatives Committee (TPAC) and Metro staff. (Attachment B contains a roster of nominations committee members.) The nominations committee met three times to develop a recommended list of nominees for appointment and approval by JPACT and the Metro Council.

Consistent with ISTEA, the nominations committee made every effort to nominate a balanced slate of nominees offering a broad spectrum of perspectives on transportation issues, including those of groups traditionally underserved by the transportation system, such as low income and minority households, and persons unable to own or operate a car.

The following nomination criteria were used by the nominations committee:

1. Ability to develop and maintain two-way communication with a broad network of people within their community as well as the ability to communicate effectively in a group.

2. Experience serving on committees or advisory boards and/or working with neighborhood, business, community, or other civic organizations.

3. Leadership skills, which the nominations committee defined to mean some combination of the following: problem solving skills, the ability to take responsibility, ability to complete tasks, listening skills, negotiating skills, and consensus-building skills.

4. Knowledge of and experience with transportation issues and/or community issues.

5. Ability to provide the time needed to serve on the CAC and any subsequent subcommittees that are formed.

6. Fresh perspectives and new faces. The nominations committee developed this criteria to bring a number of people who have not previously participated in transportation planning into the process. This criteria also assists to meet the objective of having a wide spectrum of views and perspectives represented, including those of groups traditionally underserved by the existing transportation system.

The nominations committee clarified the difference between resident and business community delegates. Resident delegates were defined as individuals who have a knowledge of the concerns of neighborhoods, schools, commuters, and other related issues and knowledge of or ties to neighborhood and community organizations. Business delegates were defined as individuals who have a knowledge of the particular concerns of businesses in their community such as the movement of goods, access to services, parking, and other related issues as well as knowledge of or ties to business associations and chambers of commerce in their community.

The nominations committee created an at-large position for a motorist delegate to replace the academic community at-large position. Despite outreach to the academic community, there were no applicants for that at-large position. In addition, the committee felt that adding an at-large member with a specific knowledge of motorists' issues and concerns would create a more balanced committee.

There were no initial applicants for the high school student at-large position, with exception of one college graduate student. The nominations committee felt that a graduate student would not bring the specific issues and concerns of youth who are too young to operate a car to the committee. The nominations committee conducted additional outreach to area high schools and considered five students, one from Lincoln High School, one from Glencoe High School, and three from Sam Barlow High School.

A total of 58 individuals applied for a position on the RTP CAC. (See Attachment C for a list of applicants.) The screening process was extremely difficult as there were many highly

qualified applicants. The nominations committee concluded the nominations process at their March 22 meeting and is recommending a slate of 20 candidates for the RTP CAC with a final nominee for the high school at-large delegate to follow as soon as possible.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends approval of Resolution No. 95-2123.

ACC:PP:lmk
95-2123.RES
4-3-95

METRO

Regional Transportation Plan Citizens Advisory Committee

Introduction

The Regional Transportation Plan (RTP) is an umbrella document that identifies a long range transportation improvement strategy coordinated with growth predictions. The RTP identifies transportation needs related to highways, arterial streets, transit, bikes, pedestrians, and freight and supports alternative transportation programs. The current RTP will be updated in 1995 to meet current state and federal requirements.

Public involvement is critical to shaping a RTP that addresses regional transportation issues and concerns. A RTP Citizens Advisory Committee (CAC) is being formed to provide a forum for detailed public review and comment during the development of the RTP update. The RTP CAC is an important part of a comprehensive public involvement strategy that includes a wide variety of techniques to inform, involve, and receive input from the public during the process of updating the RTP.

Citizens Advisory Committee Mission

The Regional Transportation Plan Citizens Advisory Committee will provide a broad based, long range, and regional citizens perspective on regional transportation planning issues during the process of updating the Regional Transportation Plan (RTP). The RTP CAC will ensure full public access to and continuing public involvement in key decisions related to the development of the RTP as required by the Federal Intermodal Surface Transportation Efficiency Act (ISTEA).

Citizens Advisory Committee Charge

1. The RTP CAC will be advisory to the Metro Council and the Metro Joint Policy Advisory Committee on Transportation (JPACT) and will review policy recommendations made by the RTP work teams.

2. RTP CAC members will serve on RTP work teams and sub-committees as needed.

3. The RTP CAC will meet once a month and more if needed. The RTP CAC will receive reports from the RTP work teams, the project manager, and other technical staff.

4. RTP CAC members will be available to meet with neighborhood groups and other public organizations within their geographical area.

5. RTP CAC members will evaluate and participate in the project's public involvement process.

6. The RTP CAC will provide opportunity for public testimony at its regular meetings.

7. It is anticipated that RTP CAC members will serve through the completion of the RTP Update up to two years.

RTP Citizens Advisory Committee Structure -- 21 members:

Community delegates:

- 1 resident delegate from the City of Portland
- 1 business delegate from the City of Portland
- 1 business community delegate from the Cities of Multnomah County
- 1 resident delegate from the Cities of Multnomah County
- 1 resident delegate from Multnomah County
- 1 resident delegate from the Cities of Clackamas County
- 1 business community delegate from the Cities of Clackamas County
- 1 resident delegate from Clackamas County
- 1 resident delegate from the Cities of Washington County
- 1 business community delegate from the Cities of Washington County
- 1 resident delegate from Washington County
- 1 delegate from Clark County/City of Vancouver

At–large delegates:

- 1 Metro Committee for Citizen Involvement member
- 2 alternative mode delegates
- 1 student/high school age delegate
- 1 freight delegate
- 1 senior citizen delegate
- 1 academic community delegate
- 1 environmental interest group delegate
- 1 transit union delegate

Nominations/Appointments:

RTP CAC community and at–large members will be nominated through a joint effort of local jurisdictions and Metro, and appointed and approved by JPACT and the Metro Council. A selection committee composed of staff from local jurisdictions and Metro will review applications and recommend a slate of nominees to JPACT and the Metro Council. The MCCI delegate will be nominated by MCCI, and appointed and approved by JPACT and the Metro Council.

Every effort will be made to appoint a balanced slate offering a broad range of perspectives, including those of groups traditionally underserved by the existing transportation systems, such as low income and minority households which may face challenges accessing employment and other amenities. Nominees should have an understanding of the varied viewpoints that exist within the area they represent and should have access to a broad network of people. Nominees will be solicited through newspaper advertisements, notices, newsletter articles, and outreach to Chambers of Commerce, neighborhood and business associations, and environmental and modal interest groups.

Meetings:

It is anticipated that the RTP CAC will meet monthly or at intervals as needed to adequately respond to the release of products and information.

METRO

Regional Transportation Plan

Citizens Advisory Committee Application Form

Name _____

Address _____

City/State/Zip _____

Phone _____

Fax _____

Employer _____

Work Address _____

Work Phone _____

Work Fax _____

Signature _____

1. Which delegate position are you applying for? (see list on page two of attached Citizens Advisory Committee description)

2. Why do you want to serve on the Regional Transportation Plan Update Citizens Advisory Committee?

3. List and describe prior and current experience in transportation related activities and issues. List the dates (month/year) served. (use additional paper if needed)

4. List and describe other civic, community and neighborhood activities that you have been involved in. Also list the advisory boards that you have served on as a volunteer. List the dates (month/year) served. (use additional paper if needed)

5. How do you hope the transportation system will change over the next twenty years?

6. a. Do you represent a particular interest group? If so, which one?

b. How will you maintain two-way communication between that group and the Citizens Advsiory Committee throughout your involvement?

7. List two references who are familiar with your community and volunteer work.

Name _____
Address _____
Phone _____

Name _____
Address _____
Phone _____

8. Optional: Attach a resume.

Application Deadline: Monday, January 23, 5 p.m. (by mail or fax)

Thank you for your interest and time. We will notify you by mail of your status by February 22, 1995. The first meeting of the Citizens Advisory Committee is scheduled for March 1995. Please call Pamela Peck at (503) 797-1866 if you have questions.

Return to: Pamela Peck
Metro Planning Department
600 NE Grand Ave.
Portland, OR 97232-2736
Fax: 797-1794

ATTACHMENT B

Regional Transportation Plan Citizens Advisory Committee Nominations Committee

Councilor Susan McLain, Metro, Committee Chair
Councilor Jon Kvistad, Metro
Councilor Claudiette LaVert, City of Gresham, JPACT
Kathy Busse, Multnomah County, TPAC
Rod Sandoz, Clackamas County, TPAC
Brent Curtis, Washington County, TPAC
Steve Dotterrer, City of Portland, TPAC
Molly O'Reilly, TPAC Citizen Member
Mike Hoglund, Metro, Transportation Planning Manager

Observers:

Gina Whitehill-Baziuk, Metro
Pamela Peck, Metro
Renee Cannon, Metro Councilor Morrisette's staff

Regional Transportation Plan Citizens Advisory Committee Applicants List

(Please note some applicants name appear more than once on this list because they applied for more than one position.)

Community delegates:

Resident delegate City of Portland

Barbara Scott-Brier
Dick Watson
Sam Bush
Kevin Kincaid
Marcia Cooperman
Gerri Sue Lent
Brian Chase
Eugene T Canty
Steve F. Cook
Lois Achenbach
Patricia B Lee
John F. Harney
Mel Sears
Kerry Chipman
Terry Parker
Chris Eykamp

Business delegate City of Portland

Sam Bush
Seiji Shiratori
Anne O'Ryan
Steve F. Cook
Gregory Goodman
H. Richard Steinfeld
Stephen Abouaf
Peter Finley Fry

Business delegate Cities Multnomah Co.

Stephen Abouaf
Paul Spanauer

Resident delegate Cities Multnomah Co

Marcia Cooperman
Mel Sears
Chris Eykamp
Marjorie Schmunk
Charles Becker

Resident delegate Multnomah Co

Marjorie Schmunk
Charles Becker
Sam Bush
Barbara Scott-Brier
Marcia Cooperman
Steve F. Cook

Peter Finley Fry
Chris Eykamp

Business delegate Cities Clackamas Co.

Todd Chase
Don Weege
Paul Koch

Resident delegate Cities Clackamas Co

Paul Koch
Todd Chase
Don Weege
Robert Simon
Seth Shiratori
Karl W Rohde
Henry Germond

Resident delegate Clackamas Co

Robert Simon
Lynn White
Michael R Silvey
Henry Germond

Business delegate Cities Washington Co.

John Butler
Stephen Stolze
Charles Noble

Resident delegate Cities Washington Co

John Butler
Charles Noble
Jan Campbell
Stephen L Stolze
Dale C Chambers

Resident delegate Washington Co

John Porter
John Butler
Terry Moore
John J Breiling
Anne O'Ryan
Walter L Gorman
Dale C Chambers
Robert E Enninga

delegate from Clark Co./City of Vancouver

Mark Heintz

At-large delegates:

MCCI member – Don MacGillvray (nominated by MCCI)

2 alternative mode delegates

Doug Strickler
Jim Howell
Graham Clark
Dick Watson
Gerri Sue Lent
John J Breiling
Rick Meyers
Jan Campbell
Chris Bernhardt
Rex Burkholder
Joe Walicki

student/high school delegate

Graham Clark (college student)

freight delegate

Peter Manson
Joseph Intile
H. Richard Steinfeld

senior citizen delegate

Eugene T Canty
Patricia B Lee

academic community delegate (NO APPLICANTS)

environmental interest group delegate

Lynn White
Chris Wrench
Joe Walicki

transit union delegate

Kevin Kincaid

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ENDORSING THE CITIZENS ADVISORY COMMITTEE FOR THE UPDATE OF THE 1996 REGIONAL TRANSPORTATION PLAN	))))	RESOLUTION NO. 95-2123 Introduced by Rod Monroe, Chair JPACT

WHEREAS, The federal Intermodal Surface Transportation and Efficiency Act (ISTEA) and the Oregon Transportation Planning Rule require early, continuing, and responsive public involvement for regional transportation planning; and

WHEREAS, A public involvement strategy for the 1996 Regional Transportation Plan (RTP) update has been developed by Metro staff and reviewed by the Metro Council and the Metro Committee for Citizen Involvement (MCCI); and

WHEREAS, The RTP public involvement strategy includes a Citizens Advisory Committee to provide a broad based, long-range and regional citizens' perspective on regional transportation planning issues during the process of updating the RTP; and

WHEREAS, The RTP Citizens Advisory Committee will be advisory to the Metro Council and the Metro Joint Policy Advisory Committee on Transportation (JPACT) during the update of the 1996 RTP; and

WHEREAS, A nominations committee consisting of members of the Metro Council, JPACT, TPAC, and Metro staff reviewed 58 applications and forwarded recommendations for the RTP Citizens Advisory Committee; now, therefore,

BE IT RESOLVED,

1. That the Metro Council hereby appoints the members of the Regional Transportation Plan Citizens Advisory Committee listed in Exhibit A, whose term shall last through the adoption of the 1996 Regional Transportation Plan.

2. If a member of the RTP CAC is unable to fulfill their term, JPACT and the Metro Council will appoint a replacement.

ADOPTED by the Metro Council this _____ day of _____, 1995.

_____
J. Ruth McFarland, Presiding Officer

ACC:PP:lmk
95-2123.RES
3-23-95

EXHIBIT A

Regional Transportation Plan Citizens Advisory Committee

Lois Achenbach - Resident Delegate City of Portland
(resides in NE Portland)

Gregory Goodman - Business Delegate City of Portland
(business in downtown Portland)

Charles Becker - Resident Delegate Cities of Multnomah County
(resides in Gresham)

Paul Spanbauer - Business Delegate Cities of Multnomah County
(business in Gresham)

Marjorie Schmunk - Resident Delegate Multnomah County
(resides in Troutdale)

Karl Rohde - Resident Delegate Cities of Clackamas County
(resides in Lake Oswego)

Joseph Intile - Business Delegate Cities of Clackamas County
(business in Clackamas)

Paul Koch - Resident Delegate Clackamas County
(resides in Oregon City)

Jan Campbell - Resident Delegate Cities of Washington County
(resides in Garden Home)

Charles Noble - Business Delegate Cities of Washington County
(business in Hillsboro)

Robert Enninga - Resident Delegate Washington County
(resides in Beaverton)

Mark Heintz - Clark County/City of Vancouver Delegate
(business in Vancouver, WA)

Don MacGillvray - MCCI At-Large Delegate
(resides in SE Portland)

Gerri Sue Lent - Alternative Mode At-Large Delegate
(resides in Sellwood)

Joe Walicki - Alternative Mode At-Large Delegate
(resides in SW Portland)

H. Richard Steinfeld - Freight At-Large Delegate
(business in N. Portland)

Patricia Lee - Senior Citizen At-Large Delegate
(resides in SW Portland)

Anne O'Ryan - Motorist At-Large Delegate
(business in Portland)

Chris Wrench - Environmental Interest Group At-Large Delegate
(resides in NW Portland)

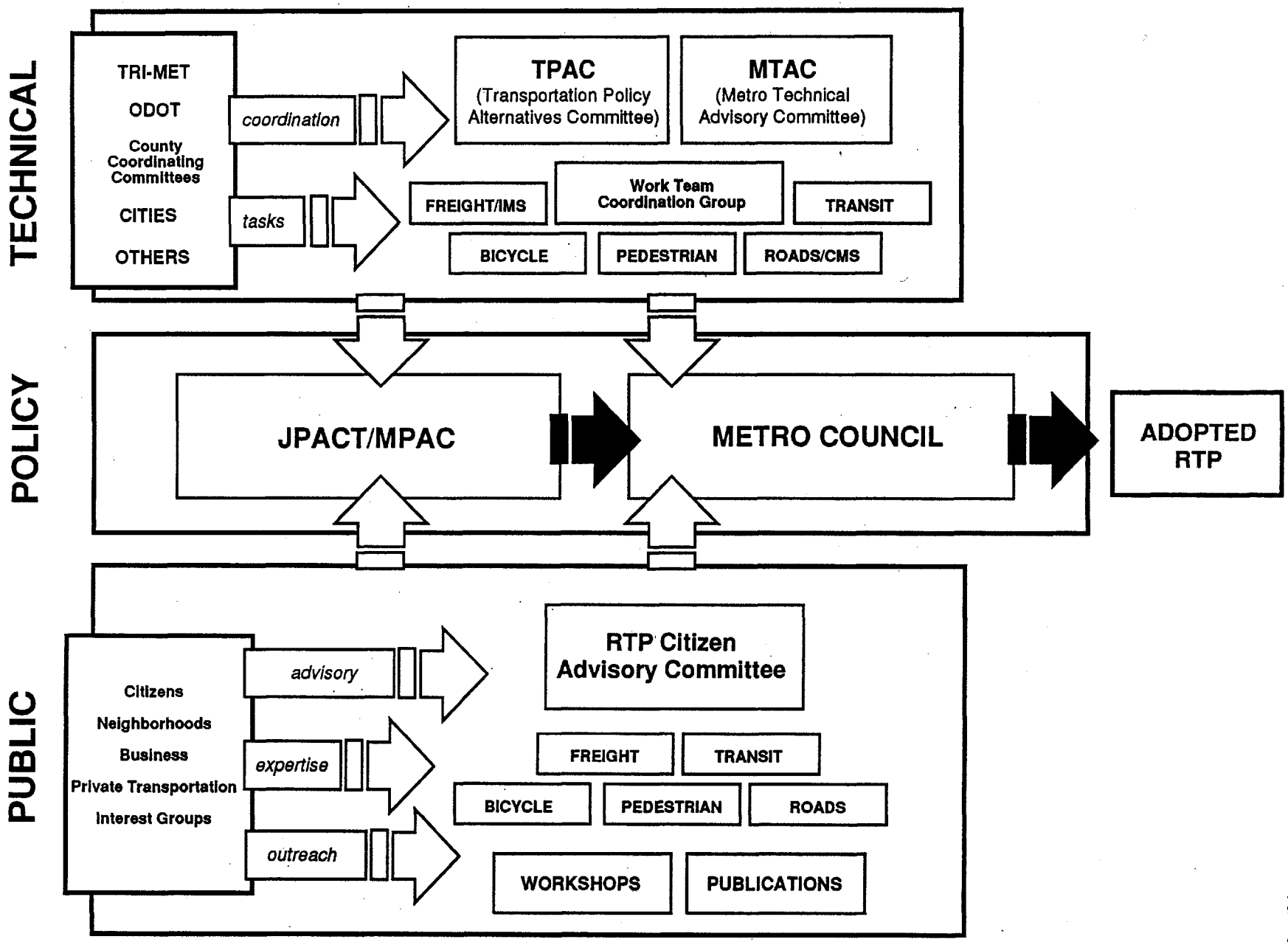
Kevin Kincaid - Transit Union At-Large Delegate
(resides in SE Portland)

David Randall Hurt - Youth/High School At-Large Delegate
(resides in Gresham)

PP:lmk
4-4-95
95-2123.RES

RTP Update Structure

METRO



Dec '94

METRO

Regional Transportation Plan
Citizens Advisory Committee

Introduction

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- 1 resident delegate from Clackamas County
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Meetings:

It is anticipated that the RTP CAC will meet monthly or at intervals as needed to adequately respond to the release of products and information.

M E M O R A N D U M

METRO

Date: April 5, 1995

To: JPACT

From: Michael Hoglund, Transportation Planning Manager

Re: Lidar Demonstration Project Proposal

Attached for your review are two pieces of information regarding an air quality-related demonstration project being proposed for the Portland metropolitan area airshed. The project is being proposed by the Alliance for Transportation Research, a division of the Department of Energy's Los Alamos National Laboratory. Representatives of the Alliance will provide an overview of the proposal at the April 13 JPACT meeting.

Following the overview and subsequent discussion, JPACT will be asked to endorse a letter of support to Congress for pursuing the Portland area project. Given the region's support, members of the Alliance will be working to secure project funding in the Department of Energy's Los Alamos budget for the next three federal fiscal years.

Lidar Technology

Lidar stands for "light detection and ranging," and is similar to radar in that it is a remote sensing technique that pulses laser light into the atmosphere and senses the return of atmospherically scattered light. The Alliance/Los Alamos proposal is to use the technology to examine pollutants for their chemical compositions within the Portland airshed. The technology would provide "real time" readings of the make-up and concentration of the airshed. Lidar theoretically would be able to differentiate pollutant concentrations within the airshed and identify chronic or potential problem areas.

Over time, as information is collected and stored, lidar could form the basis for a real-time predictive model. The model would more accurately forecast air quality alert days and subsequently trigger strategies to ensure that Clean Air standards are not violated.

The Los Alamos team can further discuss the lidar technology at the April 13 meeting.

Study Proposal

The study would cover a three-year period and would result in three major products, generally one product per year. The first year would be used to set up the study, gather background information on the Portland airshed and meteorological conditions, and develop an instrument that measures general aerosol levels. Year two would result in instrumentation that can measure at "large signature" levels nitrogen oxides and volatile organic compounds, the precursors to ozone pollution. At that point, we would have general information on the different sources of pollution within the Portland airshed. At the end of the third year, instrumentation would be precise enough to provide for "small signature" analysis, or the ability to evaluate small areas. We would also be able to monitor the movement of pollutants within the region.

The study would also focus on how the advanced technology would be used in the air quality/transportation decision-making process. Again, the Los Alamos team will elaborate on the study products at the April 13 meeting.

Project Cost

The project cost is estimated at about $10-12 million. No local funds are being requested.

Project Staff

The proposal calls for three project teams. Two teams would be comprised of Los Alamos and Alliance for Transportation Research members. An Oregon team would provide local expertise and oversight. It is anticipated that the local team would include skilled professionals from transportation, air quality, and scientific agencies and institutions. Candidate agencies and institutions for the Oregon team include Metro, DEQ, ODOT, local jurisdictions, PSU, OSU, and the Oregon Graduate Institute. This list is preliminary and will be revised as necessary.

Technical Coordination

The proposal would represent a significant advancement in the field of air quality modeling. Current models are emission-based and only estimate pollutants emanating from tailpipes. Lidar provides the opportunity to retrieve real-time, location-based air quality information. Potentially, lidar technology could be used to evaluate the effectiveness of various air quality or

transportation measures. For example, lidar could potentially be used to evaluate the air quality effect of a new interchange or major new development.

Enhancing air quality modeling would be consistent with a number of local and national efforts to improve transportation and land use models. Los Alamos is heading a national effort to review, and potentially modify, traditional travel forecasting models. Metro, in cooperation with ODOT and other Oregon MPOs, is conducting extensive survey and model enhancement work to improve our own regional travel forecasting models. Specifically, the Metro model is being upgraded to better analyze alternative forms of transportation including truck/freight movements, bicycles, and pedestrians. The model will also be better able to forecast the effectiveness of travel demand programs.

Land use models are also evolving. Metro's Real Estate Location Model (RELM) will help us better understand development trends and market conditions as part of our growth allocation (population/employment) process. Lidar technology would be consistent with our efforts to gain better information in the areas of land use, transportation, and air quality.

Process

The Alliance/Los Alamos team presented the proposal to Portland area representatives on March 30. TPAC was provided a brief overview of the proposal the next day. TPAC recommended forwarding the proposal to JPACT subject to a review by TMAC and technical modeling staff. Those activities are scheduled and results will be reported to JPACT on April 13. Assuming JPACT approval, the Alliance/Los Alamos team will pursue an appropriation in mid-April. Project start-up date has not been determined, but would likely coincide with the start of the next federal fiscal year in October.

MH:lmk

Attachments

COOPERATIVE DEVELOPMENT OF AN ADVANCED TECHNOLOGY AND DECISION SUPPORT MODEL:

THE PORTLAND AIR QUALITY PROJECT

David Albright, President, and Larry Blair, Executive Vice President
The Alliance for Transportation Research

PURPOSE

This project will develop and demonstrate a comprehensive and coordinated process of integrating advanced technology with the decision making process of public organizations. The advanced technology to be developed is a species specific LIDAR for air quality monitoring. The decision support model is characterization and mitigation of urban and regional air pollution.

PRODUCTS

The products of the Portland Air Quality Project include an advanced technology and a model for meaningfully using the technology to support decisions by public organizations. Specific products are as follows.

- a new LIDAR technology constructed by Los Alamos National Laboratory
- a procedure for collaboration between a scientific team building technology and a planning team which will use the technology
- a model for developing a decision support structure among interested organizations so that data from new technology is useful
- specific application of the technology and process in Portland, Oregon

NEED

There is a general need to improve technical support for public decision makers. Our governmental process is founded on commitment to the public well being. Serving the public interest through advanced technology is a complex process. It involves the types of data to inform decisions, and how these data are summarized and presented. The need is shared by the scientists, engineers, planners, and public decision makers.

There is a specific need to improve support for urban and regional air quality decisions. This includes and extends beyond existing regulatory requirements. The need is to improve air quality characterization, provide quality data, and assess the effect of mitigation investments. This need is shared by all levels of government concerned with air quality.

DEMONSTRATING THE MODEL

An innovative team will be formed to combine scientific and planning excellence. The resulting technology and model can be used by state and federal agencies, metropolitan planning organizations, city and county governments.

The demonstration will be in Portland, Oregon. It will address a practical situation of interest to the state and city transportation and environment officials. To be successful, project must be something involved organizations understand as important to the ongoing success of their mission.

ROLES AND RESPONSIBILITIES

OREGON TEAM - The Oregon team will identify and define a current transportation-related air quality situation. It must have practical and important implications locally as well as generic applicability to a range of similar situations in other locations. This team will be responsible for working with the scientific team to ensure common understanding of the data needed and the data to be provided. The Oregon team will also be responsible for the local operations during the study, including conventional instrumentation for air quality, metrology and traffic monitoring. Finally, this team will lead in analyzing results and assessing the value of the process.

LOS ALAMOS TEAM - This team will be responsible for designing, constructing, testing and fielding the species-specific LIDAR air quality monitoring system that would be the key innovative tool introduced in this project. This team is responsible for dialogue with other team members to ensure the technology will provide data to support the intended decisions. The Los Alamos team will operate the technology during the Portland field tests. This team will also help the Oregon team interpret the LIDAR data, and work cooperatively to integrate and correlate those results with data from other monitors used in the study.

ATR TEAM - This team would be responsible for overall design, integration and coordination of the diverse scientific and planning elements of the project. The ATR team will work closely with and support the Oregon team in the design of the air quality study. This team will work closely with and support the Los Alamos team in clarifying capabilities of the technology. The ATR team will be the prime interface with the ultimate sponsor of the project, and coordinate support from the other two teams in this activity.

ACTIONS

- The project will begin with two activity paths. The paths will be designed to intentionally intersect. This is a fundamental change in the traditional model of independent and parallel paths. The Oregon team will identify, define, and design the air quality study, assisted by the ATR team. The Los Alamos team will design, build and test the species-specific LIDAR system. These activities will be undertaken in dialogue with other team members.
- Frequent Project Team meetings, coordinated by ATR, will ensure that LIDAR system performance capabilities are consistent with monitoring requirements defined by the project. Any differences between capabilities and requirements would be identified, negotiated and resolved early in the project planning process to eliminate problems in the field test phase of the project.
- The two paths converge when field testing in Portland, Oregon, is initiated.
- The ATR team will coordinate the Project Team, will prepare the final report, and will present the conclusions to the sponsor with support from the other team members.

INTEGRATING REMOTE SENSING AND DECISION MAKING IN PORTLAND, OR

Los Alamos National Laboratory is a government-owned, contractor-operated federal laboratory of the Department of Energy. Los Alamos is considered one of the DOE's three national security laboratories with responsibilities ranging from secure energy supplies to nonproliferation to the design and maintenance of nuclear weapons. This cadre of missions requires a large, multidisciplinary laboratory that excels at solving complex problems with state-of-the-art tools. In many cases, Los Alamos has successfully integrated these skills to conduct research on other issues of national importance. One example is atmospheric sciences.

Los Alamos takes an integrated approach to atmospheric sciences, and more specifically to urban air quality assessment. A major component of this approach has been in using remote sensing techniques, such as lidar, to collect data on meteorology, pollution transport, and emissions. To date, the capability to acquire data on a variety of pollutants rapidly, in three-dimensions, and with only one instrument has not existed. Los Alamos's lidar team, in collaboration with Schwarz Electro-Optics of Concord, MA, has identified a method that will make these measurements possible. To develop this capability successfully, Los Alamos believes it is crucial to seek the assistance of a progressive metropolitan entity engaged in solving air quality issues. Otherwise, the deployment of the capability will not meet the growing needs of urban air quality managers.

LIDAR

Light Detection and Ranging, or lidar, is a laser-based, remote sensing technique that pulses laser light into the atmosphere and sensed the return of atmospherically scattered light. Similar to radar, Los Alamos has employed this technique to examine relative concentrations of particulates and aerosols at different ranges in various airsheds, including Mexico City and Barcelona, Spain. We now propose to develop a technology that would examine pollutants for their chemical compositions. This technology would be small and portable (to the tops of buildings, for example), and it will be able to acquire data on pollutants such as NOx, SOx, ozone, volatile organic compounds, particulates, CO, and many of the hazardous air pollutants (HAPS).

This instrument would employ three lidar techniques: (1) elastic-backscatter lidar will be used to identify plumes of aerosols and particulates at ranges of up to 10 km; (2) differential absorption lidar (DIAL) will be used to examine differences in absorptions to identify some chemical species; and (3) laser-induced fluorescence (LIF) will be used to fluoresce certain molecules which also provides a chemical signature. The first will be used to obtain emission, transport, and dispersion of gross pollutants while the latter two will identify the specific pollutant.

Ultimately, the information provided by lidar remote sensing will be integrated into air quality modeling and management techniques. The information provided by the technology is volumetric, providing more useful data than is possible with a point sensor alone, which is extremely relevant for modeling purposes. In addition, the technology allows one to track plumes and assess sources--crtitical information for decision makers.

WHY DO YOU CARE?

There are several major reasons that a better understanding of pollution is needed. First and foremost, the health effects related to air pollution are well documented, particularly in terms of episodic events. However, it is becoming clear that long-term exposure to even milder levels of air pollution can have deleterious effects. This observation leads to the second point, which is that the Environmental Protection Agency is becoming more stringent and will soon regulate additional pollutants such as nitrates. Both problems have significant effects on the urban community in terms of health, efficiency, and productivity, and many policy analysts and economists believe that these costs will be borne out more by individuals than by corporate entities.

Los Alamos believes that a collaboration with the state of Oregon and the city of Portland would be the most effective approach to accomplishing the goal of integrating this data into the decision making process. Oregon has a reputation for taking a very proactive approach to the examination of both transportation and air quality issues. The advantages that Oregon will accrue include further information on the relationship between transportation and air quality in the state, improving the planning process with data that is more robust than that currently available. It follows that the state will be in a better position to handle new transportation and air quality regulations more effectively and efficiently. Finally, laser-based, remote-sensing techniques will, in the future, provide a more cost-effective means of monitoring air quality.

STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 95-2134 FOR THE PURPOSE OF ENDORSING THE WASHINGTON COUNTY MAJOR STREETS TRANSPORTATION IMPROVEMENT PROGRAM SERIAL LEVY

Date: April 12, 1995 Presented by: Councilor Morissette/ Andrew Cotugno

PROPOSED ACTION

This resolution would endorse the Washington County Major Streets Transportation Improvement Program serial levy scheduled to be voted on May 16, 1995.

BACKGROUND AND FACTUAL ANALYSIS

Attached are the descriptive materials from Washington County regarding the proposed levy. Of particular interest is the description of the 27 planned projects and their relationship to the Region 2040 Growth Concept. Most of the projects entail building bike paths and curb, gutter and sidewalk to urban standards with a 2-3 lane facility where the present facility is a narrow two lanes with ditches. There are only three locations that involve widening to five lanes (Baseline Road - 177th to 185th; Brookwood Road - Cornell to Airport Road; and Barnes Road - Cornell to Cedar Hills Boulevard). The need for this added capacity is consistent with the RTP and the alternative mode shift in travel demand called for in these areas. There will continue to be a need for coordination between Metro and Washington County in design details in planned high density areas (such as Regional Centers, Main Streets, LRT station areas, bus corridors and Town Centers) to ensure design standards that are sensitive to pedestrian needs are adequately addressed.

ACC:lmk
95-2134.RES
4-12-95

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ENDORSING THE WASHINGTON COUNTY MAJOR STREETS TRANSPORTATION IMPROVEMENT PROGRAM SERIAL LEVY	)))))	RESOLUTION NO. 95-2134 Introduced by Councilor Morissette

WHEREAS, Metro's Regional Transportation Plan calls for a significant need for transportation improvements in Washington County; and

WHEREAS, The Region 2040 Growth Concept calls for an increased emphasis in integrating land use and transportation plans; and

WHEREAS, The Washington County Commission has referred a $130.2 million serial levy to the voters on May 16, 1995 to implement the Major Streets Transportation Improvement Program; and

WHEREAS, The Washington County Transportation Coordinating Committee developed the proposed program of projects for the Major Streets Transportation Improvement Program (MSTIP); and

WHEREAS, Metro is a member of that Committee; and

WHEREAS, The program of projects is consistent with the 2040 Growth Concept; and

WHEREAS, Further coordination will occur between Metro and Washington County in design details of the proposed projects to ensure that the 2040 policy direction is achieved; now, therefore,

BE IT RESOLVED,

That the Metro Council endorses the Washington County Major

Streets Transportation Improvement Program serial levy.

ADOPTED by the Metro Council this _____ day of _____, 1995.

_____
J. Ruth McFarland, Presiding Officer

ACC:lmk
95-2134.RES
4-12-95

What Is MSTIP?

MSTIP
MAJOR STREETS TRANSPORTATION IMPROVEMENT PROGRAM

The Major Streets Transportation Improvement Program (MSTIP) was established in 1985 as a transportation investment program for the cities and unincorporated areas of Washington County. It focuses on cooperative solutions to congestion and safetyproblems on major roadways.

MSTIP 1 was approved by county voters in 1986. It raised $27 million over three years, leveraged an additional $30 million in federal and state resources, and funded 14 major transportation projects throughout the county.

In 1989, county residents voted to continue the MSTIP for an additional six years. MSTIP 2 is raising a total of $60 million for 16 additional transportation improvements.

Consideration is now being given to continuing the program again - to creating a MSTIP 3. Before doing so, a number of important questions need to be answered. That's the purpose of this open house.

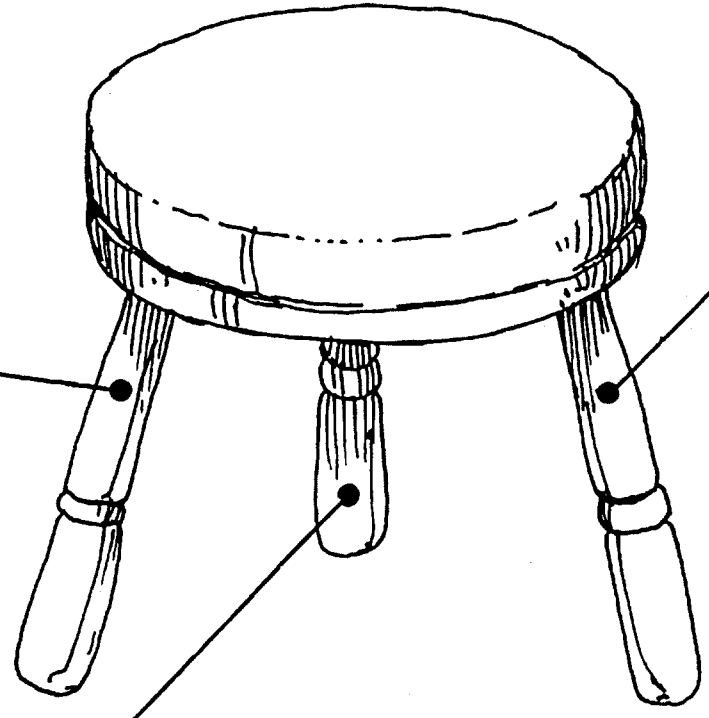
Thank you for participating!

Revised January 1995

"Three Legged Stool"

The "three-legged stool" illustrates how MSTIP balances with other funds to support the transportation system of Washington County and its cities.

MSTIP
MAJOR STREETS TRANSPORTATION IMPROVEMENT PROGRAM



Gas Taxes

help maintains roads

State and local fuel taxes help keep the transportation system in good condition. General policy is to direct these funds first toward maintaining the major transportation system to ensure the investment in improvements is not lost.

Development Fees

help meet future needs

Traffic Impact Fees (TIF) are used to increase transportation system capacity in order to help accommodate growth. These fees are paid by new development, as authorized by voters first in 1986 (outside cities) and then in 1990 (countywide, including cities). To date, the TIF program has generated more than $30 million in improvements and revenues.

Property Taxes

help solve existing congestion and safety problems

MSTIP 1 and MSTIP 2, the first two Major Streets Transportation Improvement Program initiatives, raised nearly $90 million to pay for 30 projects addressing some of Washington County's most pressing transportation system safety and congestion problems. **MSTIP 3** is proposed to continue this program.

MSTIP 1
Project Status

MAJOR STREETS TRANSPORTATION IMPROVEMENT PROGRAM

Completed

1988 1 **Murray Blvd**/Mill Creek-BNRR*
2 **River Rd**/Hillsboro City Limits-Rosedale*
3 **Sunset**/Forest Grove Corridor Study

1989 4 **185th**/Alexander-Rock Creek
5 **Cornell**/Cornelius Pass-Ray Circle*
6 **Maple St**/Pacific Hwy-TV Hwy*
7 **Rood Bridge**-Renovate piling (Bridge Program)
8 **TV Hwy**/21st-Oak (portion Shute Park-Oak)*

1990 9 **Bull Mtn-99W Intersection**

1991 10 **HallBlvd**/Allen-Greenway*
11 **Scholls Ferry-Denny Intersection**
12 **185th-Farmington Intersection**

1992 13 **Scholls Ferry**/Murray-Fanno Creek*
14 **Tualatin-Sherwood Rd**/Edy Rd-Boones Ferry (Phase 1)*

Remaining Projects

Scheduled Completion

1995 15 **BH Hwy-Oleson-Scholls Intersection** Study
16 **TV Hwy**/Shute Park-21st *(ODOT Project)**
17 **Western Bypass** Feasibility Study *(ODOT Project)*

1997 18 **Farmington**/Murray-173rd *(ODOT Project)* (Phase 1)*

** includes bicycle and pedestrian facilities*
ODOT = Oregon Department of Transportation

MSTIP 2
Project Status

MAJOR STREETS TRANSPORTATION IMPROVEMENT PROGRAM

Completed

1991 19 **231st-Baseline Intersection**
20 **Cornell Rd**/Murray-Dale*
21 **Saltzman Rd***

1992 22 **Tualatin-Sherwood Rd**/Edy Rd-Boones Ferry Rd (Phase 2)*
23 **Durham Rd**/72nd-Upper Boones Ferry Rd (Phase1)*
24 **Tigard** Bike Paths*

1993 25 **King City** Curb Cuts for bikes*
26 **Walker Rd**/158th-Murray Bike Lanes*

1994 27 **Murray Blvd**/Allen-Scholls*
28 **Bull Mountain Road***
29 **Glencoe-Zion Church Intersection***
30 **Zion Church-SPRR Crossing***
31 **Zion Church-Susbauer Intersection***
32 **Tualatin** Bike lane Striping*
33 **Murray**/Allen-TV Hwy Bike Lanes*

** includes bicycle and pedestrian facilities*
ODOT = Oregon Department of Transportation

Under Construction

Scheduled Completion

1994 34 **Cedar Hills-Parkway Intersection***

1995 35 **Cornell Rd**/153rd-Murray (Phase 1)*
36 **185th**/Bronson-Tamarack*

Remaining Projects

1995 37 **Baseline**/158th-185th*
38 **Durham Rd**/Hall-Upper Boones (Phase 2)*
39 **Garden Home-Oleson Intersection**

1996 40 **Beef Bend**/99W-King Arthur (Phase 1)*
41 **E. Main**/10th-Brookwood*
42 **Baseline**/Brookwood-231st*

1997 43 **Greenburg Rd Interchange** *(ODOT Project)**

1998 44 **Forest Grove Northern Arterial***

Other MSTIP 1 & 2 Projects

MSTIP
MAJOR STREETS TRANSPORTATION IMPROVEMENT PROGRAM

MSTIP Bridge Replacement

Renovate **Rood Bridge** piling plus leverage over $900,000 of state and federal funds. **216th/Rock Creek and Golf Course Road bridges** to be replaced in 1995.

MSTIP 1 and 2 Small Cities

Gaston, Banks and North Plains leveraged $450,000 in MSTIP funds to make $900,000 worth of improvements to city streets.

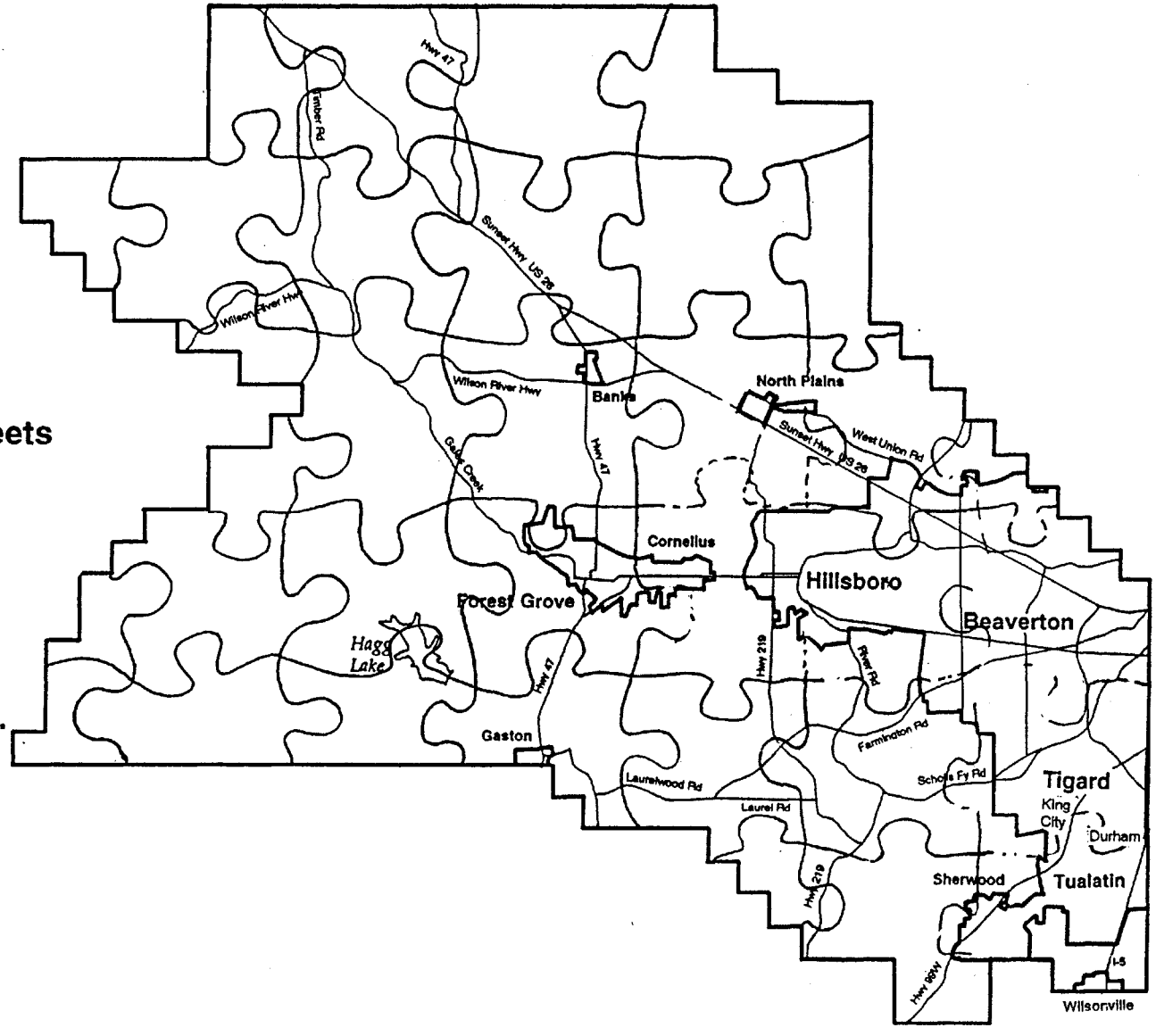
MSTIP 2 Bike

Over $150,000 spent on **bikeway improvements** and leveraged over $480,000 in state and city funds.

MSTIP 3:
Cooperation Is Key

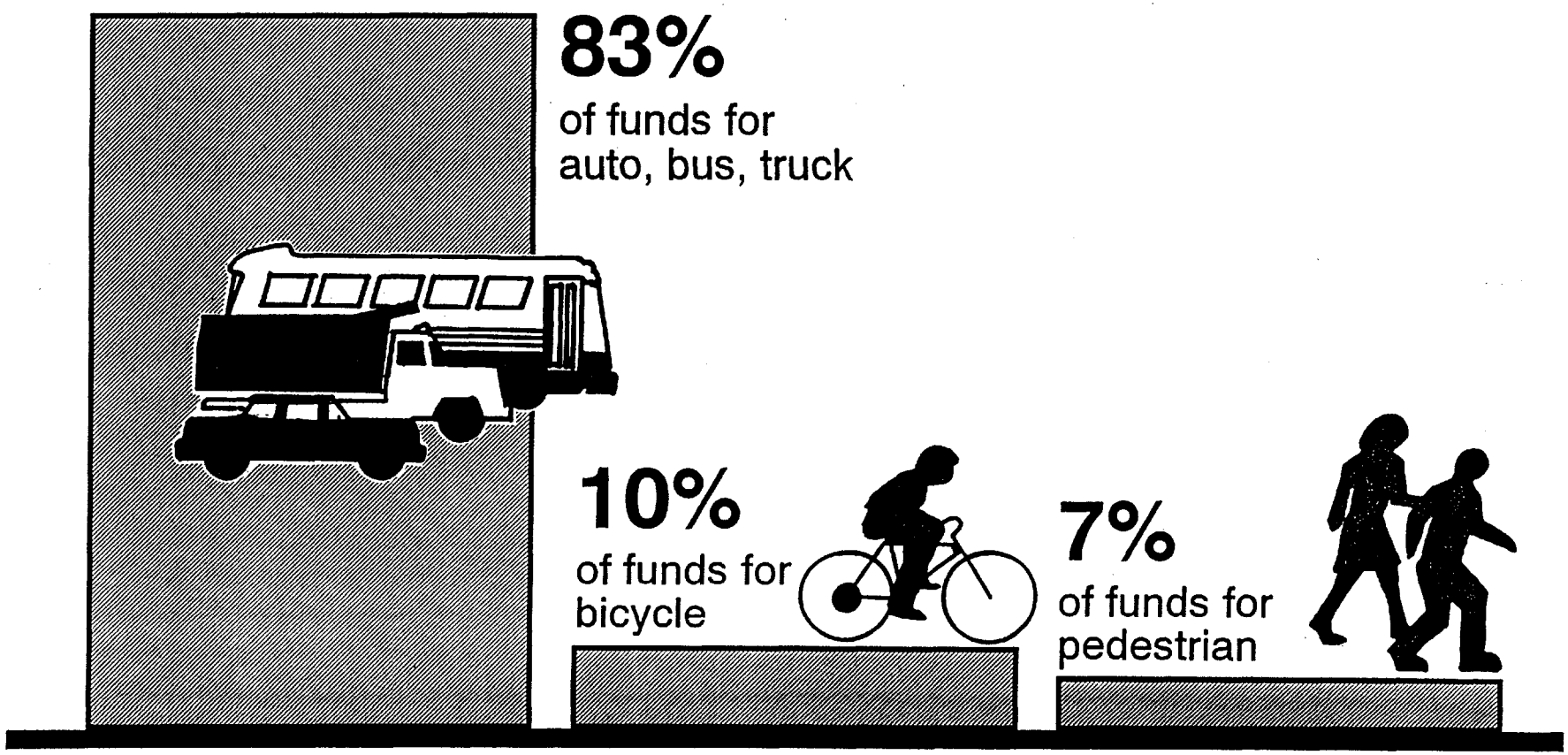
Cooperation between County and city governments is an essential part of the Major Streets Transportation Improvement Program.

Balancing the interests of citizens across the County is one of the most important and challenging aspects of MSTIP 3 development process.



On average, the funds for major roadway projects are spent as follows:

Roadway Improvement: Cost Shares By Mode



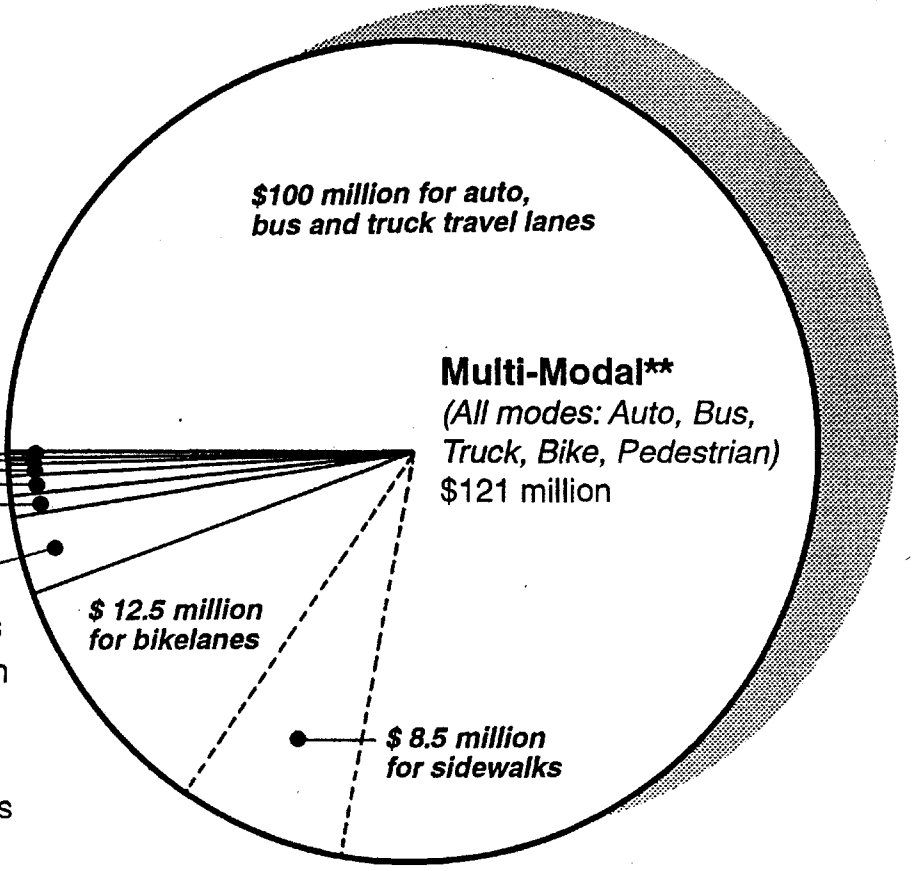
These figures assume:

- An average of the cost of building three- and five-lane roadway projects
- All major roadway projects include bicycle lanes and sidewalks

MSTIP 3:
How Do We Divide The Benefits?

As Washington County and our cities improve our transportation system, a strong effort is being made to assure that a range of choices is provided for how people travel. The package recommended for public discussion by the Washington County Coordinating Committee* divides MSTIP 3 funding as follows:

What do you think?



*The Washington County Coordinating Committee (WCCC) is responsible for coordinating local government land use and transportation activities in Washington County. It is composed of elected officials from Washington County and all cities in Washington County.

**These figures assume:

- An average of the cost of building three- and five-lane roadway projects
- All major roadway projects include bicycle lanes and sidewalks
- Estimated inflation effects over 6-year period

MSTIP 3: How To Turn a Long List Into a Short List?

MAJOR STREETS TRANSPORTATION IMPROVEMENT PROGRAM

More than $280 million in possible MSTIP 3 projects have been submitted by the County and cities. How can we reduce this to something closer to $100 million — the amount recommended by the Washington County Coordinating Committee (WCCC)?*

Here are some ideas. Please let us know what you think.

1. Start with projects of ***countywide benefit***, such as:
    - Benefits more than one city or the county.
    - Provides a variety of transportation choices; i.e., bikes, cars, trucks, pedestrians, buses, access to Westside MAX, etc.
    - Removes bottlenecks; allows freer flow of traffic; improve safety.
2. Add projects that are ***high local priorities***, as established through local government project ranking processes.
3. Evaluate for ***fair distribution of benefits*** so that MSTIP 3 projects are built to benefit those who pay taxes for them.

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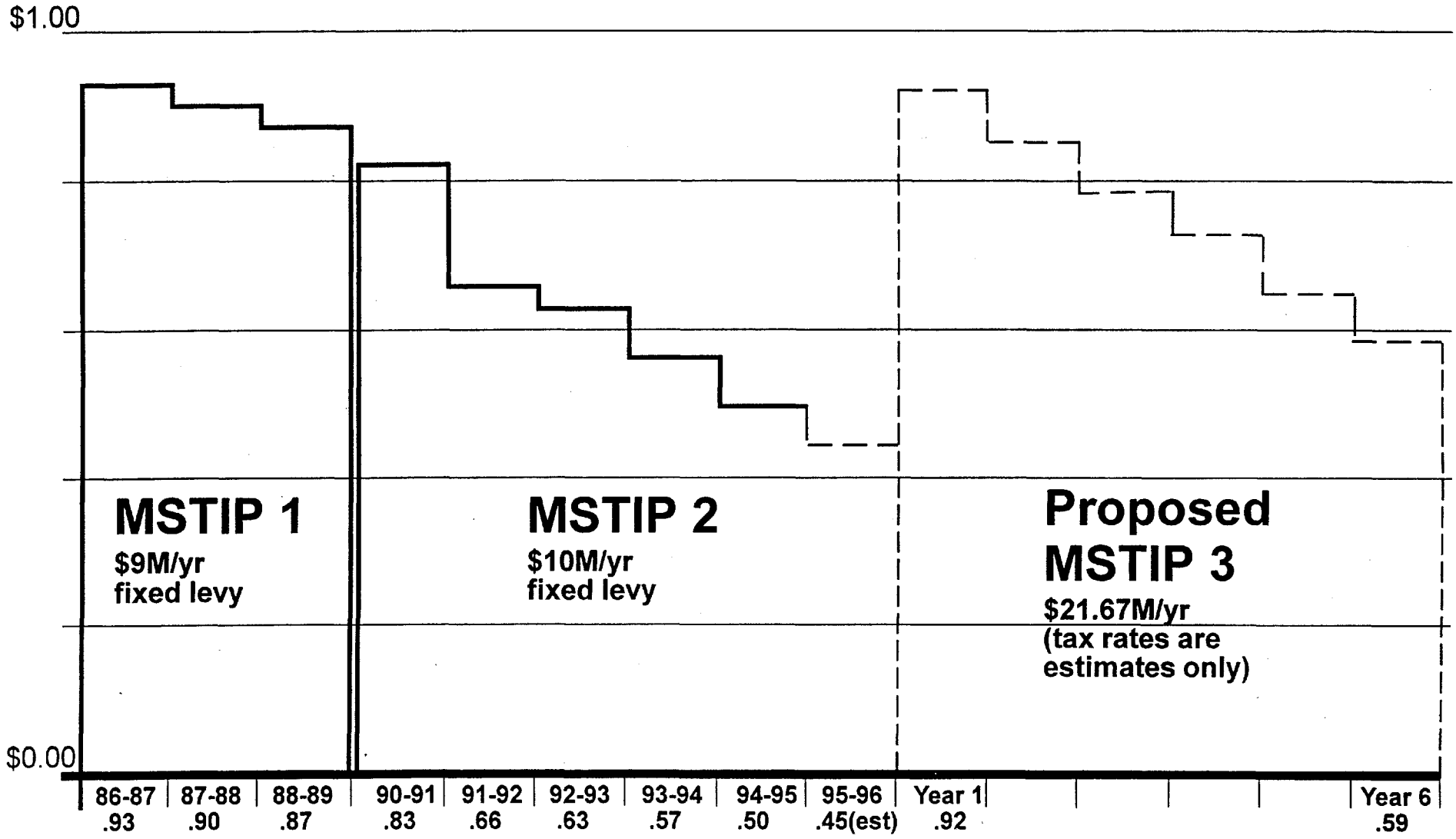
The MSTIP 1 and 2 measures raised $ 9 million and $10 million annually. The tax rate required to raise those funds declined as market forces and new development caused the total value of property in Washington County to increase. **MSTIP 3** assumes a lower first year tax rate and would raise approximately $21.67 million per year.

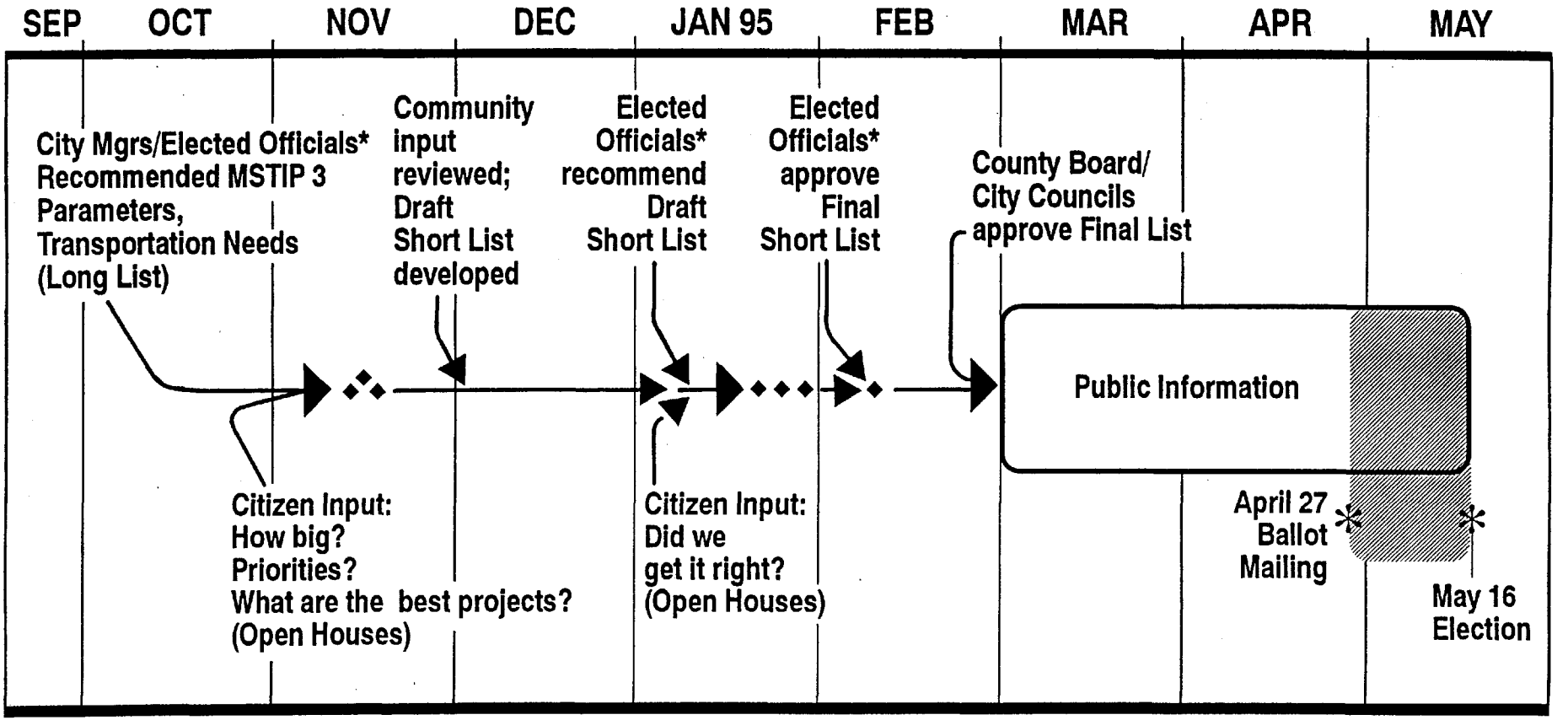
MSTIP Rates

Rate per $1000 assessed value



MSTIP 3
Getting From Here To There

MAJOR STREETS TRANSPORTATION IMPROVEMENT PROGRAM



*** Washington County Coordinating Committee**

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M E M O R A N D U M

METRO

Date: April 5, 1995

To: JPACT

From: Michael Hoglund, Transportation Planning Manager

Re: Lidar Demonstration Project Proposal

Attached for your review are two pieces of information regarding an air quality-related demonstration project being proposed for the Portland metropolitan area airshed. The project is being proposed by the Alliance for Transportation Research, a division of the Department of Energy's Los Alamos National Laboratory. Representatives of the Alliance will provide an overview of the proposal at the April 13 JPACT meeting.

Following the overview and subsequent discussion, JPACT will be asked to endorse a letter of support to Congress for pursuing the Portland area project. Given the region's support, members of the Alliance will be working to secure project funding in the Department of Energy's Los Alamos budget for the next three federal fiscal years.

Lidar Technology

Lidar stands for "light detection and ranging," and is similar to radar in that it is a remote sensing technique that pulses laser light into the atmosphere and senses the return of atmospherically scattered light. The Alliance/Los Alamos proposal is to use the technology to examine pollutants for their chemical compositions within the Portland airshed. The technology would provide "real time" readings of the make-up and concentration of the airshed. Lidar theoretically would be able to differentiate pollutant concentrations within the airshed and identify chronic or potential problem areas.

Over time, as information is collected and stored, lidar could form the basis for a real-time predictive model. The model would more accurately forecast air quality alert days and subsequently trigger strategies to ensure that Clean Air standards are not violated.

The Los Alamos team can further discuss the lidar technology at the April 13 meeting.

Study Proposal

The study would cover a three-year period and would result in three major products, generally one product per year. The first year would be used to set up the study, gather background information on the Portland airshed and meteorological conditions, and develop an instrument that measures general aerosol levels. Year two would result in instrumentation that can measure at "large signature" levels nitrogen oxides and volatile organic compounds, the precursors to ozone pollution. At that point, we would have general information on the different sources of pollution within the Portland airshed. At the end of the third year, instrumentation would be precise enough to provide for "small signature" analysis, or the ability to evaluate small areas. We would also be able to monitor the movement of pollutants within the region.

The study would also focus on how the advanced technology would be used in the air quality/transportation decision-making process. Again, the Los Alamos team will elaborate on the study products at the April 13 meeting.

Project Cost

The project cost is estimated at about $10-12 million. No local funds are being requested.

Project Staff

The proposal calls for three project teams. Two teams would be comprised of Los Alamos and Alliance for Transportation Research members. An Oregon team would provide local expertise and oversight. It is anticipated that the local team would include skilled professionals from transportation, air quality, and scientific agencies and institutions. Candidate agencies and institutions for the Oregon team include Metro, DEQ, ODOT, local jurisdictions, PSU, OSU, and the Oregon Graduate Institute. This list is preliminary and will be revised as necessary.

Technical Coordination

The proposal would represent a significant advancement in the field of air quality modeling. Current models are emission-based and only estimate pollutants emanating from tailpipes. Lidar provides the opportunity to retrieve real-time, location-based air quality information. Potentially, lidar technology could be used to evaluate the effectiveness of various air quality or

transportation measures. For example, lidar could potentially be used to evaluate the air quality effect of a new interchange or major new development.

Enhancing air quality modeling would be consistent with a number of local and national efforts to improve transportation and land use models. Los Alamos is heading a national effort to review, and potentially modify, traditional travel forecasting models. Metro, in cooperation with ODOT and other Oregon MPOs, is conducting extensive survey and model enhancement work to improve our own regional travel forecasting models. Specifically, the Metro model is being upgraded to better analyze alternative forms of transportation including truck/freight movements, bicycles, and pedestrians. The model will also be better able to forecast the effectiveness of travel demand programs.

Land use models are also evolving. Metro's Real Estate Location Model (RELM) will help us better understand development trends and market conditions as part of our growth allocation (population/employment) process. Lidar technology would be consistent with our efforts to gain better information in the areas of land use, transportation, and air quality.

Process

The Alliance/Los Alamos team presented the proposal to Portland area representatives on March 30. TPAC was provided a brief overview of the proposal the next day. TPAC recommended forwarding the proposal to JPACT subject to a review by TMAC and technical modeling staff. Those activities are scheduled and results will be reported to JPACT on April 13. Assuming JPACT approval, the Alliance/Los Alamos team will pursue an appropriation in mid-April. Project start-up date has not been determined, but would likely coincide with the start of the next federal fiscal year in October.

MH:lmk

Attachments

COOPERATIVE DEVELOPMENT OF AN ADVANCED TECHNOLOGY AND DECISION SUPPORT MODEL:

THE PORTLAND AIR QUALITY PROJECT

David Albright, President, and Larry Blair, Executive Vice President
The Alliance for Transportation Research

PURPOSE

This project will develop and demonstrate a comprehensive and coordinated process of integrating advanced technology with the decision making process of public organizations. The advanced technology to be developed is a species specific LIDAR for air quality monitoring. The decision support model is characterization and mitigation of urban and regional air pollution.

PRODUCTS

The products of the Portland Air Quality Project include an advanced technology and a model for meaningfully using the technology to support decisions by public organizations. Specific products are as follows.

- a new LIDAR technology constructed by Los Alamos National Laboratory
- a procedure for collaboration between a scientific team building technology and a planning team which will use the technology
- a model for developing a decision support structure among interested organizations so that data from new technology is useful
- specific application of the technology and process in Portland, Oregon

NEED

There is a general need to improve technical support for public decision makers. Our governmental process is founded on commitment to the public well being. Serving the public interest through advanced technology is a complex process. It involves the types of data to inform decisions, and how these data are summarized and presented. The need is shared by the scientists, engineers, planners, and public decision makers.

There is a specific need to improve support for urban and regional air quality decisions. This includes and extends beyond existing regulatory requirements. The need is to improve air quality characterization, provide quality data, and assess the effect of mitigation investments. This need is shared by all levels of government concerned with air quality.

DEMONSTRATING THE MODEL

An innovative team will be formed to combine scientific and planning excellence. The resulting technology and model can be used by state and federal agencies, metropolitan planning organizations, city and county governments.

The demonstration will be in Portland, Oregon. It will address a practical situation of interest to the state and city transportation and environment officials. To be successful, project must be something involved organizations understand as important to the ongoing success of their mission.

ROLES AND RESPONSIBILITIES

OREGON TEAM - The Oregon team will identify and define a current transportation-related air quality situation. It must have practical and important implications locally as well as generic applicability to a range of similar situations in other locations. This team will be responsible for working with the scientific team to ensure common understanding of the data needed and the data to be provided. The Oregon team will also be responsible for the local operations during the study, including conventional instrumentation for air quality, metrology and traffic monitoring. Finally, this team will lead in analyzing results and assessing the value of the process.

LOS ALAMOS TEAM - This team will be responsible for designing, constructing, testing and fielding the species-specific LIDAR air quality monitoring system that would be the key innovative tool introduced in this project. This team is responsible for dialogue with other team members to ensure the technology will provide data to support the intended decisions. The Los Alamos team will operate the technology during the Portland field tests. This team will also help the Oregon team interpret the LIDAR data, and work cooperatively to integrate and correlate those results with data from other monitors used in the study.

ATR TEAM - This team would be responsible for overall design, integration and coordination of the diverse scientific and planning elements of the project. The ATR team will work closely with and support the Oregon team in the design of the air quality study. This team will work closely with and support the Los Alamos team in clarifying capabilities of the technology. The ATR team will be the prime interface with the ultimate sponsor of the project, and coordinate support from the other two teams in this activity.

ACTIONS

- The project will begin with two activity paths. The paths will be designed to intentionally intersect. This is a fundamental change in the traditional model of independent and parallel paths. The Oregon team will identify, define, and design the air quality study, assisted by the ATR team. The Los Alamos team will design, build and test the species-specific LIDAR system. These activities will be undertaken in dialogue with other team members.
- Frequent Project Team meetings, coordinated by ATR, will ensure that LIDAR system performance capabilities are consistent with monitoring requirements defined by the project. Any differences between capabilities and requirements would be identified, negotiated and resolved early in the project planning process to eliminate problems in the field test phase of the project.
- The two paths converge when field testing in Portland, Oregon, is initiated.
- The ATR team will coordinate the Project Team, will prepare the final report, and will present the conclusions to the sponsor with support from the other team members.

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Los Alamos takes an integrated approach to atmospheric sciences, and more specifically to urban air quality assessment. A major component of this approach has been in using remote sensing techniques, such as lidar, to collect data on meteorology, pollution transport, and emissions. To date, the capability to acquire data on a variety of pollutants rapidly, in three-dimensions, and with only one instrument has not existed. Los Alamos's lidar team, in collaboration with Schwarz Electro-Optics of Concord, MA, has identified a method that will make these measurements possible. To develop this capability successfully, Los Alamos believes it is crucial to seek the assistance of a progressive metropolitan entity engaged in solving air quality issues. Otherwise, the deployment of the capability will not meet the growing needs of urban air quality managers.

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MSTIP 3 Projects and 2040 relationships

PROJECT	2040 RELATIONSHIP
Sunset/University to Beal 3 lanes (Forest Grove)	Project includes bikeways and sidewalks. Facilitates development of 2040 town center
Martin- Cornelius Schefflin Corridor 2 lanes (Forest Grove, County)	Correct safety problem
Four Intersection Improvements - Tv Highway (Cornelius)	Facilitate development of 2040 Corridor, bus corridor
Evergreen/25th-Glencoe 3 lanes	Project includes bikeways and sidewalks. Supports development of 2040 Industrial Area
Brookwood/Baseline to Airport Road 5 lanes north of Cornell 3 lanes south of Cornell	Project includes bikeways and sidewalks. Facilitates access to LRT station areas and Industrial area. Built to improve spacing of multi-modal arterials
216th/Baseline to Cornell Safety project	Supports development of 2040 LRT Station Areas, Town Center, Industrial Area and Mixed-used Employment Center
Baseline/177th to 231st 5 lanes 177th to 185th 3 lanes 185th to 231st	Project includes bikeways and sidewalks. Supports Development of 2040 Corridor and LRT Station Areas.
219th/Tv Hwy to Baseline 3 lanes	Project includes bikeways and sidewalks. Supports development of 2040 LRT Station Areas, Town Center, Industrial Area and Mixed-used Employment Center
170th and 173rd/ Baseline to Walker 3 lanes	Project includes bikeways and sidewalks. Facilitates development of 2040 LRT Station Areas and TOD project at Steele Meadows.
Cornell/Murray to Saltzman 3 lanes	Project includes bikeways and sidewalks. Facilitates development of 2040 Town Center and Main Street. Project purposely downscaled to eliminate possibility of inconsistency with 2040 outcomes.

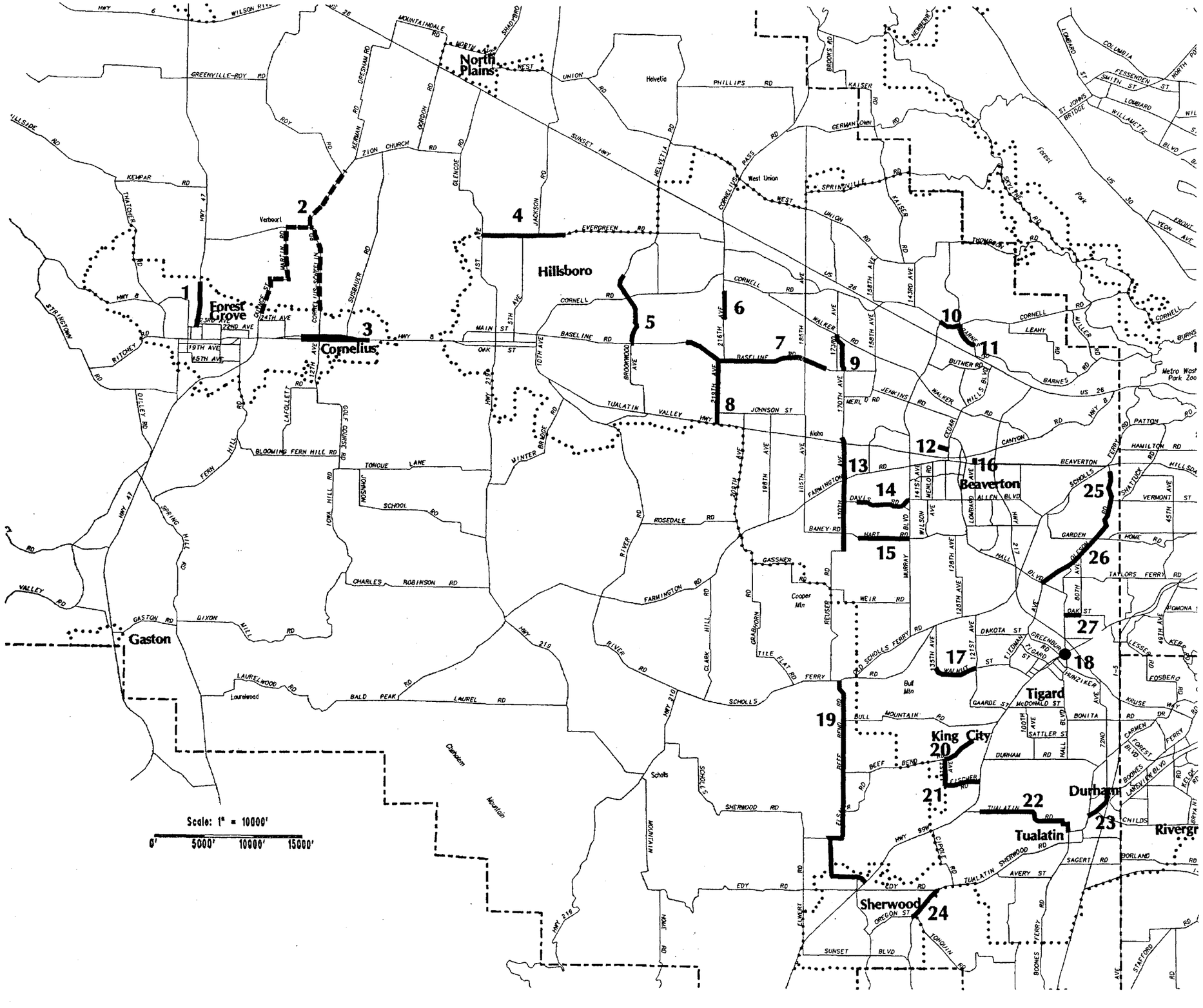
Barnes/Saltzman to 119th 5 lanes	Project includes bikeways and sidewalks. Facilitates development of 2040 Town Centers, Corridor, and LRT Station Area
Millikan Extension/Hocken to Cedar Hills 3 lanes	Project includes bikeways and sidewalks. Facilitates development of 2040 Regional Center and LRT Station Areas
170th/ Rigert to Alexander 3 lanes	Project includes bikeways and sidewalks. Facilitates development of 2040 LRT Station Area
Davis/ Murray to 170th 3 lanes	Project includes bikeways and sidewalks.
Hart/Murray to 165th 3 lanes	Project includes bikeways and sidewalks.
Lombard/ Broadway to Farmington 3 lanes	Project includes bikeways and sidewalks. Facilitates development of 2040 Regional Center and LRT Station Areas
Walnut/121st to 135th 3 lanes	Project includes bikeways and sidewalks.
Hall/99w Intersection Turn lanes	Project includes bikeways and sidewalks. Project facilitates development of 2040 Town Center.
Beef Bend and Elsner Roads from 99w to Scholls Ferry 2 lanes	2040 Concept does not include Western Bypass. Project necessary to handle traffic demand from not building the Bypass
Beef Bend/King Arthur to 131st 3 lanes	Project includes bikeways and sidewalks. Project facilitates development of 2040 Town Center
Fischer Rd and 131st Ave Sidewalk	Sidewalk project to 2040 Town Center
Tualatin Rd/115th to Boones 3 lanes	Project includes bikeways and sidewalk. Facilitates development of 2040 Town center and Industrial Area

Lower Boones/Boones to Bridgeport Sidewalks, bikeways, signal improvements and incidental widening	Project includes bikeways and sidewalks. Provides access to 2040 Tualatin Town Center and supports development of Mixed Use Employment Center.
Oregon St/ Tualatin-Sherwood to Murdock 3 lanes	Project includes bikeways and sidewalks. Facilitates development of Town Center
Oleson Rd/Fanno Creek - Garden Home 2 lanes	Project includes bike lanes and sidewalks. Project facilitates development of 2040 Regional Center and Town Center study area. Project purposely down-scaled to "interim" project to allow more funds for bike lanes and sidewalks and to eliminate the potential for inconsistencies with 2040 outcomes.
Oleson Rd/Garden Home Hall 2 lanes	Project includes bike lanes and sidewalks. Project facilitates development of 2040 Regional Center and Town Center study area. Project purposely down-scaled to "interim" project to allow more funds for bike lanes and sidewalks. and to eliminate the potential for inconsistencies with 2040 outcomes.
Oak/Hall-80th Sidewalks, bikeways, signal improvements and incidental widening	Project includes bike lanes and sidewalks. Project provides access to 2040 Regional Center. Project purposely down-scaled to "interim" project to allow more funds for bike lanes and sidewalks in the area.
Bike, Pedestrian Facility Program	$2 million for constructing new bikeways and completing links in the sidewalk system.
Bridge, Small Cities, Safety and Traffic Enhancement Programs	

WASHINGTON COUNTY

MSTIP
MAJOR STREETS TRANSPORTATION IMPROVEMENT PROGRAM

- The Major Streets Transportation Improvement Program 3 continues an initiative Washington County voters approved twice before: MSTIP 1 (1986) and MSTIP 2 (1989).
- The MSTIP 2 levy expires in 1995.
- If approved by County voters in May 1995, MSTIP 3 would replace MSTIP 2 and fund $130.2 million of additional transportation improvements.
- The six-year MSTIP 3 levy would pay for construction of 27 specific projects (see map), as well as special funds for bridge repair, small cities projects, traffic signal interties and additional bike and pedestrian improvements.
- The estimated first year tax rate for MSTIP 3 is 92 cents per $1,000 valuation. The first year rate for MSTIP 1 was 93 cents per $1,000 and MSTIP 2 was 83 cents per $1,000.
- For further information contact Greg Miller at 693-4725.



MSTIP is a cooperative program of Washington County and the cities of Banks, Beaverton, Cornelius, Durham, Forest Grove, Gaston, Hillsboro, King City, North Plains, Sherwood, Tigard, Tualatin and Wilsonville.

Information provided and paid for by:
Washington County, 155 North First Avenue, Hillsboro, Oregon 97124

MSTIP-3 PROJECT LIST

	PROJECT	NOMINATING JURISDICTIONS	SCOPE OF WORK
1	Sunset/University to Beal	Forest Grove	Widen to three lanes, including bikeway, sidewalks and a traffic signal at Willamina.
2	Martin-Cornelius Schefflin Corridor	Forest Grove County	Two lane road with wide paved shoulders from Northern Arterial (to be constructed 1998-99) to existing improvements at Zion Church/Kerkman Rd intersection. Includes improving intersections in between, and realigning Martin Road.
3	Four Intersection Improvements, TV Highway	Cornelius	Improve safety at intersections of Baseline and Adair with 4th, 10th, 14th and 26th, including signal modifications and interconnections.
4	Evergreen/25th-Glencoe	Hillsboro	Three lanes with sidewalks, bikeway.
5	Brookwood/Baseline to Airport Rd	Hillsboro	Three lanes with sidewalks and bikeway Baseline to Cornell, five lane half street Cornell to Airport Road, add traffic signal.
6	216th/Baseline to Cornell	Hillsboro County	Straighten road at two existing Railroad crossings that are being removed.
7	Baseline/177th to 231st	County	Five lanes from end of Tri-Met work at 177th to 185th, three lanes from 185th to 231st, replace three bridges, add and modify traffic signals; interconnect signals, sidewalk and bikeway.
8	219th/TV Hwy to Baseline	Hillsboro County	Widen to three lanes, add traffic signals at Francis and Johnson; interconnect signals, includes sidewalks and bikeway.
9	170th and 173d/Baseline to Walker	Beaverton	Three lanes with sidewalks and bikeway
10	Cornell/Murray to Saltzman	County	Widen to three lanes, completes project started with MSTIP 2, includes sidewalk and bikeway.
11	Barnes/Saltzman to 119th	County	Widen to five lanes to link work now under construction to Cornell and Saltzman, includes sidewalks and bikeway.
12	Millikan Extension/Hocken to Cedar Hills	Beaverton	Three lanes with sidewalks and bikeway, extends Millikan to Cedar Hills Blvd.
13	170th/Rigert to Alexander	County	Three lanes with sidewalks and bikeway from Rigert to Blanton, five lanes Blanton to Alexander. Add and modify traffic signals.
14	Davis/Murray to 170th	Beaverton	Three lanes with sidewalks and bikeway.
15	Hart/Murray to 165th	Beaverton	Three lanes with sidewalks and bikeway, traffic signal at 155th.
16	Lombard/ Broadway to Farmington	Beaverton	Three lanes with sidewalks and bikeway.
17	Walnut/121st to 135th	Tigard	Three lanes with sidewalks and bikeway.

MSTIP-3 PROJECT LIST

	PROJECT	NOMINATING JURISDICTIONS	SCOPE OF WORK
18	Hall/99W Intersection	Tigard	Add turn lanes, modify traffic signal.
19	Beef Bend and Elsner Roads from 99W to Scholls Ferry Road	Tigard, King City Beaverton, Sherwood, Durham	Two lanes with paved shoulders, eliminates safety hazards by improving alignment at corners and correcting vertical and horizontal sight distance problems.
20	Beef Bend/King Arthur to 131st	King City County	Three lanes, sidewalk, completes project started with MSTIP 2.
21	Fischer Rd and 131st Ave Sidewalk	King City	Sidewalk from Beef Bend Rd along 131st and Fischer to 99W.
22	Tualatin Rd/115th to Boones	Tualatin	Three lanes with sidewalks and bikeway, RR crossing.
23	Lower Boones/Boones to Bridgeport	Durham Tualatin	Sidewalks, bikeway, interconnect signals, incidental widening and overlays.
24	Oregon St/Tualatin-Sherwood Road to Murdock St	Sherwood	Widen to three lanes, traffic signal at Tualatin-Sherwood Road, sidewalks and bikeway.
25	Oleson Rd/Fanno Creek-Garden Home	County	2 lanes, bike lanes and sidewalks
26	Oleson Rd/Garden Home-Hall	County	2 lanes, bike lanes and sidewalks, signal at 80th
27	Oak/Hall-80th	County	Sidewalks, bikeway, interconnect signals, incidental widening
	Bridge Program	all	$4 million for replacing substandard bridges, including local match for federal funding.
	Bike/Pedestrian Facility Program	all	$2 million for constructing new bikeways and completing links in the sidewalk system.
	Small Cities Program	Banks Gaston North Plains	$600,000 for street improvements in Banks, Gaston, and North Plains.
	Safety Program	all	$500,000 for local matching funds (10%) for federal Hazard Elimination System (HES) program funds.
	Traffic Flow Enhancement Program	all	$500,000 for projects to interconnect existing signal systems, enhancing traffic flow at minimum cost.

GRESHAM CIVIC NEIGHBORHOOD

TRANSIT CENTERED DEVELOPMENT PLAN

Steering Committee Recommendation
March 20, 1995

Preparation of the Gresham Civic Neighborhood Plan was funded through a cooperative effort by the City of Gresham, Metro, Tri-Met, Winmar and PGE.

Steering Committee:

Dennis Anderson	Chair, Gresham 2020 Vision Committee
Alan Black	Bank of America
Andy Cotugno	Director, Metro Planning & Transportation
Deane Funk	Portland General Electric
Cliff Kohler	Gresham Downtown Development Association
Jeffrey Kleinman	Kindler Trust
Ryan Kragero	Northwest Neighborhood Association
Randy Kyte	Winmar
Mayor Gussie McRobert	City of Gresham
Scott Rohr	Kindler Trust
Max Talbot	Director, Gresham Community Development
Tom Walsh	Tri-Met Executive Director
David Widmark	Gresham Planning Commission Chair

Management Committee:

Michael Fisher	Tri-Met
Randy Kyte	Winmar
John Spencer	Project Manager for the City of Gresham
Max Talbot,	Director, Gresham Community Development
Mary Webber	Metro

Consultant Team: ***Team led by Zimmer Gunsul Frasca Partnership***

Cogan, Owens, Cogan - Communications
KJS Associates Inc. - Transportation Engineering
Leland Consulting Group - Real Estate Economists
Mitchell Nelson Welborn Reimann Partnership - Civil & Landscape
Sedway Kotin Mouchly Group - Financial Feasibility Analysis
Spencer & Kupper - Project Management & Implementation Strategy
SRI/Shapiro - Environmental Evaluations
Zimmer Gunsul Frasca Partnership - Planning & Urban Design

JOB N° 90365-02 March 17, 1995
GRESHAM CIVIC NEIGHBORHOOD - TRANSIT CENTERED DEVELOPMENT

LIST OF CONTENTS

GRESHAM CIVIC NEIGHBORHOOD

Purpose and Process:
Gresham Civic Neighborhood describes a partly developed super-block of 130 acres close to the core of the City. Bounded by Burnside, Eastman Parkway, Division and Wallula (212th), the block is bisected by light rail. This land is made up of several different ownerships and uses, among them City Hall. The term 'Civic Neighborhood' connotes an urban neighborhood which includes uses and features associated with the center of a city; an area which embodies civic qualities and is likely to inspire a sense of civic pride in those who use it.

Until recently, a regional shopping center was planned for much of the undeveloped western half of the site. It is now evident that such a use is unlikely, and a principal property owner has formally requested that the City remove the Regional Shopping Center [RSC] planning overlay from the property. The City recognized that removal of that potential use may create an opportunity for mixed use development at the higher than usual densities cited in Metro's 2040 studies and implied by the State's recent Transportation Planning Rule. The City of Gresham therefore sought partners with whom to develop a plan for the entire 130 acre super-block, recognizing that City Hall would contribute to the interaction between employment, retail, residential and other uses which could be developed together.

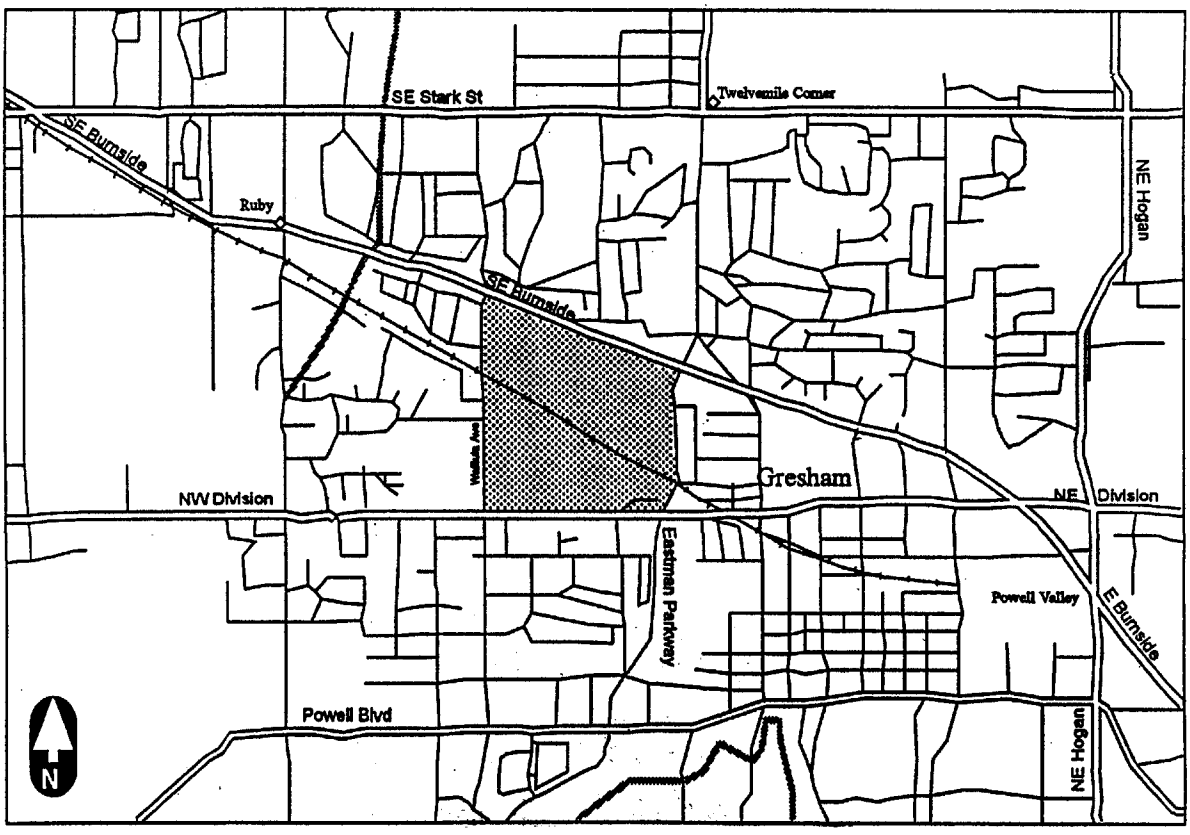
The City was joined by Metro, Tri-Met, Winmar and PGE in sponsoring design of a mixed use plan for the super-block which became known as the Gresham Civic Neighborhood. An important purpose of the plan is to demonstrate that development of mixed uses at relatively high densities is not only feasible in Gresham, but can offer advantages not found in conventional suburban development. This is to be a transit oriented neighborhood with good connections to adjacent neighborhoods - on foot as well as by car and bicycle. Those who live and work in the Civic Neighborhood will generate fewer automobile trips than their counterparts elsewhere; not only because of the proximity of light rail, but also because it would be more convenient to walk to a nearby shop or restaurant to buy lunch, for example.

The *Transportation Impact Analysis* [Table 3] provides a quantification of the resulting reductions in automobile trip generation, taking account of reduced trips internal to the neighborhood as well as reductions in trips to destinations elsewhere. Total trip reductions over typical rates are as follows:

- Residential automobile trips reduced by 10%
- Office automobile trips reduced by 30%
- Retail automobile trips reduced by 35%

By guiding development towards a mix of uses at relatively high densities, Gresham will demonstrate the advantages of sustainable development and set an important precedent for the region.

Planning Process:
The City of Gresham and its partners invited representatives of the neighborhoods and the business community to assist them in selecting a consultant team which would prepare a plan for the Civic Neighborhood. Two committees were established to direct the work of the consultants and evaluate the outcome. The Management Committee is an executive group comprising representatives of the project sponsors together with the consultant hired as project manager for the City. The Steering Committee included principles from each of the project sponsors, together with community representatives and interested parties.



Gresham Civic Neighborhood Vicinity Map

A comprehensive public consultation process was designed and put into effect early, so that the concerns and priorities of those affected would influence the planning process from the outset. Key individuals were interviewed and opinions were sought from numerous organizations with interests in central Gresham. Results were analyzed and relayed to the consultant team and the governing committees. Consultation continued, particularly through public meetings of the Steering Committee, through eight months of plan design and refinement.

Periodically, recommendations were referred by the Steering Committee to Gresham Planning Commission and to the City Council, so that they would be kept informed and so that the team could benefit from useful feed-back to the planning process. In the Spring of 1995, the Steering Committee will be able to recommend to the Planning Commission adoption of a package comprising land use plan, transportation impact analysis, financial analysis and implementation strategy. The next stage is refinement of draft code language developed by the consultant team, and preparation of specific resolutions for adoption by Gresham City Council.

Regional Goals :
The project sponsors share a strong commitment to state and regional planning and transportation goals, and to their implementation at the local level. Consequently, when members expressed their priorities for the project at the first Steering Committee meeting, it was no surprise that many reflected principles addressed in the State Transportation Planning Rule and Metro's 2040 Study emerged. These included:

- Reduce automobile trips by capitalizing on transit opportunities, and by creation of an environment which encourages people to walk.
- Create a circulation system which favors safe and efficient access by and between all modes.
- Respond to the central location of the project within the City of Gresham by including a wide range of uses and activities developed to urban densities. Uses should complement those already established nearby.
- Investigate and implement cost effective measures to reduce automobile travel.
- Provide effective connections to adjacent neighborhoods with bike routes and footpaths.
- Maximize potential transit ridership through an appropriate mix and density of uses developed in the Civic Neighborhood, and by providing easy access to transit.
- Set a precedent for sustainable development in regional centers.

Project Objectives:
Gresham's Transportation 2000 and Vision 2020 initiatives had created clear directions for the city which are in keeping with state and regional planning and transportation directives. Participants in both programs were represented on the Steering Committee as specific objectives of the project were developed. The Steering Committee provided specific direction to the team through a set of general and specific project objectives. The general project objectives were as follows:

- To identify the best uses for the super-block; uses which will complement facilities already existing downtown, and uses which will take full advantage of access by transit, on foot and by bicycle.
- To build consensus for a development master plan for the site.
- To develop a strategy for near term economic development of the property leading to full build-out within the next ten years.
- To advise the City on appropriate plan district overlay provisions for the super-block.

- To reflect the intentions of the 2040 regional strategy for Gresham as a regional center.
- To create an urban environment which those who live or work in Gresham are proud to claim as their own.

These general objectives were elaborated in a series of more detailed objectives which were grouped under five topics: land use, open space and pedestrian circulation, transportation, character and implementation. Since these detailed objectives were fundamental to all that followed on the project, they are given in full.

1 Land Use Objectives:

1.1 Provide a compatible mix of land uses which support and complement nearby uses.
1.2 Provide uses of a density and configuration that will capitalize fully on the presence of light rail and bus services.
1.3 Encourage uses which are consistent with the urban character of a civic central neighborhood.
1.4 Encourage a mix of commercial development which will
- create new jobs
- generate direct and indirect tax revenue
- attract new downtown residents
- provide new amenities

1.5 Accommodate an appropriate mix of uses to satisfy both the economic needs of landowners and community needs including:
- substantial near-term development
- economically feasible uses
- support regional goals for increased densities
- provision of new housing options in Gresham
- reduced dependence on automobiles
- public open space and other public facilities
- optimum utilization of public investment in infrastructure

2 Open Space & Pedestrian Circulation Objectives:

2.1 Create a comprehensive pedestrian network, linking the Civic Neighborhood with adjacent areas and developments.
2.2 Integrate public open spaces and landscaped areas as a cohesive system.
2.3 To the extent that it is practical to do so, integrate the pedestrian system and the open space system.
2.4 Use open space and pedestrian circulation to reinforce desired land use patterns.
2.5 Encourage access to public and commercial facilities by those who live or work in adjacent areas, without use of automobiles.
2.6 Provide safe and convenient access for all to transit stations.
2.7 Capitalize on the near and distant views which distinguish this location.
2.8 Integrate flood control measures with components of public and private landscape.
2.9 Capitalize on flood control measures to enhance the qualities and attractions of the superblock to appropriate land uses and development types.
2.10 Maintain the special character of the Wallula corridor and its natural features.

3 Transportation Objectives:

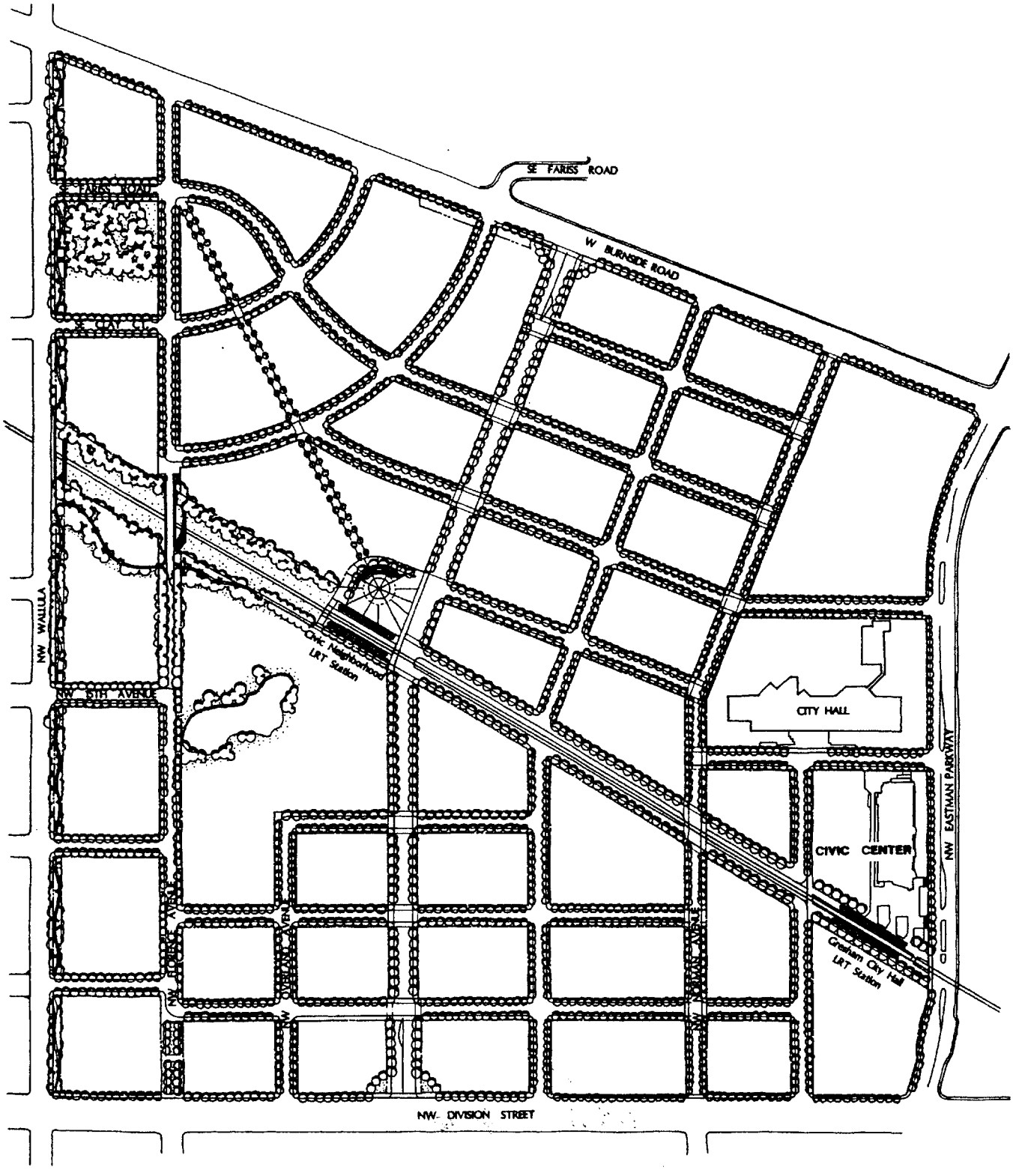
3.1 Design the Civic Neighborhood as a model multi-modal access community, accommodating the needs of all modes in a balanced and non-exclusionary manner.
3.2 Capitalize on the presence of light rail at the site.

3.3 Locate and configure parking in ways which will not dilute urban densities nor interrupt street frontages or public open spaces.
3.4 Parking should be convenient yet not dominant; adequate but not over-provided for normal, day to day needs.
3.5 Provide a hierarchy of local access streets within the superblock which will provide flexibility in circulation options and will be effective in serving a changing range of land uses over time.
3.6 Respect the established character and functions of existing streets in the vicinity.
3.7 Dimension streets for their local access functions, using no more land than is necessary.
3.8 Improve accessibility to the rest of central Gresham, with which this superblock is intended to function as an integral part.
3.9 Accommodate an effective link between historic downtown Gresham and the civic neighborhood.
3.10 Actively encourage walking and use of bicycles and transit.

4 Character:
4.1 Foster a character for the Civic Neighborhood which is appropriate to its central location and complementary to its residential and commercial neighbors, including West Gresham.
4.2 Project an image of a welcoming environment
4.3 Encourage architectural diversity within defined parameters of building scale and density
4.4 Design the street system as the framework for a walkable scaled and densely developed central city district; streets that feel safe to walk on by day and after dark.
4.5 Set a precedent for the quality of public and private development with the design, materials and workmanship evident in all public infrastructure improvements.
4.6 Establish design guidelines to be used uniformly throughout the superblock to ensure consistency in adherence to these objectives.
4.7 Phase development so that it appears to be fully integrated with other components of the neighborhood. Avoid leaving unfinished edges between phases.
4.8 Respect the integrity of nearby neighborhoods.

5 Implementation
5.1 Maintain economic feasibility and near term opportunity as critical values in evaluating alternatives.
5.2 Select a development plan which is supported by market factors.
5.3 If objectives exceed market support for specific uses within an agreed timeframe, clearly identify the roles and responsibilities of both public and private participants in delivering those objectives.
5.4 Provide a planning and development approval process which is clear, fair and timely, and assures that the Committees' objectives will be met.
5.5 Dimension and configure marketable parcels according to the housing, retail or office uses which they are to accommodate.

The Plan:
The size and configuration of the Civic Neighborhood site invited a fresh approach to planning it. Perimeter streets provide good local and regional access, yet access to those streets from the site is limited by local traffic conditions. Much of the property is undeveloped, with splendid views, varied topography and some stands of trees. The light rail line which bisects the undeveloped half of the property was in the process of being upgraded to double track, providing an opportunity for introduction of an additional station.



ILLUSTRATIVE PLAN

GRESHAM CIVIC NEIGHBORHOOD
Transit Centered Development

ZIMMER GUNSUL FRASCA PARTNERSHIP

North

0' 50' 100' 200' 400'

MARCH 17, 1995

Many suburban developments are laid out to meet the specific needs of the 'build-out' plan - of single family housing, for example. In this case, a more dynamic approach was necessary, since the ultimate mix of uses at build-out would remain dynamic. Although early phases of development might be clearly defined, the essence of a mixed use urban neighborhood is its ability to evolve; to change with the times so that it keeps up with the changing needs of the people who live and work there. The most significant consequence of this aspect of the Civic Neighborhood is perhaps the design of the street network.

The first phases of development have been identified as development which is projected to occur in the first ten years. Transportation and financial analyses have been based on these same projections, which are:

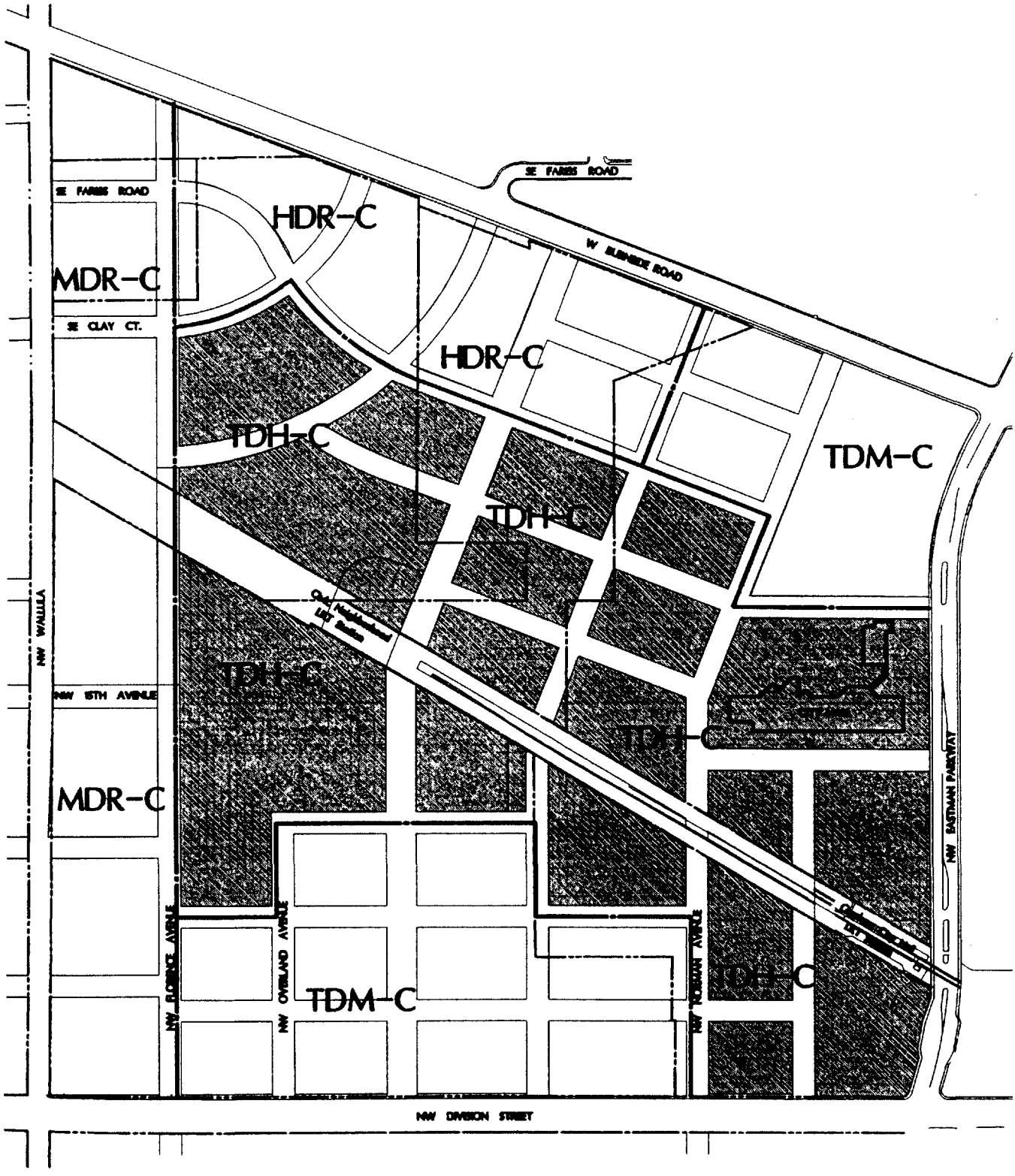
Phase I, by year 2000:	332,000 GSF Shopping and Other Retail Uses 97,000 GSF Office Uses 662 Residential Units
Phase II, By Year 2005:	332,000 GSF Shopping and Other Retail Uses 309,300 GSF Office Uses 885 Residential Units

Densities at the completion of Phases I & II will be substantially greater than might be expected through conventional development. If one assumed MDR-24 zoning as a likely alternative, then a minimum density of 12 dwelling units per acre [du/a] would be required, with equivalent FAR of about 0.25. Projected development under the proposed Civic Neighborhood zoning would provide minimum densities of 17, 24 and 30 du/a depending on location, with minimum FAR of 0.4 in the TDM-C zone and 1.1 in the TDH-C zone. The street network must serve the first phase of development on the western part of the site efficiently, but it must be extendible into properties to the east which are currently devoted to independent uses. A wide range of building types and uses would be permissible, and the street system must be amenable to all of them, and to subsequent changes of use. The planned density of development is markedly higher than has been customary in this and other suburban areas, so the street network must also provide greater permeability of the site: making it possible to develop a greater number of lots independent of one another, each capable of accommodating a wide range of building types and access needs. The solution was a street grid which was shaped to the peculiar needs and characteristics of the site.

The street grid was to satisfy all the needs listed above, but it should also reconcile the points of access into adjacent neighborhoods. This is important for two reasons. One, it makes connections between neighborhoods which are currently separated by discontinuities in the urban fabric . Two, it makes transit and other facilities in the Civic Neighborhood convenient and accessible to neighbors who are currently obliged to use their cars for almost every trip.

Although uses will be mixed throughout the Civic Neighborhood, areas can be distinguished for more or less public activity, and for likely locations for certain uses - areas close to the station clearly having different potential uses than areas close to Wallula, for example. Block sizes defined by the street grid were therefore adjusted to take account of these differences, giving greater accessibility to the most populous areas, providing for vital and varied urban streetscapes.

LAND USE ZONES
Gresham Civic Neighborhood



The streets themselves were designed to carry local traffic efficiently but not necessarily speedily to destinations throughout and beyond the neighborhood. Care was taken, however, to avoid creation of short-cuts that could compromise the safety or quality of the urban environment within the neighborhood. Street sections have sidewalks comparable in width to those in downtown Gresham; designed to encourage use rather that merely satisfy a need. Street trees and curbside parking are generally included, since they add to the sense of safety and amenity for pedestrians. In short, the street system is designed to provide equitable use by all modes.

Streets in the Civic Neighborhood, as elsewhere, are arranged in a hierarchy of importance. The biggest and busiest street will be a collector street which joins Burnside and Division via the new light rail station. This will be the principal street towards which retail establishments will be oriented. It will be the main entry to the neighborhood for most people. Views into the neighborhood along this street will terminate at the station plaza, which provides a focus for the western part of the site at the new MAX station.

The new station will be only a quarter mile west of the existing City Hall station. This creates a special opportunity to link the stations by a special street, divided by the light rail tracks - like a miniature version of Burnside west of Rockwood. A one-way access street on each side of the tracks will serve the principal entrances of future buildings which face one-another across the tracks. The significance of this arrangement is that light rail is acknowledged as a component of the Civic Neighborhood, and a generator of the vitality which makes it a desirable place to live and work.

Opportunities for circulation on foot extend beyond the street system. Some natural areas will be conserved as public or private parks, and footpaths through these will extend the pedestrian network. Green spaces and circulation routes will be parts of an integrated system giving comprehensive access to destinations within and beyond the Civic Neighborhood. The principal focus of neighborhood activity will be the plaza built at the crossing of the north-south collector street and the light rail line.

The plaza will be a paved area covering almost an acre. Through it will run the light rail tracks, signifying the inseparable nature of transit and this neighborhood. The west part of the plaza will include platforms for the new station while the east part will include a grade crossing of the north-south collector street. Enclosure of the plaza space to the northwest will be effected by a mixed use building with storefronts opening onto the plaza with housing above. To the northeast and east, offices with street level retail will be built. South of the tracks, seniors' multi-story housing is planned, with a mixed use complex across the street to the east including retail, athletic club and offices.

The greatest concentration of activity in the first phase of development will be housed in the buildings which surround the plaza, including street level uses which will tend to encourage out-door activities. Being the natural focus for activity at this level will make the plaza the natural attractor for other community activities, both programmed and unscheduled. We heard numerous comments from the community about the lack of a venue for such activities, so the plaza can satisfy a wider need - contributing to its function as the Civic Neighborhood.

View of the Station Plaza Looking North Across the Light Rail Tracks

Land Uses:
The entire Civic Neighborhood will be zoned for mixed uses, but different use categories reflect the different aptitudes of various parts of the site for certain predominant uses. Phase One development, comprising the undeveloped western half of the neighborhood, is divided by the cutting through which the LRT tracks run. Much of the land to the north of the tracks enjoys views of the Cascade peaks and a wooded frontage to Wallula. There are opportunities for a variety of housing types here, with some commercial opportunities where Burnside provides high visibility. South of the tracks, the topography is more varied. Development will require extensive grading. Access and visibility from Division, the busiest adjacent street, make this a suitable location for community retail uses, with housing forming a buffer along the sensitive Wallula frontage.

Opportunities for the greatest densities are close to the light rail station, which will maximize potential transit ridership. Housing and office users are the strongest transit supporters, so these uses surround the station plaza.

Two minor portions of the site are occupied by the Dean Company, a specialist wood veneer plant south of the tracks, and K-Mart, which occupies the northeast corner. Both of these users may remain in the Civic Neighborhood for an indefinite period, and no assumptions have been made about their moving. However, the plan for the neighborhood plans for their eventual removal and anticipates how the street network will then be extended.

The market analysis recognized a number of uses which as yet have limited prospect of development in central Gresham, but might be expected to play a major role in future. Offices, hotel and related retail uses are envisaged for late developing portions of the Civic Neighborhood. These would consolidate and support the employment center established by the City Hall. Some additional housing would complete the balance of living, working and recreational opportunities provided within the neighborhood.

City Hall currently occupies a 50,000 SF building and is in the process of developing an additional 90,000 SF in a multi-story office building on the Eastman Parkway frontage. That building will be ready for occupancy in 1996. The City's master plan envisages additional buildings to the south and west of City Hall in the future, so a substantial commitment has been made to this location; one which will certainly contribute to the Civic Neighborhood's emergence.

Thus, phased development of a mixed neighborhood is planned, with development of the undeveloped western portion of the site expected to be completed within a decade, the remaining phases to follow as opportunities arise.

Implementation:
The feasibility of the plan was verified through four complementary but separate studies: the *Market Research and Development Program* [Leland Consulting Group]; the *Financial Analysis Report* [SKMG]; the *Transportation Impact Analysis* [KJS Associates]; and the *Implementation Strategy* [Spencer & Kupper]. However, implementation of the plan depends upon its feasibility within the context of the real estate development market, as well as physical and regulatory considerations. Throughout the plan development process, both the Steering Committee and the Management Committee pressed on every aspect of the plan which might call into question its financial feasibility. Early implementation of phase one of the plan remained a high priority with all concerned.

The *Market Research and Development Program* surveyed recent market data and outlined the types and intensities of uses which an aggressive plan might consider, giving some indication of the readiness of the market for each product type. This work provided the basis for the development program for the plan, drawing also on the knowledge and experience of Committee members and other sources with knowledge of the Gresham market.

When the plan had reached a stage of substantial resolution and preliminary civil engineering work had been completed, a preliminary financial analysis was prepared and the transportation impact analysis was begun. Carried through several iterations as the plan was refined, these two studies confirmed the considerable advantages of dense, mixed use development at a transit station, and demonstrated the financial feasibility of the first phase of development.

Implementation of the plan from the point of view of the City of Gresham as planning authority posed some special problems, and required a clear regulatory framework to replace the Regional Shopping Center plan overlay. As the plan was being refined, a draft zoning instrument was developed. This was modeled on the City's recently adopted Downtown Plan ordinance, but differs from it in a number of standards and provisions. The *Civic Neighborhood Plan District* code language defines four zones within the district:

TDM-C Transit Development District, Medium Density. Retail, office and high density housing are all permitted in this zone, though community retail uses are expected to predominate. Housing must achieve a density of at least 24 dwelling units per net acre (du/a)

TDH-C Transit Development District, High Density. Areas adjacent to existing and future light rail stations are also permitted a full range of mixed uses, but a 10,000 SF limitation on freestanding retail will ensure that transit supportive uses predominate. Minimum housing density is 30 du/a.

HDR-C High Density Residential. Predominantly residential areas with good access to transit, these areas may also include neighborhood commercial uses, small offices and local parks. Residential densities of at least 24 du/a must be achieved in addition to commercial uses. The 10,000 SF limitation on freestanding retail includes this zone.

MDR-C Moderate Density Residential. Intended as a lower intensity buffer along Wallula, this residential zone requires a minimum density of 17 du/a. Provided that minimum housing densities are also met, mixed use and neighborhood scale commercial uses may occupy the ground floors of residential buildings.

[See Table 2 of the draft code section 2.0660 Civic Neighborhood District for development requirements]

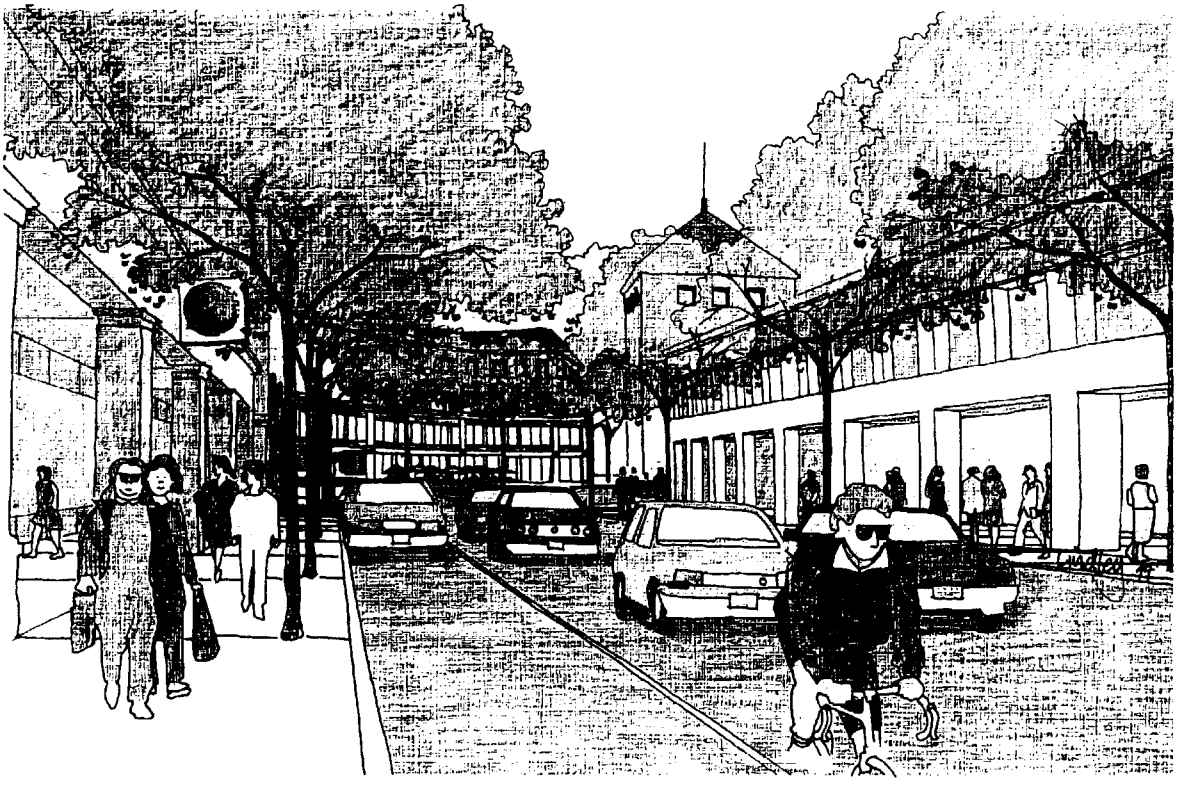
Public Components of the Civic Neighborhood Transportation Core:
Three transportation related projects which are at the core of the Civic Neighborhood clearly lie outside the responsibility of individual private developers, yet are fundamental to the ability of the Civic Neighborhood to meet the state and regional planning and transportation goals. These projects are the central north-south collector street, the light rail station and the Civic Neighborhood Station Plaza. Without commitment of these projects, the mandated densities of development would not be achievable and it is unlikely that development of the Civic Neighborhood would proceed. The importance of each Civic Neighborhood Transportation Core project may be summarized as follows:

Central north-south collector street:

1. *Description and Function* This street provides the main points of access and egress between the Civic Neighborhood and Division and Burnside. Although an important traffic street, it will also function as the main pedestrian street in the western half of the neighborhood. A change in alignment of the street at the light rail tracks ensures that transit and the station plaza will fill views along the street. The collector street will be wider than other streets in the neighborhood, providing 15' wide sidewalks, 8' wide curbside parking lanes, 5' wide bike lanes and two 12' wide travel lanes. Street trees, street lights and other furnishings will complete the amenities of this street, making it an attractive place for people to walk. This treatment complements the requirement contained in applicable zoning codes that buildings on parcels adjacent to the north-south collector shall be built with zero set back, will have active building frontages and restrictions on blank walls. Estimated total construction cost is $2,049,000 and includes 2,400 linear feet of 80' wide right of way.
2. *Critical Functions* The central north-south collector, as described above, sets an important precedent for the whole neighborhood by emphasizing the concept of equitable access. Vehicular traffic is recognized as necessary to the efficient functioning of the neighborhood, and is properly accommodated. However, access on foot, by bicycle and on transit are given similar emphasis and amenity. Only by a clear commitment to equitable access can the full benefits of high density mixed use development be realized.
3. *Relationship to 2040 Goals:* Stated another way, establishment of an ethic of equitable access is a necessary first step in achieving project objectives which are derived from the State Transportation Planning Rule and Metro 2040 goals:

- Reduce automobile trips by capitalizing on transit opportunities, and by creation of an environment which encourages people to walk.
- Create a circulation system which favors safe and efficient access by and between all modes.
- Respond to the central location of the project within the City of Gresham by including a wide range of uses and activities developed to urban densities. Uses should complement those already established nearby.
- Investigate and implement cost effective measures to reduce automobile travel.
- Provide effective connections to adjacent neighborhoods with bike routes and footpaths.
- Maximize potential transit ridership through an appropriate mix and density of uses developed in the Civic Neighborhood, and by providing easy access to transit.
- Set a precedent for sustainable development in regional centers.

4. *Redevelopment Leverage:* If the central north-south collector street were not funded, then the burden of construction of a lesser street would fall on private developers. The likelihood is that only part of the street would be constructed, providing access to the community retail area from Division. Without a through street to Burnside, transit supportive development near the tracks and to the north would be delayed, perhaps for many years, failing to trigger Tri-Met's investment in the new station. Thus the project is identified as a Transportation Core project: one which is essential to early realization of the Civic Neighborhood.



View of the Central North-South Collector Street Looking North from the Community Retail Center

Civic Neighborhood Light Rail Station

1. *Description and Functions:* A new light rail station is proposed, to be located immediately west of the grade track crossing by the central north-south collector street. This location places the station as far west as possible without encroaching into the cutting. This westerly location will improve accessibility for those who reside to the west of Wallula, putting a number of residents within a ten minute walk of the station. It will also put the majority of the Civic Neighborhood within a five minute walk of a MAX station and all within ten minutes, since the existing City Hall station serves the southeastern part of the neighborhood. The Civic Neighborhood station will be similar in design to the City Hall station, but its platforms will be lower, since it will be built for use by the new low floor rail cars. The platforms will be at the west end of a public plaza; a space designed to accommodate the station, the tracks and the collector street crossing. This plaza will be surrounded by populous buildings with active storefronts. It will be the social focus for those who live and work in the Civic Neighborhood. Thus the station will function as an integral part of the community's activity patterns, helping to make transit a normal and willingly accepted part of peoples lives. Estimated total construction cost is $2,721,000.
2. *Critical Functions* The station will be located at the focus of community activity, but it will also be the principal justification for a concentration of mixed uses around it. Multi-story seniors' housing will be located immediately to the south precisely because of direct access to the station, reducing or eliminating the need to drive. Similarly, an athletics club is planned because commuting workers are a target group, able to access the club more easily by train than if they drove. Concentrations of high density residential development and mixed office uses surround the station because of the direct and convenient transit access provided by the new station.
3. *Relationship to 2040 Goals:* The Civic Neighborhood station is central to achievement of the project objectives which rely upon transit access to reduce traffic generation and parking needs. The State Transportation Planning Rule and Metro 2040 goals lead to a number of priorities for the project which are largely dependent on construction of the new Civic Neighborhood station:

- Reduce automobile trips by capitalizing on transit opportunities, and by creation of an environment which encourages people to walk.
- Create a circulation system which favors safe and efficient access by and between all modes.
- Respond to the central location of the project within the City of Gresham by including a wide range of uses and activities developed to urban densities. Uses should complement those already established nearby. Transit is necessary to justify the proposed mix and density of uses.

4. *Redevelopment Leverage:* If the Civic Neighborhood light rail station were not funded, then this site would lose a critical distinguishing factor. Without the station, the concentration of transit supportive and transit dependent uses around the plaza would not materialize. It is questionable whether the type densities and mixes of uses planned for other parts of the property would materialize either, since there is considerable mutual dependence in an urban neighborhood of this nature. The Civic Neighborhood light rail station is central to the whole concept of sustainable development at this Regional Center.

Civic Neighborhood Station Plaza:

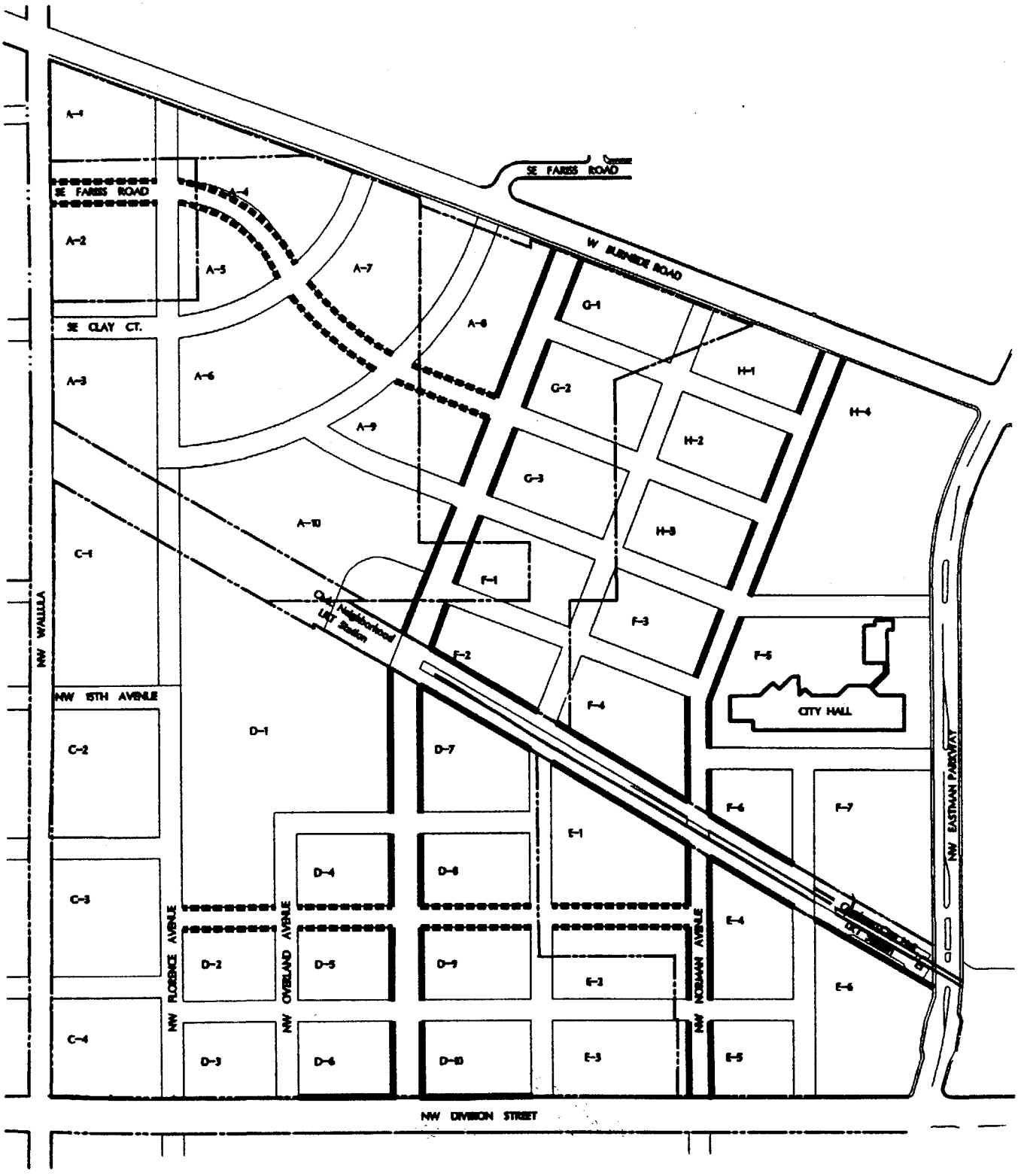
1. *Description and Function:* The Civic Neighborhood Station Plaza provides a physical focus to the community. It is located at the greatest concentration of activity, at the new light rail station, on the collector street and adjacent to busy storefronts. This plaza will include both the light rail tracks and the street within its space, making transit part of the community focus. The entire plaza will measure approximately one acre. Most of the space regularly occupied by people will be north of the tracks and west of the collector street. A terrace outside the storefronts along the northwest perimeter will invite cafe tables and chairs. Below it, amphitheater steps will capitalize on the slope down to track and platform levels; also the level at which the largest public activity area will be located. Much of the plaza will be paved with brick, with concrete at street and track. Street trees, pedestrian scaled street lights, seating, planters and other furnishings will complete the plaza. The quality of materials will not be lavish, but it will be sufficient to fulfill its intended function as an activity attractor and will be built of quality materials to keep maintenance costs down. The cost of construction will be in the order of $25 per square foot. Estimated total construction cost is $1,200,000.
2. *Critical Functions* The primary function of the plaza is to assert the station area as the heart of the Civic Neighborhood community. It will provide the necessary attraction to fill the retail units which will front onto it, combining with them to maintain a sense of vitality through the day and into the evening. The plaza is a celebration of what can be achieved with coordination of mixed living, employment and recreation activities with a light rail station. It will symbolize the very reasons why people choose to live and work in the Civic Neighborhood. The plaza will manifest the gregarious qualities of the community, providing it with a place to celebrate and a place with which to identify.
3. *Relationship to 2040 Goals:* A key aspect of the State Transportation Planning Rule and Metro 2040 goals is the willingness of people to oblige by choosing to live and work in an environment which is non-traditional to suburban settings. A demonstration of he virtues of a busier and more varied environment is necessary to the success of the whole enterprise. The plaza provides a platform for residents and visitors to discover some of those virtues and demonstrate them to others. This is the place that people will think of and photograph as the Civic Neighborhood. The goals which the plaza will support are therefore all of the following:

- Reduce automobile trips by capitalizing on transit opportunities, and by creation of an environment which encourages people to walk.
- Create a circulation system which favors safe and efficient access by and between all modes.
- Respond to the central location of the project within the City of Gresham by including a wide range of uses and activities developed to urban densities. Uses should complement those already established nearby.
- Investigate and implement cost effective measures to reduce automobile travel.
- Provide effective connections to adjacent neighborhoods with bike routes and footpaths.
- Maximize potential transit ridership through an appropriate mix and density of uses developed in the Civic Neighborhood, and by providing easy access to transit.
- Set a precedent for sustainable development in regional centers.

4. *Redevelopment Leverage:* If the station plaza were not funded, then the visibility, and therefore the market attractiveness, of the Civic Neighborhood would be severely reduced. A critical consideration in undertaking a model development such as the Civic Neighborhood is making it both visible and attractive to potential investors - whether they are investors in development or individuals making personal investments in places to live and work. Without early construction of the plaza, many of the virtues of the Civic Neighborhood may remain latent, and the ability to leverage early private investment may be lost.

Appendices:

Environmental Analysis - SRI/Shapiro Inc. August 1994
Market Research and Development Programming Report - Leland Consulting Group, October 1994
Summary of Civil Engineering and Landscape Considerations - MNWR, March 1995
Transportation Impact Analysis - KJS Associates Inc. March 1995
Financial Analysis - SKMG, March 1995
Implementation Strategy - Spencer & Kupper, March 1995



BUILDING ORIENTATION

MAP 2

GRESHAM CIVIC NEIGHBORHOOD
Transit Centered Development

ZIMMER GUNSUL FRASCA PARTNERSHIP

North

MARCH 17, 1995

Primary Pedestrian Streets ——— Secondary Pedestrian Streets - - - - - -

GRESHAM CIVIC NEIGHBORHOOD (INSIDE WHITE LINE)

M E M O R A N D U M

METRO

Date: April 5, 1995

To: JPACT

From: MH Michael Hoglund, Transportation Planning Manager

Re: FY 96 MTIP/$27 Million Regional Reserve

JPACT will be asked to endorse a $27 million package of projects for inclusion in the FY 96 MTIP at its May 11 meeting. At the April 13 meeting, staff will provide a status report on the process of developing the recommended package.

Attached for your review prior to the meeting are two items. The first is a tabulation by mode and by jurisdiction of projects submitted to Metro for evaluation and summary descriptions of each project. The second attachment is a version of the technical rankings as of April 5. Both the TIP Subcommittee and the JPACT Finance Committee will review these rankings prior to the April 7 public release of the rankings and the April 13 JPACT meeting.

The next step in the process is to apply administrative criteria to each project to determine any special circumstances which may enhance a project's ranking. Included in the administrative criteria will be public comment received (written or oral) as part of the *Priorities '95* public workshops or during the 30-day public review period. The other administrative criteria being proposed are similar to those used in the past and include:

- Overmatch. Has a sponsoring agency/jurisdiction provided more than the required match and, if so, how much more?
- Phasing. Can a project be broken into reasonable phases in order that a priority phase be funded?
- Multi-jurisdictional project. Does the project resolve a multi-jurisdictional issue or is it located in multiple jurisdictions?
- Implementable. Can the project complete plans, specifications, and estimates (PS & E) by October 1998, end of ISTEA?

- Multi-modal/alternative mode elibibility. Is the project eligible under the $7 million alternative mode fund (bicycle, pedestrian, intermodal, transit-oriented development, TSM, TDM, non-bus transit capital)?

- Equity. Is there an equitable distribution of funds based on geography and mode?

- Relationship to future projects. Are there upcoming projects that will address the proposed projects (e.g., is there an upcoming roadway project which will complete preservation, bicycle, pedestrian, freight needs)?

- Professional judgment. The technical criteria attempt to quantify certain project elements. Staff and the TIP Subcommittee recognize the limitations in being able to quantify every element of every project, given time and data limitations. Therefore, prior to recommending a package for adoption, each of the RTP/TIP work teams will evaluate project components for consistency with the technical ranking.

Staff will discuss the technical rankings, answer questions about specific projects, and discuss the administrative criteria at the meeting. The FY 96 TIP adoption schedule is being coordinated with adoption of the Interim RTP Update. A copy of the schedule is included in this packet under the RTP agenda item.

MH:lmk

Attachments

2040 Implementation Program

Project Nominations Summary
(as of March 30, 1995)

Roadway Preservation

CRP1	**Kruse Way Reconstruction (Boones Ferry Road to Bangy Road)** Deep structural improvements requiring 4 inch grind and replacement with 7 inches of asphalt.	**1,370,000**
CRP2	**Lake Road Preservation Project (SE 21st Avenue to Oatfield Road)** Half-roadway reconstruction that would include adequate base rock, widening of pavement to include bike lanes, and reconstructed curb on south side of roadway.	**699,000**
MRP1	**Hawthorne Bridge Deck Structure** Several options for deck replacement are possible. Multnomah County has hired a consultant to more specifically determine structural repairs, structural systems, and materials, and critical path to implementation. It would be advantageous to coordinate development of this project with the proposed Hawthorne Bridge Sidewalk Widening Project.	**5,750,000**
MRP2	**NE Hood Street (Division Street to Powell Boulevard)** Street reconstruction, paving overlay, safety access for bikes and pedestrians including curb extensions, decorative street lights and bomanite crosswalks. Undergrounding of overhead utilities and landscape tree plantings.	**453,200**
MRP3	**NE Fifth Street (Main Street to Cleveland Avenue)** Facilitate incorporation of pedestrian enhancements between N. Main and NE Hood; roadway reconstruction and storm drainage.	**302,900**
	Total	**$11,616,000**

Roadway Expansion

CRX1	**147th Alignment (North of Sunnyside Road to 142nd/Sunnyside Road)** Realign 147th North of Sunnyside Road to connect to the intersection of 147th and Sunnyside Road. Includes sidewalk and bike lanes in urban section.	**375,000**
CRX2	**Sunnyside Road (Sunnybrook to 122nd Avenue)** Widen Sunnyside Road to 5 lanes to include curb, sidewalks and bike lanes.	**6,000,000**
CRX3	**122nd Avenue (Sunnyside Road to Hubbard Road)** Widen 122nd Avenue to 3 lanes, including curbs, sidewalks and bike lanes.	**3,227,000**
CRX4	**92nd Avenue Reconstruction (Idleman Road to Multnomah County Line)** Widen 92nd Avenue to 3 lanes, including curbs, sidewalks and bike lanes.	**850,000**
CRX5	**Oatfield Road (Webster Road to 82nd Drive)** Widen to 3 lanes to include continuous left-turn lane and sidewalk; redesign Webster/Oatfield traffic signal to include a southbound left-turn lane; install traffic signal at Gloucester Street; coordinate traffic signals at Webster, Gloucester and 82nd Drive. Increase capacity and safety of bike lanes.	**1,300,000**
CRXt6	**Abernethy Realignment (Abernethy Road to Washington Street)** Realign Abernethy Road between County shops and Washington.	**554,000**
CRXt7	**Johnson Creek Blvd. Improvements - Phase II (SE 35th to SE 45th Streets)** Right-of-way purchases; street construction; access to Springwater Corridor at SE 45th including sidewalks.	**1,418,000**
CRXt8	**Highway 43/Terwilliger Intersection** Construct northbound left-turn lane on State Street to Terwilliger; reconfigure Terwilliger at its intersection with State Street; install traffic signal.	**1,100,000**
CRXt9	**Highway 43/A Avenue Intersection** Improve turning radius from A Avenue for southbound turn onto Highway 43, restripe turning lanes, and upgrade signal.	**580,000**
CRXt10	**Highway 43/McVey/Green Street Intersection** Construct turn lanes for both northbound and southbound traffic on Highway 43 while increasing pedestrian access.	**1,282,500**
CRXt11	**Highway 43/West A Street Realignment and Traffic Signal** Realign West A Street with Failing Street and install traffic signal.	**1,220,000**
CRXt12	**Highway 43/Willamette Falls Drive Traffic Signal** Signalize and restripe approaches to the intersection.	**165,000**

CRXt13	**Highway 43/Failing Street** Install traffic signal at Failing Street; close six streets on the east side of Highway 43.	**200,000**
CRXt14	**Highway 43/Pimlico Street** Install traffic signal.	**150,000**
CRXt15	**Highway 43/Jolie Point Traffic Signal** Install traffic signal at Jolie Point Road to complement ODOT Highway 43 improvements.	**120,000**
CRXt16	**City of Happy Valley: 129th Avenue Improvements** Realign roadway, widen for bike lanes and construct sidewalks from Scott Creek Road to Mountain Gate Road. The project will provide bicycle and pedestrian access in a town center area.	**800,000**
MRXt1	**238th Avenue/Halsey Street Intersection** Add left and right turn lanes and install new traffic signal; new sidewalks, bike lanes and street lights.	**419,650**
MRXt2	**US26/Orient Drive Safety/Congestion Project** Rebuild intersections of US 26/Orient Drive, US 26/Palmquist Road, and US 26/Kane Road to urban standards with traffic signals, bike lanes and sidewalks.	**1,015,000**
MRXt3	**UPRR Bridge Replacement (201st Avenue/I-84, and 223rd Avenue/I-84)** Construct 2 new railroad bridges to accommodate 44 feet of pavement width, including bike lanes and sidewalks.	**1,941,000**
MRX4	**Halsey Street Enhancements (223rd Ave. to Columbia Hwy)** Project would add a center turn lane or landscape median, and curbs, gutters, drainage, lighting, sidewalk and bike lanes with landscaping the entire length.	**4,448,000**
WRX1	**Glencoe Road (Lincoln Street to Evergreen)** Widen to 3 lanes, with bike lanes and sidewalks.	**3,116,000**
WRX2	**Walker Road (Westfield Avenue to Murray Boulevard)** Widen to 3 lanes, with bike lanes and sidewalks.	**1,611,000**
WRX3	**Cornell Road (Bethany Boulevard to 179th Avenue)** Widen to 5 lanes, with bike lanes and sidewalks.	**2,722,000**
WRX4	**Murray Boulevard Overpass** (Terman Road to Millikan Way) Widen 2 lane overpass to 4 lanes, with bike lanes	**4,201,000**

WRX5	**Henry Street Eastward Extension** (Cedar Hills Boulevard to Mill Street) Two lane cross-section with bike lanes and wide sidewalks.	**1,370,000**
WRX6	**Mill Avenue Southern Extension** (Canyon Road to Farmington Road/Downtown grid) Two lane cross-section with bike lanes and sidewalks; protected crossing at SPRR tracks; new signalized intersection with Farmington Road.	**1,256,000**
WRX7	**Mill Avenue/Henry Street LRT Connection** (Beaverton Central LRT Station to Canyon Road/Watson Avenue) Lane cross-section with bike lanes and sidewalks to provide access between LRT station and surrounding street network.	**1,940,0002**
WRX8	**Heather Street Connection** (Mt. View Lane, Cornelius to East City Limits, Forest Grove) Two lanes with sidewalks to connect Cornelius and Forest Grove parallel to TV Highway.	**400,000**
WRX9	**NE 28th Avenue Improvement (North of Grant Street to East Main Street)** Reconstruct existing 2 lane roadway to 3 lanes with bike lanes, curbs, and sidewalks.	**1,750,000**
WRX10	**124th Avenue/99W/Tualatin Road Intersection** Shift the location of existing Highway 99W/Tualatin Road intersection approximately 400 feet southwesterly, continuing bicycle and pedestrian facilities and combine/relocate accesses.	**4,486,000**
WRXt11	**Greenburg/Mapleleaf Improvements (Locust Street to Highway 217 ramp)** Add northbound left turn lane at Washington Square Road, and a right turn lane to the northbound off-ramp.	**358,900**
WRXt12	**Barnes Signal Interconnect (Suntek to Miller)** Portions of interconnect already exist but additional conduit, wiring, and upgraded controller software are needed.	**18,000**
WRXt13	**Murray North Signal Interconnect (Highway 26 to Cornell Road)** Interconnect signals; placement of master controller, conduit and development of signal system timing plans.	**31,000**
WRXt14	**Murray South Signal Interconnect (Farmington to Millikan Avenue)** Install a master controller, an interconnect, and develop coordinated signal timing plans.	**31,000**
WRXt15	**Scholls Ferry Signal Interconnect (Nimbus Drive to Highway 217)** Interconnect Washington County signal system along Scholls Ferry Road with ODOT signals at Highway 217.	**31,000**

PRX1	**SE Water Avenue Extension** (SE Water Avenue at Clay to SE Division Place at 4th Avenue) Three lane facility with bike lanes and sidewalks; industrial access arterial with connections to local streets and regional highway network.	**1,600,000**
PRX2	**SE Tacoma Street (SE 28th Avenue to SE 32nd Avenue)** Two travel lanes, bike lanes, curbs, sidewalks, storm drainage, improved street lighting and street trees.	**553,000**
PRX3	**SE Foster Road Realignment (162nd Avenue to Jenne Road)** Realign 2 lane roadway, provide for left turn lanes, and add bike lanes and sidewalks.	**2,112,900**
PRXt4	**Multnomah/Garden Home Intersection Improvement** Realign east leg of the intersection, install sidewalks and bike lanes to match improvements to the west of 71st Avenue, and signalize the intersection.	**785,100**
PRXt5	**ITS Program - Portland** Includes 4 components: Central Computer Traffic Control/Signal Timing Program, Transit Signal Priority, Congestion Management Monitoring/Surveillance, and Traffic Signal Preservations.	**1,884,000**
ORXt1	**Arterial Signal Optimization Projects** Includes a number of projects that are part of the ATMS Implementation Plan, including: •SE Division Street (SE 60th Avenue to SE 174th Avenue) •NE Sandy Blvd. (E. Burnside Street to 82nd Avenue) •SE Powell Blvd. (SE 11th Avenue to SE 98th Avenue) •SE Division Street (SE 182nd Avenue to SE 257th Avenue) •SE 181st Avenue (I-84 to Powell Blvd.) •TV Highway (Beaverton City Limits to Baseline Rd)	**925,000**
ORXt2	**ATMS Pilot Program: I-5 Tow Service Patrol (Marquam Bridge to Wilsonville)** Demonstration program to reduce incident detection and response times, promptly removing disabled and accident vehicles.	**100,000**
ORXt3	**US 26 Throughway Enhancement** A TSO project with the intent to improve a bottle-neck location, lane embalance and correct geometric conditions that exist today.	**250,000**
ORXt4	**I-205 Ramp Metering** Retrofit ramp meters and the communication system at each entrance location, except freeway to freeway connections on I-205.	**2,000,000**
ORXt5	**I-5 Southbound at Front Avenue Ramp Metering** Retrofit ramp meters and the communication system at each entrance location.	**100,000**

ORXt6	**I-5 & I-84 Connection Ramp Metering** Retrofit ramp meters and the communication system at each entrance location.	**500,000**
ORXt7	**Motorist Info. System; Telephone System** Telephone System Traffic Report to provide pre-trip and enroute, real-time traffic conditions; information of incidents, road conditions and alternative routes.	**50,000**
ORXt8	**Oregon 43 Traffic Signal Improvement** Coordinate signal operations; control from a remote location; monitoring and fault reporting.	**1,250,000**
	Total	**$60,421,773**

Transit

TTR1	**Fastlink - Eastside** Fastlink is transit service designed to provide frequent and fast transit service in corridors linking regional centers, town centers and main streets. The proposed Southeast Corridor would connect the CBD and 82nd Avenue along one of the high activity eastside corridors like Hawthorne, Belmont or Division Street.	**1,678,372**
TTR2	**Fastlink - Northwest Corridor** The proposed Fastlink northwest corridor would connect the CBD and the high density Northwest Portland Neighborhood with key regional attractors such as Civic Stadium, Westside LRT, Good Samaritan Hospital, and the retail center along NW 23rd Avenue.	**1,640,000**
	Total	**$3,318,372**

Transit Oriented Development (TOD)

MTOD1	**Civic Neighborhood - Station Plaza** The Station Plaza is part of the Gresham Civic Neighborhood Transit Centered Development Plan. The plaza will be the focal point for light rail, pedestrian friendly streets, and shopping. It will include street trees, pedestrian scaled street lights, seating, planters and other transit oriented furnishings.	**5,657,730**
MTOD2	**Civic Neighborhood - LRT Station** The station will be located immediately west of the grade track crossing near the central north-south collector (Burnside to Division). This location will put the majority of the Civic Neighborhood within a five minute walk of a MAX station. Mixed use development is planned surround the station.	**7,837,730**
MTOD3	**Civic Neighborhood- Central-NS-Collector** North-South Collector from Burnside to Division (Length = 2,450'). It will function as the main point of access and egress between the Civic Neighborhood and Division and Burnside. It will also function as the main pedestrian link in the western half of the neighborhood.	**9,681,730**
TTOD1	**Millikian Way Purchase and Development** Proposal to improve SW Millikian Way from SW Murray Boulevard to SW Hocken Street from a two-lane private roadway to a three-lane public facility, with sidewalks and bike paths.	**12,161,730**
WTOD1	**Ground Floor Retail at Jail** This proposal would fund ground level retail within the new Criminal Justice Facility in central Hillsboro.	**13,161,730**
WTOD2	**Beaverton Creek Master Plan** 122 acres of integrated development centered on the Beaverton Creek Station of the West Side LRT, adjacent to Nike and Tektronix campuses between 153rd, Murray Boulevard, and Jenkins Road.	**4,697,730**
METTOD1	**TOD Implementation Program** This proposal will provide $7.0 million for a Regional Revolving Fund to acquire property at key areas immediately adjacent to a transit station for the purpose of TOD implementation and/or to make other public investments (site preparation and site improvements) in a TOD project that encourage TOD implementation.	**2,229,468**
	Total	**$13,161,730**

Transportation Demand Management (TDM)

TTDM1 **Regional Transportation Demand Management** **1,077,000**
This request is for funds to continue and enhance the region's TDM service, through FY 1999. Services include carpool matching, emergency ride home, employer outreach, etc.

TTDM2 **Regional Center Management Association** **2,384,100**
This proposal is to fund Regional Center Management Associations in Gresham, Hillsboro, Oregon City and Milwaukie for three years. The goal of these RCMAs is to transform the three areas into regional centers, implement downtown plans, and manage the transportation system. The cities, in partnership with their downtown associations and/or chambers of commerce, have agreed to provide matching funds. Livable Oregon, Inc. will act as an advisory to the developing RCMAs, offering training and technical assistance.

PTDM1 **Central City TMA** **1,377,000**
The proposal is to fund the creation of TMAs in the Portland Central city business districts, including the Central Eastside Industrial District. The TMAs would develop TDM programs and strategies for employers in these more densely populated employment centers.

PTDM2 **Central City Vanpool Program** **2,504,100**
This would be a demonstration vanpool program aimed at providing an alternative to the single occupant vehicle in the Central City Business Districts (ie., Central Eastside Industrial Area, the Lloyd District, and other industrial sites and universities). The program is recommended in the Central City Transportation Management Plan (CCTMP).

ETDM1 **Portland Area Telecommuting Project** **3,054,100**
This proposal requests funding to expand the scope and duration of the Portland Area Telecommuting Project. Key elements include:
(1) expanding the number of Metropolitan area employers by providing information, technical assistance and training;
(2) establishing a telework center at possibly two locations; and
(3) expanding monitoring and evaluation activity.

PtTDM1 **Swan Island Transportation Management Association** **2,654,100**
Funds to formalize and expand the Swan Island Transportation Management Association and provide operating funds for 2 years.

Total **$3,054,100**

Bicycle Projects

CB1	**Clackamas County: Clackamas Town Center East-West Connector** Construct a multi-use path from connecting North Clackamas Park and Clackamas Town Center. Project improves access in a regional center area.	**$915,000**
CB2	**Clackamas County: SE 82nd Drive Bikeway** Construct bike lanes on SE 82nd Drive from Highway 212/224 to Jennifer Street.	**80,000**
CB3	**Clackamas County: Linwood Avenue Bikeway** Construct bike lanes on Linwood Avenue from King Road to Johnson Creek Boulevard. Project will provide a missing bikeway link in a regional center.	**208,000**
CB4	**Clackamas County: Carmen Drive Bikeway** Construct bike lanes on Carmen Drive from I-5 to Quarry Road. Provides improved bicycle access in a town center area.	**540,000**
MB1	**Multnomah County: Hawthorne Bridge Sidewalk Widening** Reconstruct and widen sidewalks on the Hawthorne Bridge main span. Project will relieve severe congestion problem for bicycles and pedestrians and improve safety for both modes. Project will complete a link for several bikeways from inner neighborhoods to the central city.	**1,755,000**
MB2	**Multnomah County: Hogan Road Bikeway** Widen road to provide shoulder bikeways along Hogan Road from Powell Boulevard to Palmquist Road.	**87,500**
MB3	**City of Gresham: Springwater Trail Bicycle/Pedestrian Access Improvements** Construct bike lanes and sidewalks on several local streets providing access to the Springwater Trail.	**500,000**
WB1	**Washington County: Walker Road Bikeway Improvement** Construct bike lanes on Walker Road from 173rd to 185th Street. The project would complete a bikeway from Cedar Hills to 185th Street and provide access to a town center.	**296,000**
WB2	**Washington County: Bethany Bike Lanes** Project provides bike lanes from West Union Avenue to Highway 26; the project will provide connections to a town center.	**410,000**
WB3	**Washington County: 170th Avenue Bikeways** Project provides sidewalks on one side and bike lanes on 170th Avenue from Alexander to Westside LRT alignment. The project will provide access to an LRT station.	**1,259,000**
PB1	**City of Portland: Gateway and Hollywood Bike to Transit** Provide bike lanes and bike boulevards on several streets providing access to Hollywood and Gateway town and regional centers/LRT stations.	**400,000**

PB2	**City of Portland: Burnside Bridge Waterfront Park Ramp** Project will construct a multi-use ramp from the Burnside Bridge to Waterfront Park. The project will improve bicycle and pedestrian access in a regional center.	**856,000**
PB3	**City of Portland: Burnside Bridge Eastside Esplanade Ramp** Project will construct a multi-use ramp from the Burnside Bridge to the Eastside Esplanade, providing bicycle and pedestrian access in a central city.	**856,000**
PB4	**City of Portland: Front Avenue Multi-Use Path** Project will construct a Multi-Use path directly east of Front Avenue to provide an alternative bicycle access to Waterfront Park and enhance pedestrian amenities along Front Avenue. Project will improve bicycle and pedestrian access in the Central City.	**3,579,000**
PB5	**City of Portland: Sellwood Bridge Access Connection** Construct ramps from the Sellwood Bridge to the planned Oaks Park Access road to provide improved bicycle and pedestrian access to the Sellwood Bridge. The project would improve access across the river in the central city.	**128,000**
OB1	**ODOT: SW Beaverton-Hillsdale Highway Bicycle Lanes and Sidewalks** Section A. Construct bicycle lanes and sidewalks from SW 65th Street to Scholls Ferry Road to improve access to the central city.	**460,000**
OB2	**ODOT: SW Barbur Boulevard Bicycle Lanes and Sidewalks** Construct bicycle lanes and sidewalks from Terwilliger Boulevard to Multnomah Boulevard to improve access to the central city.	**2,640,000**
OB3	**ODOT: SW Beaverton-Hillsdale Highway Bicycle Lanes and Sidewalks** Section B. Construct bicycle lanes and sidewalks from Scholls Ferry Road to Highway 217. Project will provide access in a Central City/Regional Center area.	**4,400,000**
OB4	**ODOT: Hall Boulevard Bicycle and Pedestrian Project** Construct bicycle lanes and sidewalks on Hall Boulevard from Oak Street to Pacific Highway. The project will improve access to a Regional Center.	**800,000**
OB5	**ODOT : I-205 Multi-Use Trial Intersection Improvements** Improve several street crossing along the I-205 trail to improve bicycle access on a major regional trail providing access to several regional centers.	**196,000**
OB6	**ODOT: SW Barbur Boulevard Bicycle Lanes and Sidewalks** Construct bicycle lanes and sidewalks on Barbur Boulevard from SW Hamilton Street to SW Front Street. The project will provide a missing link in bicycle and pedestrian access to the Central City.	**1,440,000**
	Total	**$16,841,500**

Pedestrian Projects

CP1	**City of Oregon City, Sidewalks on Warner Parrot and Telford Roads** Install sidewalks on north side of Warner Parrot Road between Linn Avenue and South End Road to serve local schools, commercial and residential and complement sidewalks on the south side. Install sidewalks on one side of Telford Road between Center Street and Davis.	**254,700**
CP2	**City of Lake Oswego: Pathway Adjacent to Greentree Road** Construct a 685 foot link from an existing pathway to South Shore Blvd.	**64,000**
CP3	**City of Lake Oswego: Pathway Along Glenmorrie Road** Construct a 250 foot pedestrian pathway from Chapin and Green Bluff Road.	**8,500**
CP4	**City of Lake Oswego: Pathway Along A Avenue** Construct a 150 foot pedestrian pathway between 9th and 10th.	**7,200**
CP5	**City of Lake Oswego: Pathway Along Carman Drive** Construct an 1800 foot pathway from Meadows Road to Waluga Drive.	**64,000**
CP6	**City of Lake Oswego: Pathway Along Upper Drive** Construct a 1650 foot pathway between Reese and Bryant Roads.	**68,000**
CP7	**City of Milwaukie: 17th Avenue Multi-Modal Project** Remove and reconstruct sidewalks and provide bike lanes along SE 17th Avenue from Lava Drive to Ochoco Street. Project will improve bicycle and pedestrian access to a regional center.	**494,400**
MP1	**Multnomah County: Division Street Bikeway/Pedestrian Improvements** Acquire additional right-of-way and construct sidewalks along SE Division Street from 202nd to 212th Avenue. Project will provide sidewalks and bike lanes on a major arterial street providing access to a regional center.	**179,500**
MP2	**Multnomah County: Sidewalks on Various Arterial Streets** Construct sidewalks on various improved arterial streets in East Multnomah County/Gresham. Projects will provide connections near and within a regional center.	**179,500**
MP3	**City of Gresham: Sidewalks on Various Collector Streets** Construct sidewalks on several collector streets to complete missing links in the local pedestrian system and provide connections to a regional center, transit and the Springwater Trail.	**141,370**
MP4	**City of Gresham: Pedestrian to Max Capital Program Phase II** Construct sidewalks, signals and other pedestrian amenities to enhance access around Central Gresham light rail stations.	**480,980**

WP1 **City of Forest Grove: Pacific Avenue Pedestrian/Bikeway** **101,700**
Construct curb, sidewalk and bike lanes along the south side of Pacific Avenue from Hawthorne Street to Quince Street Project will provide pedestrian access along a main street and bus corridor.

WP2 **City of Forest Grove: 19th Street Sidewalk Improvement Project** **225,000**
Repair existing sidewalk and construct new sidewalk along 19th Street from B Street to Hawthorne Street Project will improve pedestrian access in a town center.

WP3 **City of Hillsboro: Downtown Hillsboro Pedestrian Improvements** **250,000**
Reconstruct downtown sidewalks to provide intersection bulb outs, curb ramps, lighting and pedestrian amenities. Project will improve access in a regional center.

PP1 **City of Portland: SW Capitol Highway Pedestrian Crossing Signals** **1,120,000**
Realign the driveway to Wilson High School and provide two pedestrian activated signals to provide safe crossing of SW Capitol Highway providing access to transit in a town center.

PP2 **City of Portland: SE Hawthorne Boulevard Pedestrian Improvements** **400,000**
Project will design and construct pedestrian crossing and amenities on SE Hawthorne Boulevard from SE 32nd to 39th Street The project will enhance pedestrian access along a main street and bus corridor.

PP3 **City of Portland: SE Woodstock Pedestrian Improvements** **200,000**
Design and construct median islands, curb extensions and other improvements to improve pedestrian access and crossing on SE Woodstock between SE 39th and SE 49th. Project will enhance pedestrian access along a main street and bus corridor.

PP4 **City of Portland: Wildwood Trial Pedestrian Bridge** **280,000**
Construct a pedestrian bridge for the Wildwood Trail across West Burnside Street. Project would improve safety for users of the Wildwood Trail.

PP5 **City of Portland: Broadway/Weidler Bicycle/Pedestrian Improvements** **2,500,000**
(Phase 1) Reconfigure Broadway/Weidler within the existing right-of-way from NE 9th to NE 16th Avenue to provide bicycle lanes and enhanced pedestrian access. The project includes wider sidewalks, transit amenities and intersection bulb outs to reduce crossing distances. Improvements will provide bicycle access and improve pedestrian access in the central city.

PP6 **City of Portland: NE 33rd - NE Broadway to Columbia Boulevard** **280,000**
Construct various traffic calming measures and pedestrian facilities along NE 33rd Avenue from NE Broadway to NE Columbia Boulevard. The project will enhance pedestrian access to a town center.

PP7	**City of Portland: Lents Pedestrian and Bicycle Enhancement Project** Provide pedestrian and bicycle improvements on the SE Foster/Woodstock couplet from SE 87th to SE 103rd Avenue. Specific projects to be selected by June 1995. This project would enhance bicycle and pedestrian access in a town center.	**1,000,000**
PP8	**City of Portland: Cully Boulevard Bicycle and Pedestrian Improvements** Provide bicycle and pedestrian access on Cully Boulevard from Killingsworth Street to Prescott Street to improve access to a town center.	**1,680,000**
OP1	**ODOT: Canyon Road Sidewalks** Construct sidewalks on Canyon Road from SW 110th to SW Campbell Drive. Project will provide pedestrian access to a regional center.	**371,000**
OP2	**ODOT: McLoughlin Boulevard Sidewalks** Construct and replace sidewalks on McLoughlin Boulevard for Harrison Street in Milwaukie to the Oregon city Shopping Center. Project provides access between two regional centers.	**2,400,000**
	Total	**$12,470,700**

Miscellaneous Projects

MISC1	**City of Portland: Lovejoy Ramp Replacement PE** Preliminary engineering for removal of the existing Lovejoy Ramp and construction of a new shorter ramp to the Broadway Bridge to encourage development of the River District section of the Central City. Estimated construction cost for the project is $11.8 million.	**1,053,445**
MISC2	**City of Portland: NE 12th Avenue Banfield Bridge Seismic Retrofit** Project will modify the bridge to prevent the bridge deck, beams and girders from separating from the supports in the event of a moderate earthquake.	**311,500**
MISC3	**Port of Portland: Alternative Fuel Buses for PDX** Replace existing PDX shuttle fleet used to provide access from economy. Long-term and employee parking to the terminal area.	**825,000**
MISC4	**City of Oregon City: High Speed Rail Improvements** Develop projects to support future high speed rail stop in Oregon City.	**500,000**
	Total	**$2,691,000**

Freight Projects

PF1	**City of Portland: N/NE Columbia Boulevard Improvements** Signal interconnection system on Columbia Boulevard from Rivergate to I-205 and preliminary engineering for most promising alternatives for cross-overs between I-205 and I-5. Project will improve freight traffic flow in an industrial sanctuary.	**250,00**
PF2	**City of Portland, Port of Portland: Columbia/N. Lombard Overcrossing PE** Preliminary engineering for overcrossing Columbia Boulevard at N. Lombard to grade separate the facilities. Project will improve truck access in an industrial sanctuary, estimated construction cost for the project is $15 million.	**897,000**
PF3	**City of Portland, Port of Portland: Columbia Blvd. N. Burgard Intersection** Reconstruct and signalize intersection of Columbia Boulevard and N. Burgard Street to improve access and increase safety.	**886,000**
PF4	**Portland of Portland Marine Drive Modernization to Terminal Six Entrance** Expand N. Marine Drive from 3 to 5 lanes with bike lanes for 12,350 feet from the end of the new section to the Terminal Six entrance. Project will improve safety and access for freight within an industrial sanctuary.	**2,400,000**
PF5	**NE 148th Avenue Reconstruction (NE Marine Drive to NE Sandy Blvd.)** Reconstruct substandard 2 lane farm road to handle existing and future truck traffic; add continuous left turn lane, bike lanes and sidewalks.	**2,963,300**
PF6	**Lower Albina Overcrossing** (N. Interstate to N. Lewis/N. Loring/N. Tillamook) Eliminate a series of at-grade crossings ion the N. Albina Industrial District adjacent to the Union Pacific Rail Yards. Provide overpass with sidings, and secondary improvements to local streets and N. Interstate.	**4,000,000**
	Total	**$11,396,000**

Studies

S1 **Metro Transportation Planning** **1,958,000**

Fund Metro Regional Transportation Planning activites including:

*	Meeting ISTEA/Rule 12 mandates	1,050,000
*	Commodity flow modelling	340,000
*	General technical assistance	150,000
*	Westside Station Area Planning	418,000

S2 **PDC Transit Station Area Development Opportunity Strategy** **361,250**

Develop strategies and analysis to implement mixed-use development in transit station areas. Project will develop examples of complete projects including concept design, market research and financial analysis.

S3 **City of Portland Stark/Washington Corridor Study** **360,000**

Develop preliminary enginneering for signal and pedestrian improvements to improve traffic flow and increase pedestrian safety and access.

S4 **ODOT I-5/Hwy 217 Subarea Transportation Plan** **50,000**

Continue to develop a regional subarea plan to address transportation needs at the I-5/217 Interchange.

S5 **Tri-Met Transit Finance Task Force** **400,000**

Establish a blue-rilbbon task force to review plans for transit expansion, assess performance of the existing system, measure community attitiudes, examine options for new funding and prepare a package of reccomendations with public input.

S6 **Port of Portland Commodity Flow Analysis Refinement** **45,000**

Refine commodity flow analysis model developed by Metro and the Port of Portland with better defined variables and forecasts.

S7 **City of Lake Oswego Transit Center Relocation Study** **45,000**

Study alternative locations for the Lake Oswego transit center to relieve parking pressure on adjacent neighborhoods.

S8 **Cornelius Tualatin Valley Highway Corridor Enhancement** **60,000**

(4th Avenue to 26th Avenue) Enhance traffic control and circulation.

S9 **W. Burnside Redevelopment (Burnside Bridge to NW 23rd Avenue)** **950,000**

Rebuild Burnside between bridge and NW 23rd Avenue to reduce structural/ functional obstacles to pedestrians and bicyclists; special attention to urban design and intersection treatments which enhance the continuity of the Transit Mall and the Park Blocks.

S10 **City of Portland: Capitol Highway Multi-Modal Improvements** **200,000**

(Preliminary Engineering) Project will conduct project development and preliminary engineering for several projects to improve bicycle and pedestrian access along SWCapitol Highway.

S11	**Portland Traction Company Right-of-Way Trail/Project Issues/PE** Research issues to be addressed in order to develop a 7 mile bike/pedestrian trail running roughly parallel to the Willamette River from downtown Milwaukie to the City of Gladstone.	**180,000**
S12	**Clackamette Cove Master Plan** This site was identified in the Tier 1 Final Recommendation Report as a regionally significant area for TOD development. The proposal is to fund the plan to develop the entire lagoon area known as the "Clackamette Cove."	**75,000**
	Total	**$4,684,000**

STP REGIONAL RESERVE FUNDING REQUEST SUMMARY

Jurisdiction	Roadway Preservation	Roadway Expansion	Transit	TOD	TDM	Bike	Pedestrian	Freight	Studies	Misc.	Total
Clackamas Co.	$2,069,000	$19,341,500			$175,000	$1,743,000	$960,800		$300,000	$500,000	$25,089,300
Multnomah Co.	$6,506,100	$9,140,650				$2,342,500	$981,350				$18,970,600
Washington Co.		$23,381,000		$3,470,544		$1,965,000	$576,700		$60,000		$29,453,244
City of Portland	$5,331,800	$1,603,200			$420,000	$5,819,000	$7,460,000	$8,996,300	$1,871,250	$1,364,945	$32,866,495
Tri-Met			$3,318,372	$1,678,372	$2,437,000				$400,000		$9,665,372
ODOE					$400,000						$400,000
ODOT		$5,175,000				$9,936,000	$2,771,000		$50,000		$17,932,000
Metro				$7,000,000					$1,958,000		$8,958,000
Port of Portland					$150,000			$2,400,000	$45,000	$825,000	$3,420,000
Total	$13,906,900	$58,641,350	$3,318,372	$12,148,916	$3,582,000	$21,805,500	$12,749,850	$11,396,300	$4,684,250	$2,689,945	$146,755,011

ROADWAY RECONSTRUCTION PROJECTS (4/5/95)

	AC CY	MODE	PROJ NO.	PROJECT NAME	TOTAL SCORE	PAVEMENT CONDITION		ACCIDENT FACTOR		2040 SUPPORT FACTOR	COST/BENEFIT FACTOR				MULTI-MODAL FACTOR				CUM TOTAL
						SCALE 1990 FAIR = 15 POOR = 8 VERY POOR = 0	SCALE 2002 FAIR = 0 POOR = 5 VERY POOR = 10	ACCIDENT RATE	SCALE > 124% = 20 100 -124% = 10 <100% = 0	SCALE HIGH= 25 MEDIUM = 10 LOW = 0	2015 VMT	PROJECT COST	$/VMT	SCALE LOW $$ = 15 MED $$ = 8 HI $$ = 0	REG. BIKE SYS BENEFIT COMPLETES= 5 EXTENDS= 3 ISOLATED= 0	PED BENEFIT HELPS= 5 NA= 0 HINDERS = -5	TRANSIT BENEFIT EXIST'G SYS= 5 2040 SYS= 3 OTHER= 0	TOTAL MULT-MODE	
						POINTS	POINTS		POINTS	POINTS				POINTS				POINTS	
3	M	RP	1	Hawthorne Bridge Deck Stucture	85	15	10	*	20	25	17250	$5,750,000	$333.33	0	5	5	5	15	$5,750,000
1	C	RP	1	Kruse Way Reconstr (Boones Ferry Rd.-Bangy Rd.)	68	8	10	*	10	10	44000	$1,370,000	$31.14	15	5	5	5	15	$7,120,000
4	M	RP	2	NE Hood Street (Division St. to Powell Blvd.)	64	8	10	*	0	25	2380	$453,200	$190.42	8	3	5	5	13	$7,573,200
8	P	RP	3	SW Front Ave (NW Everett St to SW Harrison St.)	63	8	5	*	10	25	*	$2,980,900	*	0	5	5	5	15	$10,534,100
2	C	RP	2	Lake Road Preservat'n(SE 21st Ave. to Oatfield Rd.)	58	8	10	*	0	25	3250	$779,000	$239.69	0	5	5	5	15	$11,313,100
5	M	RP	3	NE Fifth Street (Main St. to Cleveland Ave.)	56	0	10	*	0	25	2380	$302,900	$127.27	8	3	5	5	13	$11,616,000

ROADWAY EXPANSION PROJECTS

	AGC	E	PROJ NO.	PROJECT NAME	TOTAL SCORE	VOLUME TO CAPACITY FACTO				ACCIDENT FACTOR		2040 SUPPORT FACTOR	ST/BENEFIT FACTOR						MULTI-MODAL FACTOR				REQUESTE FUNDS	CUMULATIV TOTAL
						1990 V/C	SCALE 1990 >1.0 = 15 0.9-1 = 8 < 0.9 = 0	SCALE 2016 >1.0 = 10 0.9-1 = 5 < 0.9 = 0	2016V/C	ACCIDENT RATE	SCALE > 124% = 20 100 -124% = 10 <100% = 0	SCALE HIGH= 25 MEDIUM = 13 LOW = 0	VHD 2016 COMMITTD (with targets)	VHD 2016 BUILD (with targets)	DELAY DELTA	PROJECT COST (cost/20 yr)	$/VHD (20 yr annualized benefit)	SCALE LOW $$ = 15 MED $$ = 8 HI $$ = 0	REG. BIKE SYS BENEFIT COMPLETES= 5 EXTENDS= 3 ISOLATED= 0	PED BENEFIT HELPS= 5 NA= 0 HINDERS = -5	TRANSIT BENEFIT EXIST'G SYS= 5 2040 SYS= 3 OTHER= 0	TOTAL MULTI MODE		
						POINTS		POINTS			POINTS	POINTS						POINTS				POINTS		
1	C	RX	2	Sunnyside Road (Sunnybrook to 122nd Ave.)	100	1.01	15	10	1.76	2.9	20	25	116.66	65.4	51.26	$10,500,000	$10,242	15	5	5	5	15	$6,000,000	$6,000,000
2	W	RX	13	Murray N. Sig. Intercon. (Hwy. 26 to Cornell Rd.)	90	1.55	15	10	1.79	8.03/1.89	20	25	52.1	51.19	0.91	$10,000	$549	15	0	0	5	5	$9,000	$6,009,000
3	M	RX	1	238th Ave./Halsey St. Intersection	88	1.41	15	10	1.17	*	20	13	5.77	3.36	2.41	$419,650	$8,706	15	5	5	5	15	$376,531	$6,385,531
4	W	RX	10	124th Ave/99W/Tualatin Rd. Intersection	88	1.01	15	10	1.43	9.56	20	25	6.72	2.93	3.79	$5,000,000	$65,963	8	5	5	0	10	$4,486,000	$10,871,531
5	W	RX	15	Scholls Ferry Sig. Intercon (Nimbus Dr to Hwy. 217)	83	0.82	8	10	1.05	3.79/1.89	20	25	2.44	1.79	0.65	$35,000	$2,692	15	0	0	5	5	$31,000	$10,902,531
6	O	RX	5	I-5 Southbound at Front Ave. Ramp Metering	83	*	15	10	*		20	25			0	$100,000	ERR	8	0	0	5	5	$90,000	$10,992,531
7	O	RX	6	I-5 & I-84 Connection Ramp Metering	83	*	15	10	*		20	25	0	0	0	$500,000	ERR	8	0	0	5	5	$449,000	$11,441,531
8	W	RX	15	Scholls Ferry Sig. Intercon (Nimbus Dr to Hwy. 217)	83	0.82	8	10	1.05	3.79/1.89	20	25	2.44	1.79	0.65	$35,000	$2,692	15	0	0	5	5	$31,000	$11,472,531
9	O	RX	1	Arterial Signal Optimization Projects	77	ERR	15	10	ERR		14	17.6	275.2	266.19	9.01	$925,000	$5,133	15	0	0	5	5	$830,000	$12,302,531
				NE Sandy Blvd. (E. Burnside St. to 82nd Ave.)	69	1.00	15	10	1.14	COP LIS	20	10			n.a.	n.a.	n.a.		0	0	5	5		
				SE Division St. (SE 60th Ave. to SE 257th Ave.)	69	1.08	15	10	1.12	COP LIS	20	10			n.a.	n.a.	n.a.		0	0	5	5		
				SE 181st Ave. (I-84/Burnside to Powell Blvd.)	65	1.02	15	10	1.27	NO DATA	10	25			n.a.	n.a.	n.a.		0	0	5	5		
				TV Highway (Beaverton City Limits to Baseline Rd)	55	1.14	15	10	1.23	2.96/3.55	0	25			n.a.	n.a.	n.a.		0	0	5	5		
				SE Powell Blvd. (SE 11th Ave. to SE 98th Ave.)	50	1.14	15	10	1.30	5.18/3.55	20	0			n.a.	n.a.	n.a.		0	0	5	5		
10	C	RX	7	Johnson Cr. Blvd. - Ph. II (SE 35th - SE 45th St.)	76	1.33	15	10	1.29	*	10	13	19.67	11.98	7.69	$1,418,000	$8,220	15	3	5	5	13	$1,272,301	$13,574,831
11	W	RX	14	Murray S. Sig. Intercon (Farmington - Millikan Ave.)	75	1.09	15	10	1.27	3.55/1.89	20	25	21.82	22.64	-0.82	$35,000	($2,134)	**15	0	0	5	5	$31,000	$13,605,831
12	W	RX	2	Walker Road (Westfield Ave. to Murray Blvd.)	71	0.93	8	10	1.07	2.18	10	13	19.16	13.89	5.27	$1,796,000	$17,040	15	5	5	5	15	$1,611,000	$15,216,831
13	W	RX	11	Greenburg/Mapleleaf (Locust St. to Hwy. 217 ramp)	71	0.91	8	5	0.99	*	20	25	0	0	0	$400,000	ERR	8	0	0	5	5	$358,900	$15,575,731
14	P	RX	2	Multnomah/Garden Home Intersection Improvement	71	*	15	10	*	5.74	20	13	*	*	0	$875,000	ERR	0	5	5	3	13	$785,100	$16,360,831
15	O	RX	4	I-205 Ramp Metering	70	*	15	10	*		0	25	939	931	8	$2,000,000	$12,500	15	0	0	5	5	$1,795,000	$18,155,831
16	O	RX	8	Ore. 43 Traffic Signal Improvement	70	1.05	15	10	1.22		0	25	47.75	44.71	3.04	$1,250,000	$20,559	15	0	0	5	5	$1,122,000	$19,277,831
17	W	RX	12	Barnes Signal Intercon (Suntek to Miller)	68	1.35	15	10	1.36	2.27/1.89	10	13	29.08	19.44	9.64	$20,000	$104	15	0	0	5	5	$18,000	$19,295,831
18	C	RX	10	Hwy. 43/McVey/Green Street Intersection	66	0.98	8	10	1.15	3.68	10	13	35.49	25.1	10.39	$1,282,500	$6,172	15	0	5	5	10	$1,150,723	$20,446,555
19	C	RX	5	Oatfield Road (Webster Rd. to 82nd Dr.)	66	1.18	15	10	1.20	*	10	13	4.62	2.98	1.64	$1,300,000	$39,634	8	0	5	5	10	$1,166,425	$21,612,980
20	W	RX	4	Murray Blvd. OXing (Terman Rd. to Millikan Way)	66	1.04	15	10	1.88	0.09	0	13	58.82	1.49	56.33	$4,682,000	$4,231	15	5	5	3	13	$4,201,000	$25,813,980
21	O	RX	2	ATMS Pilot Program: I-5 So. Tow Service Patrol	53	*	*	*	*		20	25			0	$100,000	ERR	8	0	0	0	0	$90,000	$25,903,980
22	C	RX	15	Hwy. 43/Jolie Point Traffic Signal	46	0.65	0	0	0.80	10.54	20	13	0	0	0	$120,000	ERR	8	0	0	5	5	$84,000	$25,987,980
23	W	RX	9	NE 28th Avenue (North of Grant St. to E. Main St.)	44	0.78	0	5	1.18	*	0	13	11.62	8.7	4.92	$2,200,000	$22,358	15	3	5	3	11	$1,760,000	$27,737,980
24	M	RX	2	US26/Orient Drive Safety/Congestion Project	43	*	0	10	*	4.28	10	13	*	*	0	$1,016,000	ERR	0	5	5	0	10	$751,100	$28,488,080
25	W	RX	3	Cornell Road (Bethany Blvd. to 179th Ave.)	43	0.88	0	5	0.97	0.52	0	13	5	0	5	$3,023,000	$30,230	15	5	5	0	10	$2,722,000	$31,211,080
26	W	RX	1	Glencoe Road (Lincoln St. to Evergreen)	43	0.46	0	0	0.88	3.28	0	25	3.71	0.45	3.26	$3,472,000	$53,252	8	5	5	0	10	$3,116,000	$34,327,080
27	P	RX	1	SE Water Ave. Ext. (SE Water @ Clay to SE Divis'n Pl. @ 4th)	41	0.76	0	5	0.90	*	0	25	0	0	0	$3,200,000	ERR	0	3	5	3	11	$1,800,000	$36,127,080
28	C	RX	1	147th (N. of Sunnyside Rd.-142nd/Sunnyside Rd.)	39	0.18	0	0	0.89	*	10	13	1.14	0	1.14	$750,000	$32,895	8	3	5	0	8	$375,000	$36,502,080
29	W	RX	6	Mill Avenue S. Ext. (Canyon - Farmington)	38		0	0		n/a	0	25	*	*	0	$1,256,000	ERR	0	3	5	5	13	$1,128,946	$37,429,026
30	W	RX	7	Mill Ave./Henry St. LRT Connect (Cent. BV Station - Canyon)	38		0	0		n/a	0	25	*	*	0	$1,840,000	ERR	0	3	5	5	13	$1,740,665	$39,169,691
31	O	RX	7	Motorist Info. System Telephone System	38	*	*	*	*		NA	25			0	$50,000	ERR	8	0	0	5	5	$45,000	$39,214,691
32	W	RX	6	Henry Street E. Ext. (Cedar Hills Blvd. to Mill St.)	38		0	0		n/a	0	25	*	*	0	$1,370,000	ERR	0	3	5	5	13	$1,229,233	$40,443,923
33	C	RX	13	Hwy. 43/Failing Street	34	0.54	0	0	0.86	2.73	0	13	0	0	0	$200,000	ERR	8	3	5	5	13	$140,000	$40,583,923
34	C	RX	8	Hwy. 43/Terwilliger Intersection	33	0.77	0	5	0.96	1.25	0	13	0	0	0	$1,100,000	ERR	0	5	5	5	15	$987,000	$41,570,923
35	O	RX	3	US 26 Throughway Enhancement	33	*	*	*	*			25			0	$250,000	ERR	8	0	0	0	0	$202,000	$41,772,923
36	P	RX	3	ITS Program - Portland	30	*	*	*	*			25			0	$2,100,000	ERR	0	0	0	5	5	$1,884,000	$43,656,923
37	C	RX	11	Hwy. 43/West "A" Street Realign & Signal	28	0.54	0	0	0.86	2.52	0	13	0	0	0	$1,220,000	ERR	0	5	5	5	15	$1,094,845	$44,751,568
38	C	RX	16	129th Ave. Imprvmn't (Happy Valley)	26	0.21	0	5	0.99	*	0	13	*	*	0	$1,000,000	ERR	0	3	5	0	8	$1,000,000	$45,751,568
39	C	RX	14	Hwy. 43/Pimlico Street	26	0.66	0	0	0.81	3.52	0	13	*	*	0	$150,000	ERR	8	0	0	5	5	$105,000	$45,856,568
40	W	RX	8	Heather St. Connect (Mt. View Lane	26		0	0		n/a	0	13	*	*	0	$400,000	ERR	8	0	5	0	5	$358,900	$46,215,468
41	C	RX	3	122nd Ave. (Sunnyside Rd. to Hubbard Rd.)	20	0.43	0	10	1.07	*	0	0	2.79	3.14	-0.35	$4,610,000	($658,571)	0	5	5	0	10	$3,227,000	$49,442,468
42	C	RX	9	Hwy. 43/A Avenue Intersection	18	0.62	0	0	0.82	1.57	0	13	*	*	0	$580,000	ERR	0	0	0	5	5	$520,405	$49,962,873
43	C	RX	6	Abernethy Realign (Abernethy Rd. -Wash. St.)	18	*	0	5	*	*	0	13	*	*	0	$1,253,000	ERR	0	0	0	0	0	$554,000	$50,516,873
44	C	RX	4	92nd Ave. Reconstr (Idleman Rd. to Mult. Co. Line)	5	0.22	0	0	0.60	0.9	0	0	0	0	0	$1,385,000	ERR	0	0	5	0	5	$850,000	$51,366,873
45	M	RX	3	UPRR Bridge Replace (201st Ave./I-84 & 223rd Ave./I-84)	0	*	*	*	*	*	*	*	*	*	0	*	ERR	*	*	*	*	0	$1,941,000	$53,307,873
46	M	RX	4	Halsey St. Enhancements (223rd to Columbia Blvd)	0	*	*	*	*	*	*	*	*	*	0	*	ERR	*	*	*	*	0	$4,448,000	$57,755,873
47	P	RX	2	SE Tacoma Street (SE 28th Ave. to SE 32nd Ave.)	0	*	*	*	*	*	*	*	*	*	0	*	ERR	*	*	*	*	0	$563,000	$58,308,873
48	P	RX	3	SE Foster Road Realignment (162nd Ave. to Jenne Rd.)	0	*	*	*	*	*	*	*	*	*	0	*	ERR	*	*	*	*	0	$2,112,900	$60,421,773

TRANSIT

AGCY	MODE	PROJ NO	PROJECT NAME	TOTAL SCORE	INCREASE MODAL SHARE							2040 SUPPORT FACTOR	COST/BENEFIT FACTOR Cost/VMT Reduced				MULTI-MODAL FACTOR	Funds Requested
					2015 RIDERSHIP TARGET	1995 RIDERSHIP	DELTA	% DELTA ASSIGNED TO PROJECT	TRIPS REDUCED	VMT REDUCTION	SCALE HIGH = 30 MEDIUM = 15 LOW = 0	SCALE HIGH= 25 MEDIUM = 1[illegible] LOW = 0	PROJECT COST	VMT REDUCED	$/VMT	SCALE LOW $$ = 20 MED $$ = 10 HI $$ = 0	SCALE HIGH = 25 Med = 13 Low = 0	
											POINTS	POINTS				POINTS	POINTS	
T	Transit	1	Eastlink - Northwest Corridor	100	5,013	4,100	913	100%	913	13,421	30	25	$2,050,000	13,421	$7.64	20	25	$1,640,000
T	Transit	2	Eastlink - Eastside	90	5,948	4,930	1,018	100%	1,018	14,965	30	25	$2,748,322	14,965	$9.18	10	25	$1,678,372

Transit Oriented Development Projects

AGCY	MODE	PROJ NO	PROJECT NAME	TOTAL SCORE	INCREASE MODAL SHARE				INCREASE IN DENSITY				2040 SUPPORT FACTOR	COST/BENEFIT FACTOR				MULTI-MODAL FACTOR	Funds Requested	Funds Recommend Cost
					PEF w/o TOD	PEF w/ TOD	DELTA % CHG non-auto Tr + bike	SCALE HIGH = 25 MEDIUM = 13 LOW = 0	2015 DENSITY w/o TOD HH/acre	2015 DENSITY with TOD HH/acre	DELTA	SCALE HIGH = 25 MEDIUM = 13 LOW = 0	SCALE HIGH= 25 MEDIUM = 13 LOW = 0	PROJECT COST	VMT Reduced	$/VMT	SCALE LOW $$ = 15 MED $$ = 8 HI $$ = 0	Four = 10 < Four = 0		
								POINTS				POINTS	POINTS				POINTS	POINTS		
Met*	TOD	1	TOD Implementation Program	100	5	12	15	25	8.5	38	29.5	25	25	2,477,186	11475	10.79	15	10	$2,229,468	2,229,468
W	TOD	2	Beaverton Creek Master Plan	76	5	12	15	25	7.03	22	14.97	13	13	2,775,680	13984	9.92	15	10	$2,220,544	4,697,730
M	TOD	3	Civic Neighborhood - Station Plaza	73	6	12	12	25	12	24	12	13	25	1,200,000	768	78.13	0	10	$960,000	5,657,730
M	TOD	4	Civic Neighborhood - LRT Station	73	6	12	12	25	8.74	24	15.26	13	25	2,721,000	1742	78.10	0	10	$2,180,000	7,837,730
M	TOD	5	Civic Neighborhood - Central N/S Colle	73	6	12	12	25	5.62	17	11.38	13	25	2,049,000	1181	86.75	0	10	$1,844,000	9,681,730
T	TOD	6	Millikan Way Purchase and Developmer	69	7	12	10.5	13	10.31	25	14.69	13	25	3,100,000	3121	49.66	8	10	$2,480,000	12,161,730
W	TOD	7	Ground Floor Retail	43	12	12	0	0	8.74	13	4.26	0	25	1,102,750	1805	30.55	8	10	$1,000,000	13,161,730

* Metro TOD represents prototypical project in Gresham or Hillsboro. Cost reflect average of other TOD proposals.

TDM

AG'CY	MODE	PROJ NO.	PROJECT NAME	TOTAL SCORE	MODAL SHARE FACTOR				2040 SUPPORT FACTOR	COST/BENEFIT FACTOR				MULTI-MODAL FACTOR		Funds Requested	Funds Requested Cum.
					2015 VEHICLE TRIPS REDUCED	VMT AVOIDED PER TRIP	TOTAL 2015 VMT AVOIDED	SCALE HIGH = 30 MED = 15 LOW = 0	SCALE HIGH= 25 MEDIUM = 1 LOW = 0	TOTAL 20 VMT AVOIDED	PROJECT COST	$/VMT	SCALE LOW $$ = 25 MED $$ = 13 HI $$ = 0	# OF OTHER MODES AIDED	SCALE High = 20 Med = 10 Low = 0		
								POINTS	POINTS				POINTS		POINTS		
T	TDM	1	Regional TDM Program	100	4645	5.1	47,379	30	25	47,379	1,435,600	$8	25	2	20	$1,077,000	$1,077,000
P	TDM	2	Central City TMA	85	1155	7.35	16,972	15	25	16,972	330,000	$4	25	2	20	$300,000	$1,377,000
T	TDM	3	Regional Center Mgt. Assoc.	73	1087	4.98	10,827	15	25	10,826	1,237,000	$23	13	2	20	$1,007,100	$2,384,100
P	TDM	4	Central City Vanpool Program	60	160	16	5,936	0	25	5,936	132,000	$6	25	1	10	$120,000	$2,504,100
Port	TDM	5	Swan Island TMA	58	392	6.93	5,433	0	13	5,433	250,000	$9	25	2	20	$150,000	$2,654,100
E	TDM	6	Portland Area Telecommuting Projec	48	330	8.5	5,610	0	25	5,610	440,000	$16	13	1	10	$400,000	$3,054,100

BIKE SYSTEM PROJECTS PRELIMINARY TECHNICAL SCORES 4/5/95

		PROJ NO.	PROJECT NAME	TOTAL SCORE	RIDERSHIP POTENTIAL				REGIONAL SYSTEM CONNECTIVITY	SAFETY		2040 SUPPORT FACTOR	COST/BENEFIT FACTOR				Cumulative Total	
					1990 TRIPS	2015 TRIPS	DELTA	SCALE	SCALE	SCALE	SCALE	SCALE	PROJECT COST	BENEFIT (Avoided VMT)	$/BENEFIT	SCALE		
								HIGH=15	COMPLETES=20	HIGH ADT/NARROW=10	YES=5	HIGH=25				low$$=25		
								MEDIUM=8	EXTENDS=10	High ADT/Wide=5	No=0	MED=10				Med$=13		
								LOW=0	ISOLATED=0	LOW ADT=0		LOW=0				HIGH$$=0		
								POINTS	POINTS	POINTS	POINTS	POINTS				POINTS	Request	Cumulative
M	B	1	Hawthorne Brdg Sidewalk Widening (Mult. Co)	100.00	974	3080	2106	15.00	20	10	5	25	$1,950,000	3,704	$23.69	25	$1,755,000	$1,755,000
O	B	2	SW Barbur Boulevard Hamilton/Front (ODOT)	88.00	515	1663	1148	15.00	20	10	5	25	$1,800,000	2,019	$35.66	13	$1,440,000	$3,510,000
W	B	1	Walker Rd. Bikeway Imprvmn't (Wash. Co.)	83.00	253	1499	1246	15.00	20	10	0	13	$370,000	2,191	$6.75	25	$296,000	$3,806,000
P	B	1	Gateway & Hollywood Bike to Transit (COP)	81.00	495	919	424	8.00	20	10	5	25	$500,000	746	$26.82	13	$400,000	$4,206,000
O	B	5	I-205 Multi-Use Trial Intersection Imprvmn't (ODOT)	73.00	150	350	200	0.00	20	10	5	25	$245,000	352	$27.86	13	$196,000	$4,402,000
C	B	2	SE 82nd Dr. Bikeway (Clack. Co.)	71.00	75	490	415	8.00	20	0	5	13	$99,900	730	$5.48	25	$80,000	$4,482,000
W	B	2	Bethany Bike Lanes (Wash. Co.)	69.00	67	490	423	8.00	20	10	5	13	$510,000	744	$27.56	13	$410,000	$4,892,000
O	B	6	SW Barbur Blvd Terwilliger/Multnomah (ODOT)	68.00	164	467	303	8.00	20	10	5	25	$3,300,000	533	$215.82	0	$2,300,000	$6,847,000
O	B	3	SW BV-Hillsdale Hwy Bike Lanes/S'walks (ODOT)	68.00	331	1015	684	8.00	20	10	5	25	$5,500,000	1,203	$182.89	0	$4,400,000	$11,047,000
M	B	2	Hogan Rd. Bikeway (Mult.Co.)	68.00	46	150	104	0.00	20	10	0	13	$111,000	183	$23.92	25	$87,500	$11,134,500
C	B	1	Clack. Town Cntr. E/W Connect (Clack. Co.)	68.00	92	434	342	8.00	20	10	5	25	$1,144,800	601	$76.07	0	$915,000	$12,049,500
P	B	5	Sellwood Bridge Access Connection (COP)	61.00	333	1018	685	8.00	10	0	5	13	$160,000	1,205	$5.31	25	$128,000	$12,177,500
P	B	2	Burnside Bridge Waterfront Park Ramp (COP)	61.00	254	946	692	8.00	10	0	5	25	$1,070,000	1,217	$35.17	13	$856,000	$13,033,500
C	B	3	Linwood Ave. Bikeway (Clack. Co.)	61.00	171	334	163	0.00	20	10	5	13	$259,875	287	$36.28	13	$208,000	$13,241,500
O	B	1	SW BV-Hillsdale Hwy Bike Lanes/S'walk (ODOT)	60.00	89	214	125	0.00	20	10	5	25	$575,000	220	$104.63	0	$460,000	$13,701,500
W	B	3	170th Ave. Bikeways (Wash. Co.)	59.00	110	589	479	8.00	10	10	5	13	$1,574,000	842	$74.73	13	$1,259,000	$14,960,500
P	B	3	Burnside Brdg Eastside Esplanade Ramp (COP)	48.00	376	624	248	8.00	10	0	5	25	$1,070,000	436	$98.13	0	$856,000	$15,816,500
O	B	4	Hall Boulevard Bike and Ped Project (ODOT)	43.00	116	352	236	0.00	20	10	0	13	$1,000,000	415	$96.38	0	$800,000	$16,616,500
C	B	4	Carmen Dr. Bikeway (Clack. Co.)	41.00	96	271	175	0.00	10	5	0	13	$675,000	308	$87.73	13	$540,000	$17,156,500

PEDESTRIAN SYSTEM PROJECTS

Preliminary Technical Scores

AGENCY	MODE	PROJ NO.	PROJECT NAME	TOTAL SCORE	INCREASE MODAL SHARE		SAFETY FACTOR	2040 SUPPORT FACTOR	COST/BENEFIT FACTOR					MULTI-MODAL FACTOR		Project Request	CUMULATIVE TOTAL COST
					POTENTIAL FOR PEDESTRIAN TRIPS (BASED ON PEDESTRIAN ENVIRONMENTAL FACTOR) SCALE HIGH = 15 MED = 8 LOW = 0	PROJECT'S IMPACT ON PEDESTRIAN TRIP-MAKING (BASED ON SCALE OF PROJECT & ITS CONNECTIONS TO OTHER PED FACILITIES) SCALE HIGH = 10 MED = 5 LOW = 0	SCALE EXTREME = 25 MODERATE= 13 NONE = 0	SCALE HIGH= 25 MEDIUM = 13 LOW = 0	PROJECT COST	20-YEAR ANNUALIZED COST	SUBTOTAL OF OTHER POINTS (=BENEFIT)	$ PER POINT	SCALE LOW $$ = 15 MED $$ = 8 HI $$ = 0	# OF OTHER MODES AIDED	SCALE 2+ = 10 1 = 5		
				POINTS 100	POINTS 15	POINTS 10	POINTS 25	POINTS 25					POINTS 15		POINTS 10		
W	P	2	Pacific Avenue Ped/Bicycle Imprvm't (F. Grove)	83	15	5	13	25	$113,000	$5,650	68	$83	15	2	10	$102,000	$102,000
P	P	1	Hillsdale Ped X'ing Signals (COP)	80	15	10	25	25	$1,400,000	$70,000	80	$875	0	1	5	$1,120,000	$1,222,000
P	P	3	Woodstock Boulevard Ped Imprvm't (COP)	78	15	5	13	25	$250,000	$12,500	63	$198	15	1	5	$200,000	$1,422,000
M	P	1	Division Street Bikeway/Pedestrian Improvements	76	8	5	13	25	$229,000	$11,450	61	$188	15	2	10	$180,000	$1,602,000
O	P	1	Canyon Rd. Sidewalks (ODOT)	76	8	5	25	25	$413,000	$20,650	68	$304	8	1	5	$371,000	$1,973,000
C	P	7	17th Ave. Multi-Modal Project (Milwaukie)	76	8	5	25	25	$618,000	$30,900	68	$454	8	1	5	$494,000	$2,467,000
O	P	2	McLoughlin Blvd Sidewalks (ODOT)	73	8	5	25	25	$3,000,000	$150,000	73	$2,055	0	2	10	$2,400,000	$4,867,000
W	P	3	19th Street Sidewalk Improvements (F. Grove)	73	15	5	13	25	$252,450	$12,623	58	$216	15	0	0	$225,000	$5,092,000
C	P	4	A Avenue Pedestrian Pathway (L. Oswego)	73	15	5	13	25	$9,000	$450	58	$8	15	0	0	$7,200	$5,099,200
P	P	7	Lents Ped and Bike Enhancement Project (COP)	73	15	10	13	25	$1,400,000	$70,000	73	$959	0	2	10	$1,000,000	$6,099,200
P	P	8	Cully Boulevard Bike and Ped Imprvmn't (COP)	73	8	5	25	25	$2,100,000	$105,000	73	$1,438	0	2	10	$1,680,000	$7,779,200
M	P	2	Mult. Co. Sidewalk Corridor Missing Links	71	8	5	13	25	$224,400	$11,220	58	$200	15	1	5	$180,000	$7,959,200
P	P	2	Hawthorne Boulevard Ped/Bicycle Imprvm't (COP)	71	15	5	13	25	$500,000	$25,000	63	$397	8	1	5	$400,000	$8,359,200
M	P	3	Gresham Missing Links Sidewalk Program	71	8	5	13	25	$282,746	$14,137	58	$252	15	1	5	$141,000	$8,500,200
M	P	4	Gresham Pedestrian to MAX Capital Program - Phase II	71	15	5	13	25	$601,000	$30,050	63	$477	8	1	5	$481,000	$8,981,200
P	P	6	Broadway/Weidler Bike/Ped Imprvmn't (COP)	68	15	5	13	25	$2,787,000	$139,350	68	$2,049	0	2	10	$2,500,000	$11,481,200
W	P	1	Hillsboro Downtown Pedestrian Improvements	66	15	0	13	25	$850,000	$42,500	58	$733	8	1	5	$250,000	$11,731,200
C	P	6	Upper Drive Pedestrian Pathway (L. Oswego)	66	8	5	25	13	$85,000	$4,250	51	$83	15	0	0	$68,000	$11,799,200
C	P	5	Carman Drive Pedestrian Pathway (L. Oswego)	64	8	5	13	13	$80,000	$4,000	39	$103	15	0	0	$64,000	$11,863,200
P	P	5	NE 33rd - NE Broadway to Columbia Blvd. (COP)	64	15	0	13	13	$350,000	$17,500	46	$380	8	1	5	$280,000	$12,143,200
C	P	1	Sidewalks on Warner-Parrot & Telford (Oregon City)	47	8	5	13	13	$283,000	$14,150	39	$363	8	0	0	$255,000	$12,398,200
C	P	2	Greentree Road Pedestrian Pathway (L. Oswego)	46	0	5	13	13	$80,000	$4,000	31	$129	15	0	0	$64,000	$12,462,200
M	P	5	Springwater Trail Pedestrian/Bicycle Access (Gresham)	43	8	5		25	$855,000	$42,750	43	$994		1	5		$12,462,200
C	P	3	Glenmorrie Road Pedestrian Pathway (L. Oswego)	41	0	0	13	13	$12,500	$625	26	$24	15	0	0	$8,500	$12,470,700
								TOTAL	$16,775,096							#########	

MISCELLANEOUS

	AG'CY	MODE	PROJ NO.	PROJECT NAME	PROJECT COST
1	P	MISC	1	COP: Lovejoy Ramp Replacement	$1,054,000
2	P	MISC	2	COP: NE 12th Ave. Banfield brdg Seismic Retro.	$312,000
3	PORT	MISC	3	Port: Alternative Fuel Buses for PDX	$825,000
4	C	MISC	4	City of Oregon High Speed Rail Improvements	$500,000
					$2,691,000

FREIGHT

	AGCY	MODE	PROJ NO.	PROJECT NAME	TOTAL SCORE	IMPROVE CONNECTIVIT	SAFETY	2040 SUPPORT FACTOR	COST/BENEFIT FACTOR						MULTI-MODAL FACTOR			
						SCORE	SCALE	SCALE	VHD	VHD	DELAY	PROJECT	$/VHD	SCALE	REG. BIKE	TRANSIT	SOV CAPACITY	
						COMPLETES LINK = 10 CONNECTS TO FACILITY = 10 TO FREIGHT AREA=5	REDUCES CONFLICTS FOR FREIGHT = 10 ADDRESSES HAZ PROBLEM = 10 ADDRESSES HIGH ACCIDENT RATE = 5	HIGH= 25 MEDIUM = 10 LOW = 0	2015 NO BUILD	2015 BUILD	DELTA	COST		LOW $$ = 15 MED $$ = 8 HI $$ = 0	SYS BENEFIT ADDS REG. = 5 ADDS LOCAL = 3 NO CHG = 0	BENEFIT YES = 5 NO = 0	BENEFIT TOP 1/3 = -5/+5 MID 1/3 = -3/+3 LOW 1/3 = 0	TOTAL MULT-MODE
						POINTS	POINTS	POINTS						POINTS				POINTS
1	P	F	1	COP N/NE Columbia Blvd. Improvements	0				2,000	1,000	1,000	$250,000	$250.00					
2	P	F	2	COP/Port: Columiba/N. Lombard OXing (PE)	0						0	$897,000	ERR					
3	P	F	3	COP/Port: Columbia Blvd. - N. Burgard Intersection	0						0	$886,000	ERR					
4	P	F	4	Port: Marine Drive Modernization to Term. 6 Entrance	0						0	$2,400,000	ERR					
5	P	F	5	NE 148th Ave. Reconstr (NE Marine Dr.-NE Sandy Blvd.)	0						0	$2,863,000	ERR					
6	P	F	6	Lower Albina OXing (N. Interstate to N. Lewis/Loring/Tillamook)	0						0	$4,000,000	ERR					
											0		ERR					
											0		ERR					
											0	$11,396,000	ERR					

STUDIES

	AGCY	MODE	PROJ NO.	PROJECT NAME	PROJECT COST
1		S	1	Metro Transportation Planning	$1,958,000
2		S	2	PDC LRT Station Area Develop. Opport. Strategy	$361,000
3		S	3	COP Stark/Washington Corridor Study	$360,000
4		S	4	ODOT I-5/Hwy 217 Subarea Transportation Plan	$50,000
5		S	5	Tri-Met Transit Finance Task Force	$400,000
6		S	6	Port Commodity Flow Analysis Refinement	$45,000
7		S	7	Lake Oswego Transit Center Relocation Study	$45,000
8		S	8	Cornelius Tualatin Valley Hwy. Cor. (4th Ave. to 26th Ave.)	$60,000
9		S	9	W. Burnside Redevelop (Burnside Bridge-NW 23rd Ave.)	$950,000
10		S	10	Capitol Highway Multi-Modal Imprvmn't (COP)	$200,000
11		S	11	Port. Traction Co. Project Issues/PE	$180,000
12		S	12	Clackamette Cove Master Plan	$75,000
					$4,684,000

M E M O R A N D U M

METRO

Date: April 5, 1995

To: JPACT

From: MH Mike Hoglund, Transportation Planning Manager

Re: Interim RTP Update

JPACT will be asked to review and recommend adoption of the updated Interim 1995 Regional Transportation Plan (RTP) at its May 11 meeting. The main focus of the interim update is to incorporate planning elements into the RTP that are consistent with the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, the Clean Air Act Amendments (CAAA) of 1990, and the Americans with Disabilities Act (ADA) of 1991.

To begin to bring JPACT up to date on interim RTP activities, the following information will be discussed at the April 13 meeting:

1. Interim Update Strategy/Major ISTEA Products/Schedule.

   a. Interim Update Strategy. The interim update will accomplish two main objectives. First, it will satisfy the ISTEA and other federal planning requirements. Second, it provides a first draft of a final RTP intended to also meet the requirements of the state Transportation Planning Rule (TPR) and, consistent with the Metro Charter, will provide the transportation functional plan component of the Regional Framework Plan. It is understood that, over the next 12 to 18 months, significant analysis, public involvement, and policy discussion will be required to incorporate TPR and Charter-related elements.

      The interim update is proposed to maintain the current RTP format of eight distinct chapters. Specific chapters and sections will be rewritten, as necessary, to meet the federal requirements, provide policy direction for the final update, and reflect recent amendments or planning actions. The latter includes any change in the status of major investment studies since 1992 (i.e., South/North Light Rail, Western Bypass, etc.).

The majority of the re-write has and will focus on the following sections: Summary and Introduction; Chapter 1, Regional Transportation Policy; Chapter 4, Policy Implications and the System Concept; Chapter 5, Recommended (and Constrained) Transportation Improvements to the Year 2015; and Chapter 7, Cost and Financial Analysis. The Outstanding Issues section of Chapter 8 will note issues for further study as part of the final RTP update process or as part of future refinement planning.

b. Major ISTEA Products. The interim update will address federal requirements related to the 15 metropolitan planning factors; revenue forecasts and financial constraint; conformity with the CAAA; and public involvement procedures. The document will also address major investments (both procedures and projects); include new ISTEA programs such as Transportation Enhancements and Congestion Mitigation/Air Quality; and recognize management systems. The latter will be noted as work-in-progress, consistent with current activities and the management system implementation deadlines.

c. Schedule. The Metro Council approved an interim RTP adoption schedule at its March 23 meeting. Copies of that schedule are attached. Firm dates, however, include TPAC recommendation on April 28 and JPACT adoption on May 11. *Priorities '95,* a series of public meetings to review the draft interim update and proposals for the $27 million Regional Reserve are set for April 13, 17, and 18 (see also attached).

2. Introduction/Chapter 1. Attached for your initial review are drafts of the RTP introduction and Chapter 1. The two components set the legal, historical, and policy context for the plan. They are for your review and can be discussed on April 13.

3. Systems. Chapter 4 describes and/or maps the RTP modal components for the roadway, transit, bicycle, pedestrian, freight, and National Highway systems. Chapter 4 also begins to move from the policy basis of Chapter 1 to defining projects (which will included in Chapter 5) by describing the types of investments, corridors, and facilities which are of higher regional significance.

4. Public Involvement Procedures. ISTEA requires that metropolitan planning organizations (MPOs), including Metro, adopt public involvement procedures and include them as an element of or appendix to the RTP. Attached is a summary of ISTEA public involvement requirements as they relate to MPOs. The public review draft of our public involvement procedures will be available at the April 13 meeting.

5. Financial Constraint. ISTEA requires that regional transportation plans be constrained to reasonably anticipated 20-year revenue forecasts. Metro and ODOT staff will present the forecast methodology and "highlight" findings at the meeting.

MH:lmk

Attachments

Interim RTP/$27 Million Regional Reserve
JPACT/Metro Council Adoption Schedule
(revised 4/5/95)

- **April 6.** JPACT Finance Committee review of joint ODOT/Metro staff recommendation.
- **April 7.** Release technical ranking on $27 million regional reserve for public/agency review and comment.
- **April 10.** Release draft Interim RTP.
- **April 11.** Council worksession to review projects and technical ranking on $27 million regional reserve.
- **April 13, 17, 18.** *Priorities '95,* public meetings to comment on$27 million technical ranking and other criteria, and to comment on draft Interim RTP.
- **April 28.** TPAC recommendation on final package.
- **May 4.** Council public hearing on TPAC recommendation.
- **May 9.** Council worksession to review and discuss TPAC recommendation, discuss results of the public hearing and forward comments to JPACT.
- **May 11.** JPACT adoption.
- **May 25.** Metro Council adoption.

Meeting Notice

METRO
600 NE Grand Ave.
Portland, OR 97232-2736
(503) 797-1866

Priorities '95

A series of meetings to receive public comment on regional transportation issues

Thurs., April 13 – Clackamas County meeting
Pioneer Community Center, 615 Fifth St., Oregon City
4 to 9 p.m. (oral comment period: 6:30 to 9 p.m.)
Tri-Met bus line 33

Mon., April 17 – Portland meeting
Metro Regional Center, 600 NE Grand Ave., Portland
4 to 9 p.m. (oral comment period: 6:30 to 9 p.m.)
Tri-Met bus line 6 or take MAX to the Oregon Convention Center stop

Mon., April 17 – East Multnomah County meeting
Gresham City Hall, 1333 NW Eastman Parkway, Gresham
4 to 9 p.m. (oral comment period: 6:30 to 9 p.m.)
Tri-Met bus lines 4 and 23 or take MAX to the Gresham City Hall stop

Tues., April 18 – Washington County meeting
Beaverton City Hall, 4755 SW Griffith Drive, Beaverton
4 to 9 p.m. (oral comment period: 6:30 to 9 p.m.)
Tri-Met bus lines 54 and 59

.orities '95 meetings will provide an opportunity for comment on:

The interim Regional Transportation Plan (RTP)
The plan is a 20-year blueprint for the region's transportation system that takes into consideration expected population and economic growth. The RTP addresses how to best move people and goods through the region and identifies strategies for highways, arterial streets, transit, freight, bikes and pedestrians.

The FY '96 Metropolitan Transportation Improvement Program (MTIP)
A regional transportation funding program. Local jurisdictions submit transportation projects to Metro for funding consideration annually. For 1996 there are $27 million of federally authorized funds available for allocation to new projects.

Drafts of both the interim RTP update and MTIP funding information will be available for public review in early April. There will be a 30-day comment period following the release of the draft recommendations. All written comments received during the comment period will be entered into the formal record. Written comments should be mailed to: Metro,Transportation Planning, 600 NE Grand Ave., Portland, OR 97232 or faxed to 797-1794.

Priorities '95 meetings will provide an opportunity for the public to make oral comments to a panel of Metro councilors and local elected and appointed officials from 6:30 to 9 p.m. Metro staff will be available to answer questions and provide background information from 4 to 9 p.m.

. more information or to obtain copies of the draft interim RTP update and the draft MTIP information, call Metro at 797-1866 or call Metro's Transportation Planning Hotline (503) 797-1900. A schedule of key decision points for the RTP update and FY'96 MTIP is on the back of this notice.

Regional Transportation Plan (RTP) Update
FY '96 Metropolitan Transportation Improvement Program (MTIP)
Schedule of Key Decision Points

The following schedule includes key decision points and other important dates related to the Regional Transportation Plan (RTP) update and the FY '96 Metropolitan Transportation Improvement Program (MTIP). **Key decision points are in bold face type.** Best opportunties for public comment are underlined.

The RTP will be updated in two phases. An interim update to meet federal requirements will be completed by June 1995. A full update intended to meet state and federal requirements, and to be consistent with Metro's Regional Framework Plan for growth will be completed in mid-1996. The FY '96 MTIP allocation process will be completed by June of 1995.

January 1995

28 Transportation Fair held to kick-off RTP update process and receive comments on FY '96 MTIP project selection criteria.

April 1995

7 Draft interim RTP and MTIP information available for public review.
30 day public comment on interim RTP update and FY '96 MTIP begins.

13-18 *Priorities '95* public meetings on interim RTP update and FY '96 MTIP.

20 RTP Citizens Advisory Committee appointed by Metro Council.

May 1995

4 Metro Council public hearing on interim RTP update and FY '96 MTIP.

7 30 day comment period on interim RTP update and FY '96 MTIP ends.

11 Metro Joint Transportation Policy Advisory Committee (JPACT) considers adoption of interim RTP update and FY '96 MTIP.

25 Metro Council considers adoption of interim RTP update and FY '96 MTIP.

RTP CAC holds first meeting in May (date not yet determined).

June 1995 Phase 2 of RTP update process begins.

Publication on interim RTP document.

mid-1996 Phase 2 RTP update adopted by Metro Council.

DRAFT
4/5/95

~~1993 UPDATE~~
~~REGIONAL TRANSPORTATION PLAN~~

INTRODUCTION

A. The Context of the Plan

The adopted Regional Transportation Plan (RTP) provides a benchmark document for the region's decision-makers that:

- provides a comprehensive assessment of the overall effect of past regional transportation and land use decisions to ensure individual parts of the system function properly as a whole;
- serves as a regional framework for the coordination of the transportation and land use elements of local comprehensive plans consistent with the Regional Urban Growth Goals and Objectives (RUGGO);
- provides the region with a program of transportation improvements consistent with a unified policy direction for transit and highway investments and demand management programs; and
- presents an order-of-magnitude estimate of the region's transportation funding needs.

The development of the RTP has been a joint effort of the different cities, counties and agencies (Oregon Department of Transportation (ODOT), Tri-Met, the Port of Portland and [the Metropolitan Service District] (Metro)) in the region. Adoption of this Plan represented:

- completion of a federal requirement as a condition for receipt of federal transportation funding;
- endorsement of the overall level of transportation investments needed to adequately serve the expected growth in the region over the next 20 years and a commitment to seek necessary financing;
- endorsement of a set of 10-year regional priority improvements to the transportation system;
- endorsement of the interrelated roles of highway and transit investments and demand management programs;
- endorsement of the regional elements of the transportation system and definition of the extent of Metro interest in the subregional system;
- endorsement of the land use aspects of the RTP and a definition of local comprehensive plan consistency;

- ~~endorsement of a 20-district population and employment forecast for the year 2005 as the basis for determining needed transportation investments; and~~

- recognition of the policy direction identified in the adopted program 2040 growth concept and recognition of an interim set of 2015 population and employment forecasts.

- completion of the process to achieve regional consensus and a unified direction on transportation policy issues.

- recognition that substantial work will be conducted through 1996 to define region 2040. Identify urban reserves, and create a regional set of adopted population and employment forecasts developed through regional consensus and reflecting the final 2040 revisions.

B. Why a Regional Transportation Plan?

The daily movement of people and commerce on the region's transportation system crosses city and county boundaries, producing transportation problems thatwhich extend beyond individual jurisdictional authorities and create the need for cooperative governmental action. In addition, the transportation system intended to facilitate this movement of people and goods areis owned and operated by an intricate mixture of different jurisdictions. The highway system is owned and maintained by the different cities and counties, as well as ODOT and the Port of Portland. Tri-Met owns and operates the transit system but is generally dependent on the aforementioned jurisdictions for the roads on which to operate. Demand for new transit services is influenced by both: 1) the type of new development that occurs (which is controlled by local comprehensive plans); and 2) the availability and convenience of auto travel. Demand for new highway facilities or highway widening is influenced by the extent to which alternative modes of travel, such as transit and ridesharing, can be used. The cost, convenience and availability of parking, which is controlled by local jurisdictions and individual property owners, have a great deal of influence on the mode of travel of an individual.

Financing for transportation facilities and services is also a complex mechanism, consisting of a number of single purpose sources of local funds (such as local improvement districts), dedicated state and local highway and transit taxes, and a number of federal highway and transit funding programs.

The RTP provides guidance and coordination to the combined efforts of jurisdictions and agencies responsible for the region's highway and transit facilities. These entities include the Metro region's 24 cities and three counties, Tri-Met, ODOT, the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA) and the Port of Portland.

Four general areas of regional coordination are assuredensured by adoption of the Plan.

1. Geographic Consistency --- continuity between the plans of jurisdictions in the function of components of the transportation system.

2. Multi-Modal Coordination --- developing transportation improvement projects and programs thatwhich produce the ~~greatest people-moving~~ most efficient transport capability with the most cost-effective combination of transportation investments ~~for the auto, transit and demand management components of the system~~.

3. Land Use Inter-relationships --- developing consistency between the adopted Metro region 2040 growth concept, the land use plans of cities and counties and the transportation system.

4. Financing -- managing the expenditure of funds to produce cost-effective transportation investments thatwhich best serve the growing travel demand in the region.

Since the start of this region's cooperative transportation planning efforts in 1959, coordinating activities have grown in complexity. The initial emphasis was on developing a highway system to serve the rapidly growing demand for auto travel.

The majority of coordination occurred between cities, counties, ODOT and FHWA to determine the location of freeways to serve intraregional and interstate auto and truck travel. However, during the decade of the 1970s, a multi-modal improvement policy was developed to encourage the most cost-effective combination of highway and transit improvements.

The amendments contained in the 19912 RTP revision have been found to be consistent with the Regional Urban Growth Goals and Objectives. Future updates will reflect consistency with the Region 2040 Planning Process, the state LCDC Goal 12 Transportation Planning Rule, the Clean Air Act Amendments of 1990, and the new reauthorization of the Intermodal Surface Transportation Efficiency Act. Future RTP updates will have to reflect RUGGO and local comprehensive plans have to change to meet RUGGO.

C. Transportation Problems Addressed by the Plan

Many of the region's transportation problems can be directly attributed to one cause -- rapid growth. The Portland metropolitan area is a fast growing area with a diverse, improving economy. Over the next two decades, this long-term trend is expected to continue, with the population increasing from the current 1.28 million to millionto 1.74 million by the year 2015year 2005 (actual numbers being refined and will be included in further drafts). Without major transportation improvements, the travel demand associated with this growth will overload a system that is already at or over capacity in some areas.

Suburban and urban areas within the Urban Growth Boundary (UGB) are impacted differently by growth. The development of vacant suburban land increases the travel demand on a transportation system trying to emerge from its rural origins. The intensification of development in urban areas, plus the impact of increased intraregional trips, will produce congestion on the existing system of streets and highways where space is at a premium and improvement costs high. Therefore, newly developing parts of the region may be are in need of an entirely new roadway highway and transit systems while already urbanized areas require improvements thatwhich maximize efficiency of the sizable transportation investments thatwhich have already been made.

Growth is also a potential problem for the region's air quality. While attainment of federal and state clean air standards werewas generally met by the 1993 and 1995 1987 deadlines (primarily due to improved auto emission technology), continued rapid growth in automobile travel endangers pushing could push the region back over the standard by placing too many additional vehicles on the road.

Uncertain future trends in the price of gasoline and the possibility of future supply problems create the need for greater energy efficiency, the flexibility to cope with temporary shortages and the need to provide the public with alternatealternative modes of travel.

The primary constraint upon meeting the region's transportation needs over the next two decades is cost. Recently, construction costs have risen faster than the general rate of inflation while gas tax revenues have declined in terms of real dollars. In fact, projecting revenue sources to the year 2015 ~~2005~~ show a decline in purchasing power to the point that the cost of merely maintaining today's system will exceed the total expected revenues from existing transportation-related sources. The situation is similar for transit. While farebox revenues and the payroll tax are expected to keep pace with inflation, existing resources are insufficient to allow significant expansion in the size of the transit system. (See also chapter 7.)

D. Metro's Role in Transportation Planning

Metro is the regional government and designated Metropolitan Planning Organization of the Portland metropolitan area. It is governed by a 7-member Metro Council elected by and representing districts within Metro's jurisdictional boundaries: all of Multnomah County and generally the urban portions of Clackamas and Washington Counties. Metro is responsible for the Washington Park Zoo, solid waste landfills, the Oregon Convention Center, the Portland Center for the Performing Arts, establishing and maintaining the Urban Growth Boundary (~~The area expected to be urban and in need of urban transportation investments is defined by the UGB adopted by Metro as~~ shown in Figure I-1), and for ~~urban~~ regional transportation planning activities within the Oregon portion of the Portland-Vancouver metropolitan area, such as the preparation of the RTP, and the planning of regional transportation projects including light-rail.

The following subsections of the Plan describe the legislative authority under which Metro has developed and adopted this RTP, the decision-making structure used by Metro to insure~~ensure~~ adequate representation by the various agencies responsible for implementation of the Plan and areas of inter-jurisdictional coordination on particular aspects of the Plan.

Metro Legislative Authority

Metro's authority for urban transportation planning is derived from three ~~two~~ primary sources:

- Title 23 (Highways) and Title 49 (Transportation) Code of Federal Regulations,~~; and~~
- Oregon Revised Statutes — Chapter 268, and ~~;~~
- Metro Charter (an official charter for the regional government, recognized by the State, and voted into law by the Portland metropolitan region electorate).

Regarding the first two, the federal requirements for transportation planning are primarily directed at proposed transportation investments using federal funds while the state requirements deal with the transportation elements of local comprehensive plans. There is, however, a great deal of overlap between the two requirements since federally funded transportation investments comprise a significant portion of the full transportation system identified in comprehensive plans. ~~The Metro Charter charges the regional government with coordinating this overlap and addressing land use and transportaion issues at a regional level. The Charter specifically calls for a Regional Framework Plan that includes a "Transportation Element;" this RTP fulfills that Transportation Element.~~

Federal Planning Requirements

FHWA and FTA have jointly required that each urbanized area, as a condition to the receipt of federal capital and operating assistance, have a transportation plan process that results in a transportation

plan consistent with the planned development for the area. Metro is the agency that, in cooperation with ODOT and Tri-Met, ~~that~~ is designated by the Governor as the "Metropolitan Planning Organization" (MPO) to carry out the federal transportation and related air quality planning requirements through adoption of a Unified Planning Work Program (see below).

In accordance with these requirements, Metro must ~~annually~~ endorse a long-term transportation plan at least every three years and a Transportation Improvement Program (TIP) at least every other year. The TIP must specify federally funded transportation projects to be implemented during the next three to five-year period based upon realistic estimates of available revenues. Furthermore, projects included for funding in the TIP must be consistent with the adopted RTP. Pursuant to ISTEA, the Governor must also approve the TIP. Metro's approved TIP is incorporated into the statewide TIP prepared by ODOT.

Also in accordance with regulations, the RTP must consist of short and long-range elements and provide for the transportation needs of persons and goods in the metropolitan area.

The planning process leading to adoption of the RTP must:

- consider the social, economic and environmental effects of transportation in accordance with the National Environmental Policy Act and Clean Air Act;
- ensure involvement of the public;
- ensure there is no discrimination on the grounds of race, color, sex, national origin, income, or physical handicap in the planning process or under any program receiving federal assistance;
- include special efforts to plan public ~~mass~~ transportation facilities and services for the ~~handicapped~~ disabled;
- consider energy conservation goals and objectives; and
- include technical analysis as needed and to the degree appropriate, including:
  - an analysis of existing conditions of travel, transportation facilities and fuel consumption;
  - projections of economic and land use activities and their potential transportation demand;
  - an evaluation of alternative transportation improvements to meet short and long-term needs;
  - corridor or subarea studies, transit technology studies, legislative, fiscal, functional classification and institutional studies; and
  - an evaluation of alternate~~alternative~~ measures to respond to short-term energy disruptions.

In addition to the requirements of FHWA and FTA, the Clean Air Act Amendments of 1990 (administered by the Environmental Protection Agency (EPA)) require each urbanized area to meet federal standards for clean air. Metro is responsible for examining alternative transportation strategies to reduce air pollution that, in combination with stationary controls (i.e., point source) adopted by the Department of Environmental Quality (DEQ), meet the standards. Metro coordinates development of the RTP with transportation control measures (TCMs) contained in the region's portion of the State Implementation Plan (SIP). Metro, FHWA and FTA make a joint determination that the RTP conforms to the Clean Air Act Amendments and EPA's conformity regulations. Although the RTP does not need to be approved by FHWA or FTA, copies of any new or revised plans must be provided to each agency.

Because the Metro boundary does not include the entire air quality maintenance area, a cooperative agreement must be reached regarding the process for emission's~~emissions~~ analysis and for policy mechanisms both inside and outside the Metro boundary (see 23 CFR 450.310(f)). In response to this requirement, JPACT presented Resolution 94-2039 and supporting reports and technical materials to the Metro Council, who approved the Resolution/agreement in October, 1994.

State Planning Requirements

The state of Oregon has adopted 19 statewide planning goals that~~which~~ are required to be implemented through a comprehensive plan for each city and county throughout the state. These comprehensive plans specify the manner in which the land, air and water resources of the jurisdictions will be used and determine the need for improved public facilities. In accordance with state law, Metro must adopt a functional plan for transportation and must review the local comprehensive plans of the cities and counties within the district and recommend or require changes to assure~~ensure~~ conformity ~~(see Chapter 8)~~.

With the adoption of the state's Goal 12 Transportation Planning Rule (referred to as either Rule 12 or the TPR), Metro must adopt a Transportation System Plan (TSP), complying with Rule 12, which is consistent with the State TSP. In the case of the State, the TSP is the Oregon Transportation Plan (OTP) and, in the case of Metro, the TSP is the RTP. Metro is working with ODOT to assure~~ensure~~ consistency between the OTP and the RTP (see also Chapter 8, Section E).

The Unified Planning Work Program (UPWP)

To accomplish its many tasks and comply with the numerous Federal and State regulations listed above, Metro acts as the lead agency to develop the region's Unified ~~Planning~~ Work Program (UPWP). The UPWP is the periodic statement of proposed work and estimated costs that document the transportation planning, research, and development efforts to be undertaken during the next 1- to 2-year period in the region. It is developed in coordination with ODOT and Tri-Met, who provide input on planning funding and activities. Both of these agencies participate with Metro in the annual meeting with FTA and FHWA to review the program. Local representation is achieved through JPACT (see below ~~above~~), who approves the Oregon portion of the UPWP. The UPWP of the Metro (Oregon) portion is published as a joint document with the UPWP of South Washington Regional Transportation Council (SWRTC). The development and approval of the FY 1995-96 UPWP meets the conditions and satisfies the requirements of 23 CFR 420, 23 CFR 450.310 (e), and 23 CFR 450.314.

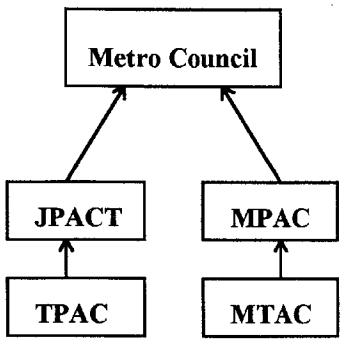
Regional Transportation Decision-Making Process

Every metropolitan area must have a Metropolitan Planning Organization (MPO) designated by the Governor to receive and disburse federal funds for transportation projects. Metro ~~(the Metropolitan Service District)~~ is the MPO for the Portland metropolitan area and, therefore, approves the expenditure of all federal transportation funds in this region. To ensure~~assure~~ a well-balanced regional transportation system, the following decision-making process has been established for these important funding allocations.

Rather than creating a patchwork of freestanding "agreements," Metro has established a strong decision-making structure that~~which~~ integrates federal, state, regional and local governments and stakeholders into the transportation and land use decisionmaking processes of the region. Although Metro has entered into written agreements with other agencies (such as ODOT, Tri-Met, SWRTC, etc.), the responsibilities and standards for transportation planning and programming activities are reflected principally in the organization, composition, and by-laws of each constituent part of this structure, which are summarized below.

Metro Council

The Metro Council is composed of 7 members ~~(formerly 13)~~, directly elected from districts throughout the metropolitan region (urban areas of Clackamas, Multnomah and Washington counties). The Council approves Metro policies, including transportation plans, projects and programs recommended by the Joint Policy Advisory Committee on Transprotation (JPACT). The Metro Council, in making policy decisions and approving transportation plans, programs and projects, relies on JPACT and the Metro Policy Advisory Committee (MPAC). These committees, in turn, rely on technical expertise and input from TPAC and MTAC, respectively (see diagram below).



~~Metro is our directly elected regional government, with responsibility for garbage disposal, development assistance and management of the Metro Washington Park Zoo, as well as transportation and growth management planning. The Metro Council is composed of 12 7 members elected from districts. The Joint Policy Advisory Committee on Transportation (JPACT) recommends transportation projects and programs for Council approval.~~

Joint Policy Advisory Committee on Transportation (JPACT)

JPACT provides a forum for elected officials and representatives of agencies involved in transportation projects to evaluate all the transportation needs in this region and to make recommendations for funding to the Metro Council. The 17-member Committee includes elected officials from local governments within the region, three Metro Councilors, representatives of the agencies involved in regional transportation (ODOT, Tri-Met, the Port of Portland, DEQ and WSDOT), plus representatives from governments and agencies of Clark County, Washington, and the State of Washington.

~~Agencies represented on JPACT include the Washington State Department of Transportation (WSDOT).~~

~~A finance subcommittee of JPACT has been formed to develop and recommend financing strategies to implement the region's transportation agenda.~~

Transportation Policy Alternatives Committee (TPAC)

While JPACT provides a forum for recommendations on transportation issues at the policy level, TPAC provides input from the technical level.

TPAC's membership includes senior technical staff from the same governments and agencies in JPACT plus representatives of FHWA, Federal Aviation Administration (FAA), FTA and the ~~Intergovernmental Resource Center (IRC) of Clark County~~ Southwestern Washington Regional Transportation Council (SWRTC). There are also six citizen representatives appointed to TPAC by the Metro Council.

~~TPAC has one standing subcommittee:~~

- ~~Transportation Improvement Program (TIP) Subcommittee - comprised of staff from the three counties, Portland, ODOT, Tri-Met and Metro. This subcommittee monitors progress on implementing projects and recommends changes in the TIP to JPACT.~~

Similar and parallel to JPACT/TPAC are the Metro Policy Advisory Committee (MPAC) and Metro Technical Advisory Committee (MTAC). Though MPAC and MTAC are not explicitly transportation-oriented, they are heavily involved in the Regional Framework Plan (which includes a transportation element), land-use issues, and other Metro policy issues that~~which~~ effect~~affect~~ the region's transportation. MPAC is composed of local elected officials (including representatives from Clark county, Washington ~~A~~ and the State of Oregon), and MTAC is composed of senior planners from the region and three citizen representatives appointed by the Metro Council.

A "Cooperative Agreement on Duties and Responsibilities of the Metro ~~Metropolitan Service District (Metro)~~, Oregon Department of Transportation (ODOT), and Tri-County Metropolitan Transportation District of Oregon (Tri-Met) in Participating in the Metro Transportation Planning Program" was signed in July, 1981. The structure described above is consistent with that 1981 agreement.

Interstate Coordination

Planning for the Portland-Vancouver metropolitan area is carried out by two regional planning agencies, Metro and the ~~Intergovernmental Resource Center (IRC) of Clark County~~ SWRTC. Each agency conducts its transportation planning under its respective state and federal authority for its own geographic area. However, since this is a single urbanized area, it is essential that the two agencies coordinate plans to adequately address problems of interstate significance. This coordination is assured through the mechanisms described below.

- Bi-State Policy Advisory Committee - A Bi-State Policy Committee exists to provide a forum for elected officials from Oregon and Washington to discuss problems of mutual concern and make recommendations to the Metro Council and ~~IRC of Clark County~~ SWRTC. This Committee includes representation from the two regional agencies, the two principal cities and the two principal counties. In addition, the Committee can establish ad hoc committees to deal with transportation problems. Transportation recommendations from the Committee are made to the Metro Council through TPAC and JPACT in accordance with Metro's decision-making process.

- Metro/~~Clark County IRC~~ SWRTC Committees - In order to ensure a voice in transportation decisions of interstate significance, JPACT includes representation from WSDOT, Clark County and Vancouver, and TPAC includes representatives from WSDOT, Clark County, Vancouver and ~~Clark County IRC~~ SWRTC. Similarly, Clark County's "Consolidated Transportation Advisory Committee" includes representation from ODOT and Metro.

- Transportation Plan and Improvement Program Coordination - Before adoption of the RTP or an amendment to the Plan having interstate significance, Metro and ~~Clark County IRC~~ SWRTC must consult with the other party and consider any comments of the other party before adoption.

These mechanisms build upon the December, 1987 comprehensive Memorandum of Agreement between Metro ~~(formerly Metropolitan Service District) and SWRTC (formerly Clark County Intergovernmental Resource Center).~~

Public Involvement

The planning process leading to development of the RTP and TIP must also include a proactive public involvement process that~~which~~ provides full access to information and key decisions and responds to public comments. Metro's regional public involvement process is summarized in Appendix "PI."~~".~~

E. ~~The~~ Organization of the RTP
~~Regional Transportation Plan Document~~

The Introduction has provided the planning, statutory and decision-making context of the RTP, and outlined the overall intent of the Plan. The remaining chapters in this document are organized as follows:

- Chapter 1 presents the overall policy framework and direction for the Plan and an overview of past transportation-related decisions affecting that policy framework. In addition, the goals, objectives and criteria against which the Plan was measured are established.

- Chapter 2 describes the anticipated year 2015 ~~2005~~ land use pattern and population and employment growth associated with the development called for in the adopted Region 2040 growth concept and in the local comprehensive plans, as well as the travel characteristics expected as a result of that growth. The resulting travel demand is what the recommended transportation system is expected to serve.

- Chapter 3 examines the impacts on the region of attempting to serve the anticipated year 2015 ~~2005~~ travel demand without additional transportation investments beyond those highway and transit projects with "committed" construction funding as of 1995. ~~1988.~~

- Chapter 4 applies the policy direction established in Chapter 1 to the region's transportation system and discusses the long-range system concepts embodied in the recommended Plan improvements.

- Chapter 5 details, on a sector-by-sector basis, the transportation improvements and programs recommended in the Plan to achieve the major goals and objectives established in Chapter 1 and consistent with the policy direction as applied in Chapter 4. The public review draft of the interim RTP update (April, 1995) is intended to provide choices for the public. As such, chapter 5 focuses on a list of needs to be balanced with available funding identified in chapter 7.

- Chapter 6 evaluates the year 2015 ~~2005~~ performance of the regional transportation system recommended in the Plan against the objectives and criteria established in Chapter 1.

- Chapter 7 presents an order-of-magnitude estimate of the costs associated with the needs identified in chapter 5, ~~improvements recommended in the Plan as of early 1988~~, as well as an analysis of the ability of the region to pay for the recommended improvements.

- Chapter 8 examines the processes necessary to implement the recommended Plan, defines statewide goal and local comprehensive plan compliance procedures, establishes a process to update, refine and amend the RTP and details outstanding issues that remain to be resolved.

- Chapters 1, 4 and 8 are the key sections of the Plan that describe what the transportation system is to consist of, who has implementation responsibilities, and what coordination mechanisms are required. The remaining chapters contain supplemental information describing the costs and benefits of the proposed investments and the land uses that the transportation system is designed to serve.

DRAFT
4/5/95

CHAPTER 1

A. INTRODUCTION

This chapter presents the overall policy framework within which the specific transportation goals, objectives and actions contained in the adopted Regional Transportation Plan (RTP) were formulated. It also provides the basis for future planning and decision-making by the Metro Council and the implementing agencies, counties and cities. The remainder of this chapter is organized as follows:

- History: Identifies past regional transportation decisions and describes the evolution of the policy direction recommended in the RTP for the region's future transportation needs.

- Regional Transportation Plan Goals and Objectives: Describes the policy direction of the Plan and establishes in measurable terms what level of mobility the transportation system is expected to provide.

- Urban Form and Land Use: Connects Region 2040 Growth Concept to RTP transportation goals and objectives, with an emphasis on the specific land use components that make up the Region 2040 urban form.

- Transportation System Design: Provides objectives regarding the performance and function of each element of the transportation system~~: Highways, Transit and Demand Management Programs~~.

B. HISTORY

The adopted RTP is built upon the structure of transportation-related decisions and policies developed over the past two decades. The most significant of these benchmarks include:

1959 The Portland/Vancouver Metropolitan Area Transportation Study (PVMATS) was initiated as an ongoing regional transportation planning process and resulted in a proposal for an extensive system of new freeways and streets. In total, 50 new freeway projects were proposed to be constructed by 1990.

1969 The State Legislature provided for public takeover of the faltering privately-owned mass transit system. Tri-Met was formed.

1973 The first transit plan for the region was published.

1973 A Governor's Task Force was formed to clarify the transportation decision-making process in the region. This Task Force made landmark recommendations for restructuring transportation decision-making in the region, with some far-reaching implications:

- Fiscal and environmental realities made it impractical to rely solely upon new freeways as the solution for urban travel needs.

- Improvements of existing state and regional highways on an incremental, more cost-effective basis was essential.

- Transit and highway planning should be done together, with shared rights-of-way and preferential treatment for transit in the major travel corridors.

- Better management of traffic was required, including support of carpooling, parking and transit policy coordination, and traffic engineering improvements to get more service from existing highways.

As a result of the recommendations, regional leaders decided to make better use of existing transportation corridors rather than building new ones; limit the growth of traffic on the region's highway system; and assign most of the new commuter growth to transit and carpooling.

1973 The Land Conservation and Development Commission (LCDC) was established. Cities and counties were required by LCDC to prepare comprehensive plans in compliance with state planning goals.

1975 A consensus was reached to withdraw the Mt. Hood Freeway from the Interstate System. These funds were later earmarked for various regional transit and highway projects including major corridor transitways.

1978 The decision was made to build light rail transit (LRT) in the Banfield corridor and to widen the freeway to improve auto travel.

1978 The I-505 Freeway was withdrawn from the Interstate System and the decision was made to replace it with lower cost improvements which upgrade Yeon Avenue to connect I-405 and Highway 30.

1979 The Metro Council adopted a Regional Transportation Corridor Improvement Strategy designed to guide in-depth analysis of corridor problems and potential solutions.

1982 This RTP was adopted by Metro after thorough public review and consensus among the local jurisdictions in the region, providing a framework for transportation planning and cost-effective investments over the next two decades.

1982 Regional air quality control plans to meet standards for ozone and carbon monoxide by the federal Clean Air Act deadline (December 31, 1987) were adopted by Metro and the Environmental Quality Commission after extensive public review and comment. These plans were approved by the Environmental Protection Agency (EPA) in the fall of 1982.

1983 The Regional Bicycle Plan element of the RTP was adopted by Metro to define regional policy with respect to bicycle facilities and programs and to provide guidelines for encouraging the use of bicycles as an alternate mode of transportation. This system element is updated concurrently with the rest of the Plan.

1983 The Sunset LRT was selected by the region as the preferred alternative to connect downtown Portland and Beaverton (to 185th) as the result of the Westside Corridor Project Alternatives Analysis and extensive public review and comment. The decision to proceed to construction will not be made until after the completion of an FEIS on the project and an evaluation of operation of the Banfield LRT.

1987 JPACT adopted regional priority transportation improvements for the next 10 years. These improvements consist of a balanced program of regional transportation investments in: a) the regional highway corridors; b) urban arterials; c) regional LRT corridors; and d) transit bus service expansion.

1988 An updated version of the Special Needs Transportation (SNT) Plan (originally adopted by Metro in 1985) that defines policies and transit service with regard to the elderly and handicapped population was adopted by Tri-Met. The full text of the adopted SNT Plan is included in the RTP as Appendix B.

1990 Congress approves the federal Clean Air Act Amendments. The new law requires that transportation plans conform to air quality standards.

1991 LCDC adopts the Goal 12 Transportation Rule requiring a reduction in the reliance on single-occupant vehicles and requiring local actions which encourage the development and use of reasonable alternatives such as transit and ridesharing. The Transportation Rule also requires the development of Transportation System Plans to be completed consistent with the state requirements within four years for the RTP and within five years for local jurisdictions. The plans must include methods to achieve reductions in per-capita vehicle miles traveled, increases in peak-hour auto occupancy rates and examination of alternative land use scenarios to address transportation needs.

1991 The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) is approved by Congress, and becomes law. The act changes the priorities for federal transportation funding, with a departure from projects that primarily serve the automobile, and a new focus on alternative modes of transportation that are more cost efficient and environmentally sound.

1991 Metro Council adopts the Regional Urban Growth Goals and Objectives which provide a set of land use planning goals and objectives, which are consistent with statewide planning goals, for purposes of planning coordination in the region.

1992 The region's voters approve the Metro Charter. Among the activities set in motion by approval of the charter are the Future Vision project and development of a Regional

Framework Plan. The RTP will serve as the transportation element of the Framework Plan.

1993 The Federal Highway Administration (FHWA) and Federal Transit Agency (FTA) jointly propose regulations to implement the federal ISTEA. The regulations are divided into three components, two of which (the *Metropolitan Planning* and *Management Systems* proposed rules) apply to Metro.

1994 The Metro Council approves, by resolution, the Region 2040 Growth Concept, and initiates a six-month refinement process prior to adoption of a final Growth Concept.

C. REGIONAL TRANSPORTATION PLAN GOALS AND OBJECTIVES

Vision Statement

The Regional Transportation Plan seeks to balance the need for continued economic development and ~~Any plan of this scope must have a guiding vision. The preceding decisions clearly illustrate an evolving regional transportation policy direction that recognizes the interrelationship among the values inherent in: 1) providing adequate levels of mobility; 2) allocating finite fiscal resources and protecting~~ protection of the region's natural environment~~al quality~~, consistent with goals set forth in the RUGGOs and Region 2040 Growth Concept

Guiding Principles

~~As a result,~~ The Regional Transportation Plan vision ~~defined in this Plan~~ has ~~two major~~ three guiding principles:

- Encourage and facilitate the economic growth of the Portland region~~, and~~ through improved accessibility;

- Ensure that the allocation of increasingly limited fiscal resources be driven by both land use and transportation benefits; and

- Place a priority on protecting the ~~quality of life for the residents of the~~ region's natural environment in all aspects of transportation planning process.

Economic growth is necessary for the viability of the region and the state. ~~Local comprehensive plans are in place providing development capacity for a 90 percent increase in employment and a 72 percent increase in population.~~ The Region 2040 Growth Concept assumes nearly a million new residents in the region over the next fifty years, and over 500,000 new jobs. Investment in transportation improvements is needed to both promote and facilitate ~~economic~~ this growth. ~~At the same time,~~ However, the region should act to avoid the excessive traffic problems and associated degradation of livability common to major growth areas. Loss of accessibility, intrusion of through traffic into neighborhoods, increased air pollution, and other

detrimental impacts should be avoided. An effective plan to serve a growing metropolitan area must address these concerns and provide ~~an adequate~~ a balance among ~~mobility~~ accessibility, cost and environmental impact.

Accessibility ~~Mobility~~

~~Mobility for personal travel and goods movement~~ Accessibility to services and markets throughout the urban metropolitan area is the principal objective of the transportation plan. ~~An adequate level of mobility is needed by~~ Residents of the region must have reasonable ~~for~~ access to jobs, shopping and other personal business, social and recreational pursuits. Commerce in the region depends on ~~and~~ access to statewide and interstate travel facilities. Both the quality of life for residents and the economy of the region would suffer without reasonable access to these destinations ~~mobility, the economic prosperity of the region will diminish as development is curtailed by lack of adequate access~~.

An important provision of the federal ISTEA requires metropolitan areas to develop management systems that will help to improve the efficiency of the transportation system, and introduce new technologies in the planning process. The Intermodal Management System (IMS) will be the primary tool for coordinating transportation modes and connections within the region, and represents the first formal integration of freight and passenger travel issues. Similarly, the Congestion Management System will serve as a tool for considering various strategies to manage congestion in the metropolitan area (the management systems are discussed further in this chapter and in the Appendix).

System Cost

A cost-effective transportation system will provide adequate levels of mobility to the users while minimizing the overall cost of the system and therefore reducing the need for public investment. Certain situations require increased investments in one element in order to save a greater amount of capital cost in another element. However, the RTP places emphasis on the preservation and efficient use of existing facilities as the preferred approach in providing an adequate transportation system. The cost-effectiveness of the transportation system as a whole, therefore, is dependent on solutions that provide adequate capacity at the lowest total cost.

Environmental, Economic & Social Impacts

A basic assumption in the development of ~~a~~ the Regional Transportation Plan is that transportation systems do more than meet travel demand. Transportation systems have a significant effect on the physical and socioeconomic characteristics of the areas they serve. Transportation planning must be viewed in terms of other fundamental regional and community goals and values, such as protection ~~and enhancement of a pleasant and healthy~~ of the environment, impact on the regional economy, and maintaining the quality of life that area residents now enjoy ~~the maintenance of desirable social and economic structures~~.

The RTP measures economic and quality of life impacts of the proposed system by evaluating key indicators, such as job and retail service accessibility, economic benefits to the business community, travel speeds and congestion, energy costs, protection of natural resources and air quality impacts. Because of the multiple values which must be considered, objectives will sometimes be in conflict. There are no rigid priorities which can be applied to all situations. Each program must be evaluated in terms of the extent to which it best achieves an overall balance between conflicting goals.

Planning Period

The RTP addresses transportation needs over a 20-year horizon. The plan is reviewed yearly for consistency with state and federal planning requirements, and updated at least every three years to ensure its accuracy, and reflect changes in regional planning priorities.

At least every five years, a major update to the RTP is prepared, with transportation needs modeled according to an updated regional population and employment forecast. The current forecast is through the year 2015. During the next update to the RTP, scheduled for 1996, the planning period will extend to the year 2020, and the plan will be reevaluated according to that new horizon.

Public Involvement

The first goal in Oregon's statewide planning program seeks to "develop a citizen involvement program that ensures the opportunity for citizens to be involved in all phases of the planning process." The federal ISTEA regulations reflect this emphasis on public involvement. The process for adopting the RTP meets these objectives by including public input at every level of decision-making.

The RTP is largely the product of extensive discussion at the community level, and thus reflects the interests of local citizens to an extent that could not be achieved at the regional level. Each local jurisdiction in the region has developed its own objectives for the regional plan through a distinct public process open to all citizens. Public comment that is provided to local planning commissions, city councils and county commissions forms the basis for local elected officials and representatives to provide input at the regional level. Metro has also developed an extensive public program for regional transportation planning. Prior to adoption of this plan, regional public involvement activities included a transportation fair, several community workshops held throughout the region, a newsletter to over 50,000 households and an RTP "hotline" that provides frequent updates on public involvement opportunities, and allows citizens to leave spoken comments.

The main forums for local input at the regional level are the Transportation Policy Alternatives Committee (TPAC) and Joint Policy Advisory Committee on Transportation (JPACT). Both committees are based on local representation, with local citizens and technical staff serving on TPAC, and local elected officials appointed to JPACT. Meeting notices are published in advance of TPAC and JPACT meetings, and public comment is welcomed in these forums. JPACT recommendations to the Metro Council often include public input received at the

regional level. Metro Council hearings on changes to the RTP are also advertised to the public, as well, and open for citizen comment.

Systemwide Goals and Objectives

The overall goal of the RTP is to develop a transportation system that provides adequate levels of ~~mobility~~ accessibility to a growing region at the same time recognizing the financial constraints and environmental impacts associated with that system. The remainder of this section: 1) presents the systemwide goals and objectives of the Plan; 2) defines adequate mobility and the types of fiscal and environmental constraints that must be addressed; and 3) details the criteria against which the performance of the system will be measured.

System Goal 1 - Provide adequate levels of accessibility within the region ~~mobility on the transportation system~~.

1. **Objective:** To maintain accessibility to jobs for residents of the region.

   Performance Criterion: The number of job opportunities available within 30 minutes from major residential sectors by the fastest mode during peak hours should be equal to or greater than today.

2. **Objective:** To provide a public transit system which maintains accessibility to jobs for the transportation-disadvantaged.

   Performance Criterion: The number of jobs accessible by transit within 30 minutes from those subareas having a higher than average concentration of transportation-disadvantaged persons should be equal to or greater than today.

3. **Objective:** To maintain accessibility to ~~shopping~~ retail and service opportunities for residents of the region.

   Performance Criterion: The percentage of total regional population having access to ~~a~~ regional ~~shopping area~~ retail and service opportunities within 15 minutes by fastest mode during off-peak hours should be equal to or greater than today.

4. **Objective:** To maintain accessibility to markets for Regional Centers and regional ~~major~~ shopping centers ~~investments~~.

   Performance Criterion: The population within 15 minutes' travel time of Regional Centers and ~~selected major~~ regional shopping centers ~~locations~~, by fastest mode during off-peak hours, should be equal to or greater than today.

5. **Objective:** To maintain accessibility to intermodal facilities and major freight distribution centers.

Performance Criterion: The off-peak travel time from intermodal facilities and major freight distribution centers to the nearest freeway interchange using a route compatible with surrounding land uses should be equal to or faster than today. Freight performance will be monitored as part of the IMS.

System Goal 2 - Provide ~~adequate mobility~~ accessibility at a reasonable ~~total~~ cost.

1. **Objective:** To minimize the total public cost associated with the transportation system including cost of improvements and cost for operation and maintenance of the system.

   Criterion: SOV expansion projects should only address residual corridor demand after consideration/application of management options identified in the Regional Congestion Management System including demand reduction, improved corridor operational improvements (including application of ATMS freeway and arterial management techniques) and transit service.

2. **Objective:** To consider the financial relationship between private sector development and the resulting need for improvements to the publicly financed transportation system and pursue public/private funding partnerships as appropriate.

3. **Objective:** To place emphasis on the preservation and efficient use of existing facilities as the preferred approach in providing an adequate transportation system.

System Goal 3 - Provide adequate accessibility ~~mobility~~ with minimal environmental impact and energy consumption.

1. **Objective:** To ensure consideration of applicable environmental impact analyses and practicable mitigation measures in the RTP decision-making process.

2. **Objective:** To minimize, as much as practical, the region's transportation-related energy consumption through improved auto efficiencies resulting from aggressive implementation of TSM measures (including freeway ramp metering, incident response and arterial signal optimization programs) and increased use of transit, carpools, van pools, bicycles, ~~and~~ walking and TDM programs such as telecommuting and flexible working hours.

   Performance Criteria (TSM):

   - Install traffic responsive ramp metering on all regional freeways;
   - Operate corridor teams capable of freeway/parallel principal arterial incident response within five minutes; and
   - Install responsive signal timing capability on all minor arterial and higher classifications.

3. **Objective:** To maintain the region's air quality.

   Performance Criteria: Hydrocarbon emissions by transportation-related sources, in combination with stationary source emissions, should not result in the federal ozone standard of .12 PPM (parts per million) being exceeded. Areas which experience concentrations of carbon monoxide emissions resulting from transportation-related sources (i.e., downtown Portland) should not exceed the federal standard of 9 PPM.

4. Objective: To maintain consistency ~~The Annual Element~~ of the region's Transportation Improvement Program (TIP) ~~must be consistent~~ with the State Implementation Plan (SIP) for air quality and ~~must~~ conformity with the Clean Air Act Amendments of 1990.

5. Objective: To coordinate the RTP with SIP control measures to ensure continued consistency. Amendments to the RTP must be consistent with the SIP. Amendments to the SIP must be reflected in the next update to the RTP.

6. **Objective:** To minimize disruption associated with capital improvement projects.

7. **Objective:** To remove through traffic from neighborhood streets which results from congestion on through streets ~~adjacent facilities~~.

8. Objective: To improve local travel options by increasing the number of local street connections to each other and the regional network.

Civil Rights/Transportation Disadvantaged

In the development and approval of this and future RTP updates, Metro recognizes that plans, programs, and projects should "be consistent with Title VI of the Civil Rights Act of 1964 and the Title VI assurance executed by each State under 23 U.S.C. 324 and 29 U.S.C. 794, which ensure that no person shall, on the grounds of race, color, sex, national origin, or physical handicap, be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination under any program receiving Federal assistance from the United States Department of Transportation" (23 CFR 450.316(b)(2)). In addition, the planning process should "seek out and consider the needs of those traditionally underserved by existing transportation systems, including but not limited to low-income and minority households" (23 CFR 450.316(b)(1)(vi)).

Statewide Planning Goal 12 and its implementing Transportation Planning Rule (TPR) has a similar requirement for "Transportation Disadvantaged--those individuals who have difficulty in obtaining transportation because of their age, income, physical or mental disability." These requirements have been integrated into Metro's planning process primarily through the public involvement process; this process is outlined in Appendix "PI."

D. URBAN FORM AND LAND USE

Regional Urban Growth Goals and Objectives

The Regional Urban Growth Goals and Objectives (RUGGOs) were adopted in 1991 in response to direction by the Oregon Legislature to develop regional land use goals and objectives that would replace those adopted by the Columbia Region Association of Governments. The RUGGOs establish a process for coordinating planning in the metropolitan area in an effort to maintain regional livability. The RUGGOs also provide a policy framework for guiding Metro regional planning program, including development of functional plans and management of the region's urban growth boundary. The Regional Transportation Plan serves as a functional plan.

In late 1994, the Metro Council adopted by resolution the Region 2040 Growth Concept, and initiated a six-month refinement process prior to adoption of a final Growth Concept. Like the RUGGOs, the growth concept is not a final plan for the region, but rather, serves as a starting point for developing a more focused vision for the future growth and development of the Portland area. While the Region 2040 concept is principally a land use framework, there are important linkages to transportation policy. Following are the land use components that form the basic building blocks of the growth concept, with corresponding transportation system implications:

- Central City and Regional Centers

  Portland's central area already forms the hub of the regional economy, and regional centers in suburban locales like Gresham, Beaverton and Hillsboro are envisioned in the Growth Concept as complementary centers of regional economic activity. In the Region 2040 vision, the Central City would be accessed by an improved transit system network, a multi-modal street system and regional highways. Light rail lines would radiate from the Central City, connecting to each regional center. An improved network of multi-modal arterial and collector streets would tie regional centers to surrounding neighborhoods and nearby town centers, while regional through-routes would be designed to connect regional centers with one another and points outside the region.

- Town Centers

  Town Centers would function as local activity areas that provide a full range of local retail and service offerings. While Town Centers will not compete with Regional Centers in scale or economic diversity, they will offer some specialty attractions of regional interest. Though the character of these centers varies greatly, each will be function as strong business and civic communities with excellent arterial street access and high quality transit service.

- Station Communities , Corridors and Main Streets

  Station Communities are envisioned around light rail or other transit stations that feature a high-quality pedestrian and bicycle environment. These communities are designed around the transportation system to best benefit from the public infrastructure. Corridors will not be as intensively planned as Station Communities, but have a similar emphasis on

a high-quality bicycle and pedestrian environment and convenient access to transit. Main Streets will feature storefront style development along a limited number of corridors, with street designs that provide less auto capacity than Corridors, and emphasize pedestrian, transit and bicycle travel.

- Neighborhoods

  In recent decades, the newest neighborhoods have become the most congested. This is largely due to a lack of street connections, which discourages walking and bicycling for local trips in these areas, and forces local auto trips onto the regional arterial network. The Growth Concept envisions master street plans in all areas that include 8-20 local street connections per mile of the regional roadway network.

- Industrial Areas and Employment Centers

  Industrial Areas would serve as "sanctuaries" for long-term industrial activity. In contrast, Employment Centers would allow mixed commercial and industrial uses, including some residential development. These areas are primarily served by a network of arterial connections to the regional freeway system and intermodal facilities. Many Industrial Areas and Employment Centers are also served by freight rail.

- Airports and Terminals

  Intermodal facilities (air and marine terminals, freight rail yards and common carrier truck terminals) are an area of regional concern. Access to these areas is centered on rail, the regional freeway system and key roadway connections.

- Urban and Rural Reserves

  These reserves are outside the Urban Growth Boundary, are largely undeveloped, and have limited transportation facilities. Urban Reserves are intended to accommodate future growth, and will eventually require multi-modal access to the rest of the region. In contrast, Rural Reserves will be protected from urbanization for the foreseeable future by limiting rural access to urban through routes.

- Neighboring Cities

  Neighboring Cities are separated from the main urban area by Rural Reserves, but are connected to Regional Centers within the metropolitan area by limited access "Green Corridor" highway routes. Neighboring Cities will be encouraged to maintain a strong balance between jobs and households to limit travel demand on these connectors. Green Corridor routes will include bicycle and transit service to Neighboring Cities.

Although not complete at this time, the Region 2040 Growth Concept will eventually include a detailed plan for urban reserve areas, and a refined system of Regional Centers, Town Centers, Corridors and other urban components. Future updates of the RTP will continue to incorporate these elements of the Regional Growth Concept as the vision becomes more detailed, and will eventually be adopted as the transportation component of the Regional Framework Plan.

E. TRANSPORTATION SYSTEM DESIGN

While additional public investments in the ~~highway~~ roadway and transit systems are needed to provide the region with an adequate level of accessibility ~~mobility~~, the federal ISTEA has dramatically altered the funding priorities for projects that include federal support. In particular, funding for projects that primarily benefit single-occupancy vehicle (SOV) auto travel on the roadway system will be sharply limited, while roadway projects that benefit bicycle, pedestrian, transit and freight travel are more likely to be funded. ~~However,~~ Demand management programs ~~can be used to~~ be combined with improvements that encourage non-auto modes to reduce the need for SOV projects by discouraging travel during the ~~minimize~~ peak period ~~travel~~, thereby lessening the magnitude of the required public investment. However, the automobile will continue to be the dominant mode of travel, and investments in the roadway system will still be needed, in addition to other transportation improvements.

This section specifies the quality of service expected on the ~~highway~~ roadway and transit systems and establishes ~~system~~ design criteria by which the various components of the system ~~must be delineated (i.e., where major arterials and regional transit trunk routes~~ should be identified ~~located)~~. In addition, this section also establishes a policy direction for demand management programs to support the highway and transit objectives and a series of management systems that will guide decision-making on congestion management, intermodal transportation facilities and public transit. This section does not prescribe standard capacities for each type of highway facility or transit service. These decisions are based upon forecasts of traffic volumes and transit ridership and a policy determination on tolerable levels of traffic congestion and transit crowding.

Regional Roadway System

The automobile continues to be the dominant form of passenger travel, and much of the region's roadway system has been designed to accommodate growing automobile demands. However, roadways also play a role in the movement of freight, and are the backbone of commerce in the region. Roadways also serve the bus element of the regional transit system -- by far the largest share of transit riders, and most modern roadways are also built to serve bicycle and pedestrian travel. In serving these varied needs, the region must continue to move toward a truly multi-modal roadway system that responds to the needs of all forms of travel.

The roadway system described in this section is multi-modal, with design criteria intended to balance often conflicting modal demands. Subsequent sections in this chapter provide more detail on the regional bicycle, pedestrian, transit and freight systems, and how they relate to the regional roadway network.

Roadway System Goals and ~~Highway~~ Objectives ~~and Performance Criteria~~

Roadways are intended to serve any combination of modes. A major activity in the next RTP update is to develop multi-modal design objectives and criterion for roadways.

Goal 1 - Provide a regional roadway system of major through-routes and multi-modal arterials that function with an acceptable level of service.

1. **Objective:** To maintain a system of ~~principal~~ regional through-routes for long distance, high speed, statewide travel.

   Performance Criterion: The off-peak travel time for statewide trips within the region, from each entry point into the region to each exit point, should be equal to today, and the off-peak travel time for statewide trips within the region from each entry point to the I-405 loop should be equal to today.

2. **Objective:** To maintain a reasonable level of vehicle speed on the regional ~~freeway~~ through-routes and multi-modal arterials ~~routes~~ during the peak hours.

   Performance Criterion: The acceptable level of service on these facilities is defined as the maximum service volume at level-of-service D. Deficiencies are deemed to exist at level-of-service E (exceeding the D-E boundary). Improvements to these facilities should be designed to provide operating characteristics within the level-of-service D range with cost-effectiveness and impacts dictating what level of service within the D range the design achieves. It should be noted that, in some instances (policy, impact, cost or other constraints), decisions will be made to accept a lower level of service on segments of particular facilities.

3. **Objective:** To maintain a reasonable level of vehicle speed on the regional through-routes ~~freeway~~ and arterials ~~routes~~ during the off-peak periods.

   Performance Criterion: These facilities should operate at level-of-service C during the off-peak.

Roadway ~~Highway~~ Functional Classification ~~Criteria~~

Metro's ~~adopted~~ roadway functional classification system establishes ~~the principal~~ through-routes, ~~the~~ and major ~~arterials~~ and ~~the~~ minor arterials of regional significance, and serves as the framework for consistency among ~~the~~ local transportation ~~comprehensive~~ plans ~~of local jurisdictions. Metro's adopted functional classification system within the urban area consists of the Principal, Major Arterial and Minor Arterial~~ These routes of regional significance are designated on system maps in Chapter 4 of this plan ~~(Figures 4-1 and 4-2)~~.

Local comprehensive plans also include additional minor arterials, collectors and local streets. The regional Principal, Major and Minor Arterials, the minor arterial and collector systems and streets designated in local plans for transit service in the local comprehensive plans constitute the Federal-Aid-Urban system and, as such, are eligible for federal funding.

~~Principal~~ Regional through-routes: ~~this system provides~~ these facilities form the backbone for the roadway network. ~~It serves through~~ Trips entering and leaving the urban area follow these routes, as well as the majority of movements bypassing the central city or

regional centers. Regional through-routes also form the primary connection between neighbor cities and the urban area. This system includes interstates, freeways, expressways and other through-route ~~principal~~ arterials.

Regional Through-Route System Design Criteria:

- The ~~principal arterials~~ regional through-routes should provide an integrated system which is continuous throughout the urbanized area and also provide for statewide continuity of the rural arterial system.

- A ~~principal arterial or freeway~~ regional through-route should provide direct service: 1) from each entry point to each exit point; or 2) from each entry point to the I-405 loop ~~(i.e., downtown)~~. If more than one road is available, the most direct route will be designated as the ~~principal arterial~~ through-route unless through traffic is incompatible with surrounding properties. Off-peak travel times should not be significantly increased through use of indirect routes.

- Regional through-routes outside the Urban Growth Boundary should be treated as "Green Corridors", with very limited access and substantial landscaped buffers that minimize views of non-resource rural activities.

- Freeways should be grade separated with access centrally controlled by an integrated ramp meter system and other ~~principal~~ through-routes should provide a minimum of direct property access (driveways) to avoid conflicts between higher speed through travel and local access movements. Through-route route signal systems should be interconnected, optimized and capable of remote retiming. Through- movements should always be favored over local movements. Regional through-routes selected for freeway diversion should receive special design consideration to reasonably accommodate freeway-level use in the event temporary diversion of freeway traffic is required. Existing and proposed driveways should be consolidated on access frontage roads or side streets to the greatest extent possible.

- The ~~principal~~ through-route system inside the I-205/Highway 217 loop should be upgraded to freeway standards where cost-effective, with the exception of the McLoughlin Boulevard and ~~I-505~~ US 30 alternative routes, where adjacent land uses are not compatible with this treatment.

- In general, freeways should not connect to collectors or local streets.

- The ~~principal~~ through-route system should serve ~~the major~~ the Central City, Regional Centers and intermodal facilities, and should connect key freight routes within the region to points beyond the region ~~of activity (trip generators), the highest traffic volume corridors and the longest trip desires~~.

- There should be no restrictions on truck traffic.

Major Arterials: these multi-modal facilities are the supporting elements of both the principal routes and collector systems. Major arterials, in combination with principal routes, are intended to provide a high level of mobility for travel within the region. All trips from one subarea through an adjacent subarea traveling to other points in the region should occur on a major arterial or principal route. Access to major port facilities should be provided by major arterials.

Major Arterial System Design Criteria:

- The major arterial system should provide multi-modal linkages with regional through-routes ~~principal arterials~~, collectors and other major arterials.

- ~~Land~~ Local access should be restricted to public streets and major traffic generators to the greatest extent possible; minor driveways should be consolidated on access frontage roads or side streets.

- Signalized intersections should maintain high capacity for the major arterial with grade separations as needed. Major arterial signal systems should be interconnected, optimized and capable of remote retiming.

- A major arterial ~~or principal route~~ should provide direct service from one ~~subarea~~ regional or town center to ~~through~~ another, or to the regional through-route system ~~to reach the next subarea~~. If more than one route is available, the more direct route will be designated unless through traffic is incompatible with surrounding land uses ~~properties~~. Peak travel times should not be significantly increased through use of indirect routes.

- Major Arterials selected as freeway diversion routes should receive special design consideration to reasonably accommodate freeway-level use in the event temporary diversion of freeway traffic is required. All ~~Generally,~~ major arterials should be appropriate as a truck routes.

- The ~~principal~~ regional through-route and major arterial systems in total should comprise 5-10 percent of the total mileage and carry 40-65 percent of the total vehicle miles traveled.

Minor Arterials: the minor arterial system complements and supports the ~~principal~~ through-route and major arterial systems, but is primarily oriented toward travel within and between adjacent subareas of the region. Minor arterials are multi-modal in design, and the somewhat lower auto and truck volumes on these street make them more attractive for bicycle and pedestrian travel. An adequate minor arterial system is needed to ensure that these more localized movements do not occur on ~~principal~~ through-routes or major arterials, and that areas along the urban fringe that do not warrant major arterials are connected to the regional system. Minor arterials provide connections to major activity centers and provide access from local destinations to the ~~principal~~ through-route and major arterial systems ~~into each subarea~~.

Minor Arterial System Design Criteria:

- ~~Any land~~ Local access should be oriented to public streets and major traffic generators; access to single-family dwellings should be discouraged.

- Minor arterials generally should not connect more than two regional or town centers, or other major attractions ~~be continuous across two or more subareas~~.

- The minor arterial system should provide linkages with collectors and major arterials. Minor arterial signal systems should be interconnected, optimized and capable of remote retiming.

- The full freeway and arterial system (~~principal~~ through-routes and major and minor arterials) should comprise 15-25 percent of the total mileage and carry 65-80 percent of the total vehicle miles traveled.

Collectors: the collector system is generally contained entirely within ~~subregions to provide mobility~~ local jurisdictions to provide access between centers ~~communities~~ and neighborhoods or from neighborhoods to the minor and major arterial systems. Collectors carry lower auto and truck volumes than arterials, with reduced travel speeds, and therefore are excellent bicycle and pedestrian routes. An adequate collector system is needed to ensure ~~these highly~~ localized auto and truck movements do not occur on ~~principal~~ through-routes or ~~major~~ the arterials network. ~~Land is directly accessible~~ Local access is provided, with an emphasis on collection and distribution of trips within an arterial grid.

Collector System Design Criteria:

- The collector system should provide access to minor and major arterials and other collectors, as well as local streets.

- Intersections of collectors and ~~above~~ arterial streets should consist of stop sign control and signalization, where warranted.

- Parking should generally be unrestricted on ~~the~~ collectors.

- Access to ~~freeways and principal arterials~~ regional through-routes should generally not be provided from collectors.

- The collector system should comprise 5-10 percent of the total ~~roadway~~ mileage and carry 5-10 percent of the total vehicle miles traveled.

Local Streets: the local street system is used throughout ~~developed areas~~ the region to provide for local ~~circulation and direct land~~ access and circulation. However, arterials in the region's newest neighborhoods are often the most congested due to a lack of local street connections. These closed local systems discourage walking and bicycling for local trips, and

auto travel becomes the only viable option for short trips. The lack of local street connections forces local auto trips onto the regional arterial network – a major source of congestion on major suburban streets. ~~It provides mobility within neighborhoods and other homogeneous land uses, and comprise the largest percentage of total street mileage.~~ ~~In general~~ Wherever possible, local ~~traffic movements~~ trips should be accommodated on the collector or local street system, and not on ~~occur on Major Arterials and Principal Routes~~ the regional arterial network.

Local Street System Design Criteria:

- Preference is given for local access, pedestrian and bicycle movement.
- The local street system should provide linkages to collectors and other local streets at a density of 8-20 connections per mile.
- Where local street connections are not possible, bicycle and pedestrian connections should be provided through the use of easements or dedicated right-of-way.
- Unrestricted parking is usually allowed on local streets.
- Local street trips are short and at low speeds.
- Local street service is almost exclusively directed at property access.
- Access should not be provided to freeways and generally not to major arterials from local streets.
- Local streets should comprise 65-80 percent of the total mileage and carry 10-30 percent of the total vehicle miles traveled.

Regional Transit Service ~~Objectives and Performance Criteria~~

Transit Goals, Objectives and Policies

Goal -Transit should be a viable alternative to the single-occupant automobile by serving a variety of trip destinations, purposes and times throughout the urban growth boundary. The focus of transit services should be regional centers and the central city. Transit should also reinforce other land uses that depend on high levels of transit service; main streets, town centers, station areas and corridors. The system concept consists of five service categories:

- a network of Regional Transit Trunklines (Light Rail, Regional Bus modes) connecting regional centers to each other and the central city;
- a network of sub-regional bus trunklines that provide access to regional centers, the central city, and connects town centers;
- a primary bus grid network of high frequency service that provides access to regional centers, and that serves corridors and mainstreets;

- secondary bus lines that connect neighborhoods and industrial areas with timed transfer transit centers; and

- minibus service, including demand-responsive service, that connects lower density or developing areas with the high frequency network.

1. Objective: To provide a system of regional and sub-regional transit trunklines for longer-distance trips connecting regional centers with each other and the central city.

   - Policy : A trip between regional centers and the central city can be made without taking 50% longer than the time it takes to drive; and a trip between regional centers without taking 100% longer than it takes to drive; as demand warrants.

2. Objective: To provide reasonable speed and level of reliability on Regional Trunklines.

   - Policy: Speed on Regional Trunklines should average at least 20 miles per hour outside the central city. Station spacing and facility design on the network should provide reliable service within the 20 mph guideline. The goal is to have vehicles stop only to pick-up or discharge passengers.

   - Policy: Achieve an on-time performance rate of 95% of all vehicle trips at all time points (within 1 minute early and five minutes late).

3. Objective: To provide primary or trunkline transit service within five-minute walk of a majority of new development within the urban growth boundary.

   - Policy: The percent of population and employment within 1/4 mile of transit service should be more than in 1995.

   - Policy: Paratransit service should be in areas not served by fixed-route service in order to offer service throughout the Urban Growth Boundary.

4. Objective: To provide quality multi-destination transit service. Use a network of regional and sub-regional trunklines (10 minute base service) and a grid of primary bus routes (15 minute base service) to serve higher density land uses. Use a timed-transfer system of less frequent secondary bus and minibus services (30-60 minute base service) in lower density areas.

   - Policy: Trips to the nearest regional center or the central city should be made with no more than one transfer.

   - Policy: There should be no more than four standing passengers per square meter on any vehicle trip during the peak one hour (within 20 minutes of the central city and within 10 minutes of a regional center). During the off peak, no two consecutive trips should have standing passengers. Within free-fare zones, loading standards do not apply.

Transit Functional Classification Criteria

The Functional Classification System establishes the Trunkline Network (regional and sub-regional routes) of regional significance and serves as the framework for consistency among plans of local jurisdictions and Tri-Met. Figure X presents the network of high-frequency transit routes (existing and planned) of regional significance that are designated in this plan. The following sections present a description of the modes that comprise the regional transit system, the principal land uses served by each mode, and facility design guidelines to provide an appropriate operating environment and level of pedestrian improvements.

Regional Trunkline (Light Rail)

Light rail trunklines should connect the central city with regional centers and should serve regional public attractions (such as stadiums, convention centers). Service should run at least every ten minutes during the weekday and weekend midday base periods. Service should operate at least 20 hours a day. Service should be high speed and high-capacity, with few stops outside the central city and regional centers. Light rail should operate in an exclusive right of way to the extent feasible. Speed an reliability should be maintained by provision of signal preemption.

Regional Trunkline (Bus)

Bus trunklines should connect regional centers and should serve major public attractions. Service should run at least every ten minutes during the weekday and weekend midday base periods. Service should operate 24 hours a day. Service should be high speed and high-capacity, with few stops outside the regional centers. Facilities for trunkline bus service may be developed along future light rail corridors if it cost/benefit analysis of the trunkline bus improvements warrants construction. To the extent feasible, interim bus improvements should be adaptable to light rail operations. Regional bus trunklines should receive preferential treatments along the facilities, including preferential signals, reserved lanes and median stations.

Sub-Regional trunkline (Bus)

Sub-regional trunklines should provide access to the central city and regional centers from the surrounding market areas of the center. They may also provide a secondary connection between centers (the primary connection being provided by regional trunklines). Service should run at least every ten minutes during the weekday and weekend base periods. Service should operate 24 hours a day. Emphasis should be on reliability rather than speed. Regular stop spacing (every 2-4 blocks) should be provides, with station-like stop improvements at major transfer points and destinations. Sub-regional bus trunklines should receive preferential treatments, including preferential signals and reserved lanes.

Primary Bus Lines

These lines should serve land use corridors and mainstreets. Service should run every 15 minutes during weekday and weekend base periods, 20 hours a day. Transit preferential treatments should be provides at "hot spots", locations with the most congestion.

Secondary Bus Lines

These lines provide coverage and access to regional and sub-regional trunklines. They should run every 30 minutes during the weekday base period, 16 hours a day. Weekend service should be provided as demand warrants.

Minibus

These services should provide coverage in lower density areas by providing connections to the primary, sub-regional and regional trunklines. These services, which may range from fixed route to purely demand responsive, should provide at least a 60 minute response time on weekdays. Weekend service should be provided as demand warrants.

~~Transit service objectives and criteria are established to define the extent to which transit service will be provided, the convenience with which travel can be accomplished by transit and the cost of traveling by transit. In addition, similar to highway functional classification criteria, criteria are established for different types of routes according to the type of travel served.~~

~~In general, the transit system should be designed to be a competitive and viable alternative to the automobile. It should be designed to serve a wide variety of trip destinations, purposes and times of day. In particular, the system should more effectively serve travel needs beyond 1) peak hour travel to downtown Portland, and 2) work trips in general. The overall system concept that will be provided calls for a system of trunk routes providing direct, high quality service between major activity centers with connections to neighborhood areas by feeder, crosstown and local routes. In areas with sufficient density, the service will be provided through a grid system. In areas with lower density, the service will be provided through establishment of timed transfer stations providing a focus for transfer between a large number of local routes and the trunk routes.~~

~~1. Objective: To provide transit service throughout the urbanized portions of the metropolitan area.~~

~~Performance Criterion: The percent of the regional population residing within one-quarter mile of transit service should be equal to or greater than today.~~

~~2. Objective: To provide a quality of transit service that is a reasonable alternative to other modes of travel.~~

~~Performance Criterion: The travel time for each trip by transit should be no longer than twice the trip time by auto (peak and off-peak) including walk, wait and transfer time.~~

~~Performance Criteria: Transit vehicles should be no more crowded than four standees per square meter averaged during the peak hour; during off-peak hours, transit passengers will be predominantly seated, with an average of no more than one standee per square meter. Applied to current and planned equipment, these criteria provide the following vehicle capacities:~~

~~Average Standees Per Vehicle~~	~~Average Total Capacity Per Vehicle~~

	Seats	Off-Peak	Peak Hour	Off-Peak	Peak Hour
Small Bus	25	2	8	27	33
Standard Bus	44	5	20	49	64
Articulated Bus	64	12	47	76	111
Articulated LRT	76	22	90	98	166

Transit System Design Criteria

Metro's adopted transit system (Figure 4-4) establishes the Regional Trunk Routes. Local comprehensive plans should recognize these routes and identify streets that are suitable for subregional trunk routes and/or local transit service.

Regional Trunk Routes

A regional trunk system will be provided to directly and conveniently serve long-distance trips from each major subarea through adjacent subareas to other parts of the region in each major travel corridor. The level of transit service provided on a regional trunk route is dependent upon the level of patronage demand in the corridor served. If demand is great enough, it may be deemed necessary to construct a regional transitway (i.e., light rail or exclusive busway). The characteristics of regional trunk routes are described as follows:

- Radial regional trunk routes will serve each major travel corridor connecting central Portland with suburban activity centers of regional significance. In addition to other purposes, these routes will be expected to carry the increase in work trips to downtown Portland due to new development.

- Circumferential regional trunk routes will interconnect major suburban activity centers. These routes will be designed to provide access to major trip attractors without transfer through downtown Portland.

- Regional trunk routes should provide high speed service. Preferential treatment for buses, limited stop service and/or express service during peak hours will be considered as needed to maintain a peak period transit travel time no longer than one and a half times highway travel time.

- Regional trunk routes should provide the following minimum service frequency to serve urban development:

Peak	10 minutes
Day Base	15 minutes
Night	30 minutes

Subregional Trunk Routes

These subregional transit routes should serve intermediate length trips within subareas to provide connection between major activity centers and from points within the subarea to nearby regional trunk routes and transit stations.

Transfers

~~Trunk and local routes should be designed with convenient transfer opportunities to allow travel between downtown Portland and all residential areas with no more than one transfer, between other major origins and destinations with no more than two transfers and within local areas with no more than one transfer.~~

~~Park and Ride~~

~~Park and ride lots should be established to provide convenient auto access to regional trunk route service for areas not directly served by transit.~~

Fare Rate Structure

The fare structure will meet the following objectives:

- Fares should keep pace with inflation.
- The fare should be commensurate with the length of the ride.
- Special discounts should be provided to facilitate elderly and youth ridership.
- Innovative fare programs should be used to promote increased ridership, including special promotions, off-peak fares, special zones, etc.
- The fare collection system should be convenient for the user.

~~*Service to the Disabled*~~ *Accessible Transit Service*

Based on the Americans With Disabilities Act of 1990 (ADA), Tri-Met will offer services which address the ~~special~~ needs of ~~the disabled population~~ customers with disabilities.

- Continue to develop complementary paratransit services which comply with the ADA.
- Continue to specify lifts on all new high-floor transit vehicles or ramps on low-floor transit vehicles ~~until 100 percent of the fleet is accessible~~.
- Continue to work with local jurisdictions to make transit stops ~~more~~ accessible.
- Continue to develop other facilities and services which are accessible to ~~the disabled~~ customers with disabilities as required by the ADA.

~~Line Productivity~~

~~Tri-Met is currently in the process of developing service standards relating to line productivity for transit trunk and bus feeder lines to ensure some means of evaluating the productivity of lines within the system and developing alternative service options as appropriate.~~

Regional Transitway Policies

Regional transitways (light rail transit or exclusive busways) ~~provide~~ are an attractive method of providing regional trunkline ~~route~~ service. With a partially separated right-of-way and larger vehicles, greater capacity and higher speed service and

reliability can be provided while concurrently minimizing operating cost. Regional transitways have additional benefits of providing efficient, high capacity service to adjacent station-area land uses, thereby providing a logical tool for targeting locations for high density developments.

Regional transitways are, however, a very high-cost public investment. As such, they are warranted in only the most heavily traveled corridors if they are to be a cost-effective investment. In addition, transitways require acquisition of right-of-way that may otherwise be developed. Due to the high cost of transitways and the length of time to implement such a facility, development of this region's transitway system will be pursued in an incremental fashion. The guidelines for implementation of the transitway system (Figure 4-5) are as follows:

- Regional transitways will be considered for individual regional trunkline ~~route~~ corridors as appropriate to economically provide required high speed and/or high capacity service.

- Potential transitway routes will be identified in each corridor as appropriate to ensure consistent phasing from bus trunk operation in public streets to transitway operation.

- Right-of-way will be protected from encroachment to the greatest extent feasible for each of the transitway routes.

- Detailed cost and environmental impact studies will be pursued in each corridor before implementation of a transitway to ensure the most cost-effective public investment is implemented.

Regional Freight System

Vision Statement

Acknowledging that the movement of goods and services makes a significant contribution to Portland's regional economy and wealth, and that it contributes to our quality of life... Maintain and enhance the regions competitive advantage in freight distribution through efficient use of a flexible, seamless, multi-modal transportation network that offers competitive choices for freight movement.

Draft Goals And Objectives

Goal 1 - Provide efficient, cost-effective and safe movement of freight through and within the region.

1. Objectives: Maintain a reasonable and reliable travel (transit) time for moving freight through the region on freight transportation corridors.

2. Objective: Provide high-quality access between freight transportation corridors and the regions intermodal facilities and industrial sanctuaries.

Goal 2 - Preserve the safe operation of the freight system.

1. Objective: Correct existing safety deficiencies on the freight network relating to:

   - roadway geometry and traffic controls;

- at-grade railroad crossing;
- truck traffic in neighborhoods;
- congestion on interchanges and hill climbs;
- hazardous materials movement.

2. Objective: Identify and monitor potential safety problems on the freight network.

Goal 3 - Protect the public and private investments in the freight network.

1. Objective: Enhance partnerships between the private freight transportation industry and public agencies to improve and maintain the regions integrated multi-modal freight network.

2. Objective: Analyze market demand and linkages in estimating the life of public investments in the freight network.

3. Objective: Encourage efforts to provide flexible public funding for freight mobility investments.

Regional Bicycle System ~~Bicycling~~

The adoption of the Regional Bicycle Plan element of the RTP continues the region's recognition of bicycling as an important ~~legitimate form of~~ transportation alternative. In Portland, ~~for example,~~ bicycle commuting has doubled in volume since 1974, and now accounts for almost 4 percent of all work trips - more than double the national average. The implementation of the bicycle plan element will provide safe and convenient routes for ~~existing~~ bicyclists between jurisdictions and to major attractions throughout the region. ~~and encourage more bicycle use. In addition to the provision of safe bike routes, guidelines for increasing the use of bicycles as an alternative mode of transportation which local jurisdictions are encouraged to support are as follows:~~

- ~~Long-term bicycle parking facilities should be provided at employment centers, transit stations, park-and-ride lots, schools and multi-family dwellings.~~
- ~~Short-term bicycle parking facilities should be provided at shopping centers, libraries, recreation areas and post offices, among others.~~
- ~~Where practicable, bicycle parking should be secure and weather protected.~~
- ~~Local voluntary bicycle marking programs should be initiated to deter theft and aid in returning stolen bicycles to their owners. The licensing of bicycle operators is not recommended for the region.~~
- ~~Police programs for consistent enforcement of all rules of the road pertaining to bicyclists should be supported.~~

- ~~The development of guidelines and programs for safety education and awareness should be encouraged.~~

Regional Bicycle Program Goals & Objectives

Goal 1 - Provide a regional network of safe and convenient bikeways integrated with other transportation modes.

1. Objective: Integrate the efforts of the state, counties, and cities in the metro region to develop the most safe, cost-effective, aesthetic practical and aesthetic safe system of regional bikeways.

   - Policy: Ensure that local bicycle projects are coordinated and connected with other jurisdictions wherever practicable when possible.

   - Policy: Develop and update a system of regionally significant bikeways which connect activity centers as identified in Region 2040 the Regional Framework Plan.

   - Policy: Assure that the regional bikeway system functions as part of the overall transportation system.

   - Policy: Ensure that jurisdictions implement regionally significant bikeways in accordance with established standards. (i.e. AASHTO)

   - Policy: Coordinate with Tri-Met to ensure improved bicycle access to existing and future LRT stations, transit centers and park and rides.

   - Policy: Coordinate with Greenspaces to ensure integration of multi-use paths with on-street facilities when possible.

Goal 2 - Increase the modal share of bicycle trips to regional centers to 10% by 2015.

1. Objective: Secure additional funding sources to implement the regional bicycle facilities.

   - Policy: Ensure that all regionally-funded transportation projects provide for bicycles accessibility using established standards. (i.e. AASHTO)

   - Policy: Develop a prioritization and selection process for regional bicycle facilities that will assure implementation of critical regional projects and effectively use limited funding resources.

   - Policy: Ensure that the current level of funding for bicycle facilities will be maintained or increased in future regional revenue allocations.

   - Policy: Identify Develop new sources of regional revenue for constructing regional bicycle facilities; aggressively pursue all opportunities for increased funding.

2. Objective: Provide planning guidance to local jurisdictions.

   - Policy: Coordinate consistent implementation and planning of regionally significant bicycle facilities.

- **Policy:** Develop travel-demand forecasting for bicycles and integrate with regional transportation planning.

- **Policy:** Coordinate with jurisdictions on streamlining data collection and utilizing mapping resources.

- **Policy:** Establish an ongoing Continue to staff a regional bicycle program.

3. **Objective:** Promote increased bicycle use for all travel purposes.

   - **Policy:** Participate in and cooperate with local efforts to promote bicycle transportation.

   - **Policy:** Continue to update and publish a bicycle suitability map for the metro area.

   - **Policy:** Establish modal share targets for work and non-work trips to activity centers identified in 2040.

Goal 3 - Encourage bicyclists and motorists to share the road safely.

1. **Objective:** Coordinate efforts by jurisdictions in the region to promote safe use of roadways by bicyclists and motorists.

   - **Policy:** Act as a clearinghouse to distribute bicycle safety information to jurisdictions, schools and community organizations.

   - **Policy:** Act as a clearinghouse to distribute information that educates motorists and bicyclists on sharing the road to jurisdictions and community organizations.

Regional Pedestrian System ~~Facilities~~

Like bicycle routes and paths, pedestrian facilities are recognized as an important alternative mode of travel. Walking for short distances is an attractive option for most people when pedestrian facilities are available. Combined with adequate sidewalks, amenities such benches, curb extensions, marked street crossings and wide planting strips can make walking attractive and convenient mode of travel. The focus of the regional pedestrian system is identifying areas of high, or potentially high, pedestrian activity in order to target infrastructure improvements that can be made with regional funds.

A comprehensive, high–quality pedestrian environment will facilitate walking trips by providing an integrated network of safe, direct routes for short trips. Transit use will be enhanced by pedestrian improvements, especially those facilities which connect stations or bus stops to surrounding areas or which provide safe and attractive waiting areas. An integrated pedestrian system supports and links every other element of the regional transportation system, and complements the region's urban form and growth management goals.

Regional Pedestrian Program Goals & Objectives

The vision of the regional pedestrian program is to "ensure that walking is a viable transportation option by providing a high-quality pedestrian environment that is safe, convenient, accessible, and attractive, and that support the region's transit system and growth management goals."

Goal 1 - Substantially increase the percentage of trips made by walking for all trip purposes.

1. Objective: Complete a regional network of safe, convenient, accessible, and attractive pedestrian facilities to and within the region's activity centers.

2. Objective: Implement pedestrian facilities which eliminate or significantly reduce obstacles or impediments to pedestrian movement and accessibility.

3. Objective: Create substantial new opportunities for walk trips through land use patterns, densities, and designs that decrease trip lengths and that support walking as a practical and attractive transportation mode.

Goal 2 - Support an increase in the percentage of trips made on transit for all trip purposes.

1. Objective: Complete a regional network of safe, convenient, accessible, and attractive pedestrian facilities to and along the region's high- frequency transit corridors.

2. Objective: Implement pedestrian facilities which eliminate or significantly reduce obstacles or impediments to pedestrian movement and accessibility.

3. Objective: Create substantial new opportunities for walk trips to transit through land use patterns, densities, and designs that decrease trip lengths and that support walking to transit as a practical and attractive transportation mode.

Goal 3 - Focus regional funding on pedestrian improvement projects which most improve the pedestrian system and help complete the regional pedestrian network.

1. Objective: Provide increased funding for pedestrian improvement projects, especially those projects with the greatest potential to increase pedestrian trips and mode share.

2. Objective: Consider pedestrian issues in the prioritization of projects for allocation of all regional funds.

Goal 4 - Support and encourage local efforts to complete the local and regional elements of the pedestrian system.

1. Objective: Adopt regional policies and guidelines which support and encourage local efforts for implementation of high-quality, interconnected pedestrian facilities.

2. Objective: Provide regional leadership to ensure completion of local and regional elements of the pedestrian system in a coordinated manner.

Transportation System Management

Advanced Traffic Management Systems (ATMS) refers to the use of proven traffic management techniques and new computer processing and communications technologies to maximize the capacity of existing roads and highways. A Portland-area ATMS program

responds to federal and state policies which direct that urban congestion should first be addressed by *more efficient operation of existing roadways* rather than construction of new travel lanes. Appendix XX provides a full description of the Portland area ATMS. The overall objectives of the Portland area ATMS program are:

1. **Objective:** To safely reduce delays, emissions and fuel consumption by users of the region's multi-modal transportation system.

2. **Objective:** To support implementation of the Portland regional element of the ISTEA mandated statewide Congestion, Intermodal, Public Transit and Highway Safety Management Systems and the Highway Performance Monitoring System.

ATMS Program Elements

The ATMS program largely defines the *operational requirements* implied by the RTP's concept of an efficient, interdependent, regional system of freeways, arterials and transit properties. The following principles will guide system deployment.

- *Rapid Detection* of congestion.

- *Communication* of congestion data to a processing center.

- *Processing* or interpretation of field data. Field detection data will be transmitted to multiple agencies including a centralized ODOT-staffed Traffic Management and Operations Center (TMOC) where it will be analyzed and "real-time" solutions generated.

- *Incident Response and System Control.* Once notification and verification of congestion occurs, TMOC staff will initiate corrective actions.

With respect to the transit system, Tri-Met has installed the capability to communicate the real time location and arrival times of its bus and light rail fleet to a centralized dispatch center. Elements of the enhanced transit service envisioned in this RTP include expanded access to this information by transit riders and use of the data to smooth transit service patterns. Additional transit related components of the ATMS Plan include modification of selected intersection signals to provide longer green time for buses approaching an intersection. Additionally, ramp meters should be designed to allow queue jumping by high occupancy vehicles, including buses.

ATMS Design Criteria

Design criteria to aid ATMS implementation should be developed and agreed to by implementing agencies. The design criteria should help meet the overall ATMS objectives and program elements described in this chapter. The criteria should be uniform and standard to ensure coordinated data collection and processing.

Demand Management Program

~~Objectives and Criteria~~

The following describes goals, objectives and design criteria for the region's demand management program, and ISTEA requirements for development of a Congestion Management System (CMS) for the Portland region.

Transportation Demand Management

~~The purpose of demand management is to reduce the number of automobile and person trips being made during the peak travel periods throughout the region. The primary objectives of managing travel demand are to reduce the necessity of building new highways or adding lanes to existing highways and to optimize the use of transit service. Managing travel demand also helps the region meet its overall goals of reducing air pollution and conserving energy in a relatively low cost manner. In addition, demand management measures are particularly attractive because of their potential to help solve localized or corridor oriented problems. For example, a rideshare program can be oriented toward a specific corridor with congestion problems; a flextime program can be targeted at a central business district or a major employment center where traffic demands are concentrated.~~

Transportation demand management (TDM) is not one action, but rather a set of actions or strategies to encourage drivers to not drive alone, especially during the most congested times of the day. The term TDM encompasses both alternatives to driving alone and the strategies, techniques and supporting actions, that encourage non–single occupant vehicle (SOV) travel.

The primary benefits of managing travel demand are a reduction in transportation system capacity needs (i.e., building new highways or adding lanes to existing highways) and a more efficient use of non–SOV modes (transit, walk, bike) of travel. Managing travel demand will also help the region reduce overall per-capita vehicle travel, reduce air pollution and maximize energy conservation in a relatively low–cost manner.

In addition, TDM measures are particularly attractive because of their potential to help solve localized, facility or corridor–related problems. For example, a rideshare program can be oriented toward a specific corridor or employment center experiencing congestion problems; a flextime program can be targeted at a central business district, regional center or a major employment area where traffic demands are concentrated; telecommuting at home can help eliminate a trip, whereas telecommuting to a satellite center can help reduce the length of travel and ultimately the number of vehicle miles traveled (VMT). These measures are also very important to achieving air quality goals. For example:

- TDM strategies that can eliminate vehicle trips are generally the most effective in reducing vehicle emissions because trips are a direct determinant of starting emissions (cold and hot) as well as hot soak emissions. In addition, vehicle trips generate VMT which directly affects running emissions. Vehicle trips also influence available capacity on the transportation system, which in turn influences the average speed which affects evaporative running loss emissions.

- Strategies that reduce trip length directly affect emissions by lowering total VMT. Trip length, however, does not affect starting emissions or evaporative and diurnal emissions.

- Strategies that produce changes in speed influence both running loss (evaporative) and running (tailpipe) emissions.

~~Presented here are objectives defining the most appropriate types of travel demand programs to pursue and guidelines on the application of these programs.~~ An important consideration for selecting demand management measures is to combine those that are mutually supportive into a comprehensive program. This approach is important to the success of TDM because of the close linkages between many TDM strategies and programs. ~~While one measure may be somewhat effective on its own, it may be much more successful in conjunction with~~

~~another measure.~~ For example, an employer-based program to increase ridesharing may be moderately effective; the same program coupled with a reduced carpool parking fee program or reduced parking supply for drive alone trips ~~may~~ can be very effective. Similarly, land use policies can be formulated which, on their own, may have little impact on reducing vehicle trips, but in concert with other actions can be very successful in promoting the use of transit, or bicycle and pedestrian travel. Therefore, local jurisdictions are encouraged ~~urged~~ to ~~examine~~ consider demand management measures ~~as a whole~~ in a comprehensive manner and implement those combinations of measures which will best satisfy regional and/or local needs for both work and non-work travel. This approach will help ensure maximum achievement of TPR, air quality goals mobility goals.

~~1. Objective: Minimize travel by single occupant automobile; maximize travel by alternate modes.~~

~~2. Objective: Minimize travel during peak hours.~~

~~3. Objective: Minimize trip length.~~

The following describes ~~ISTEA requirements for development of a Congestion Management System (CMS) for the Portland region and~~ TDM program goals and design criteria for the region's demand management program. Within the context of a specific program approach (i.e., driver-based, non-work-based, etc.) TDM strategies are categorized as Tier 1 or Tier 2 depending on what planning time frame in the RTP they would most likely be considered for implementation.

- Tier 1 strategies are considered to be the least difficult and least costly to implement and would therefore be most effective during the first 10 years of the RTP (1995 – 2005). This time period coincides closely with achievement of the first milestone for the TPR (zero percent growth in VMT per capita by 2005), and implementation of the region's ozone maintenance plan (1995 – 2006). These strategies focus on providing the infrastructure and support for continuing existing TDM efforts in the region, as well as providing employers with a choice of strategies and approaches to assist them in implementing the Employee Commute Options Rule as mandated by the region's ozone maintenance plan.

- Tier 2 strategies are more difficult and generally more costly to implement but may be necessary to help the region achieve the 10 percent VMT per capita reduction goal by 2015, as required by the TPR. Tier 2 strategies include market-based approaches as well as strategies for affecting trips at non-work locations. The available evidence on the effectiveness of TDM measures indicates that market-based approaches/incentives provides a greater potential for reducing VMT.

Regional TDM Program Goals & Objectives

Goal 1 - Comprehensive regional approach to transportation demand management (TDM). The Regional Transportation Plan (RTP) should include policies that will help the region achieve its VMT, air quality, mobility, and livability goals in a cost-effective manner. The term TDM encompasses both alternatives to driving alone (SOV travel) and the techniques or strategies that encourage non-SOV travel.

1. Objective: To reduce or eliminate the incentives that promote reliance on the single occupant vehicle (SOV) for travel, by enhancing the attractiveness of non-SOV travel.

2. Objective: To recommend TDM strategies and incentives for adoption and implementation at the regional and local level to help the region achieve its 10 percent VMT per capita reduction goal; and that reinforce implementation of the 2040 Recommended Alternative land uses.

3. Objective: To identify corridor level strategies and policies for consideration in the Congestion Management System (CMS).

4. Objective: To recommend specific demand management strategies for adoption and implementation to assist the region in maintaining federal air quality standards for Ozone and Carbon Monoxide (CO).

Performance Criteria:

- Minimize travel by single–occupant vehicle; maximize travel by non–SOV modes
  - increase auto occupancy
  - increase mode share for transit, walk, bike

- Minimize travel during peak periods
  - reduce v/c ratios during peak periods
  - increase average corridor speeds during peak periods

- Minimize average trip length for both work and non–work trips.

~~*Program*~~ *Design Criteria and Guidelines*

Presented here are policies and objectives defining the most appropriate types of travel demand programs to pursue for achieving regional and local transportation goals. Also included are guidelines on the application of these programs at various levels of implementation.

TDM Infrastructure/ Support Programs

The function of TDM infrastructure and/or support programs is to: (1) provide the physical amenities necessary to make non–SOV modes more attractive; (2) provide incentives (monetary and non–monetary) to shift people to non–SOV modes; and (3) remove barriers such as regulation and/or restrictions that would make it more difficult for people to choose non–SOV modes. These strategies and actions are intended to support mode shifts rather than cause the shift. For example, strategies such as covered bus shelters, guaranteed–ride–home and education/marketing by themselves have little effect on switching people to non–SOV modes of travel.

However, when these strategies are used in conjunction with other TDM strategies such as improved or new transit service, carpool and vanpool programs, and regulatory or market–based pricing programs, they can contribute significantly to reductions in VMT, improvements in air quality and overall quality of travel. In addition, the provision of tax incentives to promote transit or other non–SOV modes will complement increased service for these modes. Implementation and/or continuation of Infrastructure/Support strategies require a regional as well as a local commitment.

Regional strategies are intended to provide the basis for a package of strategies to meet the TPR Tier 1 (1995–2005) and Tier 2 (2006 – 2015) VMT per capita reduction targets; to continue the existing TDM efforts in the region such as regional carpool matching, employer outreach and information/marketing campaigns; emergency ride home; and to complement individual

employer–based programs that are designed to comply with the region's Employee Commute Options rule.

Local jurisdictions are encouraged to adopt policies consistent with the overall guidelines for helping the region meet the TPR and for helping Employers meet the mandates of the Employee Commute Options Rule, such as:

- Local jurisdictions are encouraged to work with Tri–Met in providing the necessary infrastructure to support transit, para–transit, and carpool/vanpool programs. This may include improving streetside environment affecting the transit user, bicyclist and pedestrian.

- Local jurisdictions are encouraged to participate in local Transportation Management Associations (TMAs) to promote the benefits of TDM.

- Local jurisdictions are encouraged to conduct active marketing and education programs to inform businesses and the public of the benefits of non–SOV modes of travel.

- Local jurisdictions are encouraged to promote, through zoning, the development of employment opportunities in areas served by transit or located along regional transit trunk routes, consistent with the 2040 Recommended Alternative.

- Local jurisdictions are encouraged to support flexible work schedules at large employment centers, in central business districts and in areas experiencing traffic and circulation problems.

Tri–Met, as the regions transit agency, should continue to provide the appropriate levels of transit service, paratransit service and infrastructure to support implementation of the 2040 Recommended Alternative, the Employee Commute Options Rule, and achievement of the TPR.

Congestion Management System (CMS)

The federal ISTEA recognizes the importance of demand management by requiring states and metropolitan areas to develop a CMS as part of their transportation plans. The CMS must consider various strategies, including TDM measures, to manage congestion in the metropolitan area. The CMS must be included in the metropolitan planning process in transportation management areas (TMAs) and updated periodically as part of the planning process. Metro and ODOT are working with other transportation agencies to develop a regional CMS, which will be adopted as part of the next update to the RTP. The federal ISTEA requires that data collection begin by October 1, 1994, and that implementation of the CMS be certified by January 1, 1995. The current status of Metro's CMS is discussed in Appendix "43".

In TMAs with nonattainment status for ozone or carbon monoxide, including the Portland region, federal funds may not be programmed for any project that significantly increases single-occupant-vehicle (SOV) capacity unless the project is part of an approved CMS. Interim guidelines issued by FHWA/FTA will govern funding decisions while the CMS is being developed.

The CMS is intended to "identify areas where congestion occurs or may occur, identify the causes of the congestion, evaluate strategies for managing congestion and enhancing mobility, and develop a plan for implementation of the most effective strategies." Demand management measures, improvements to traffic operations and expansion of transit services are examples of other strategies which will likely be included in the region's CMS.

Information likely to be included in the CMS will range from the extent and capacity of the transportation system, to travel demand, time and cost. The CMS will identify performance measures associated with the transportation system's operation, as well as methods for monitoring, collecting and reporting data.

Parking Management

~~The mode of travel used to make a trip is directly influenced by the convenience and cost of parking. As parking in densely developed areas becomes less convenient and more costly, alternative modes of travel become more attractive. In addition, as alternative modes of travel are increasingly used for work trips, scarce parking spaces are released for shopping trips. Parking management is particularly important in areas that are currently developed at high densities and in areas planned for new high-density development. This is especially true for downtown Portland for, without the effective management of parking, the transit ridership levels that this Plan is predicated upon will not occur. This, in turn, would require a major reexamination of the improvements called for in the major radial corridors (Chapter 5) as well as severe impacts on air quality and mobility within the CBD.~~

The state's Transportation Planning Rule (TPR) requires that the Regional Transportation Plan (RTP) include methods to reduce parking spaces per capita by 10 percent over the next 20 years. The requirement is one aspect of the rule's overall objective to reduce single-occupant vehicle travel, promote alternative modes and encourage pedestrian friendly urban areas. However, the mode of travel used to make a trip is directly influenced by the convenience and cost of parking. As parking in densely developed areas becomes less convenient and more costly, alternative modes of travel become relative more attractive. In addition, as alternative modes of travel are increasingly used for work trips, scarce parking spaces are released for shopping and other non-work purposes. Parking management is therefore particularly important in areas that are currently developed at high densities (Central City) and in areas planned for new high-density development such as Regional Centers and Town Centers.

In addition, parking management programs should be complementary to strategies aimed at meeting DEQ's Parking Ratio Rule and to those aimed at increasing both ridesharing and transit use. The overall guidelines for implementation of parking management programs are as follows:

- Local jurisdictions are encouraged to limit the number of parking spaces in high-density areas with direct service to regional transit trunk routes. The limit should be based upon the type and density of development and can be accomplished through a parking management program covering a general area or specific parking requirements for individual developments.

- Local jurisdictions should consider maximum limits on the number of parking spaces associated with development within walking distance of transit centers.

- Local jurisdictions are encouraged to manage the price and location of parking to favor the rideshare and transit traveler and to help reduce work and non-work trips by single-occupant autos.

- Park-and-pool lots should be provided to aid in formation of carpools.

[Additional Parking Management implementation strategies will be determined at the conclusion of the Parking Study]

Rideshare Programs

An attractive way to lessen peak period vehicle travel is to increase the percentage of commuters that rideshare. This serves to increase person carrying capacity without increasing vehicle demand on the highways. Because of the relatively constant and repetitive nature of work trips, individuals can make shared ride arrangements in advance. Other trip purposes, such as shopping and recreational trips, have proven much less responsive to instituted rideshare programs and are, therefore, not specifically addressed.

Currently, approximately 23 percent of those traveling to work by auto rideshare in groups of two or more on any given day. A few large firms in the region with aggressive rideshare programs have upwards of 30 percent of their employees ridesharing. Looking at the rideshare goals of some large firms in the region and at experiences in other cities, it is reasonable to affirm that encouragement of ridesharing efforts that have proved effective is an important component of the overall demand management portion of this Plan.

Local jurisdictions are encouraged to adopt policies consistent with the overall guidelines for supporting effective ridesharing activities, such as:

- Concentrate rideshare efforts on work trips to large employers or employment centers and in congested traffic corridors.

- Encourage ridesharing through incentives (such as preferential parking locations and price and preferential traffic lanes) and through marketing programs to advertise the benefits of ridesharing and to increase the convenience of ridesharing.

Land Use

Local comprehensive plans guide new development and provide the means to ensure that future development and future transportation investments are compatible. Local plans which provide for increased suburban employment, together with the Urban Growth Boundary (UGB) adopted by Metro, ensure a greater mix of land uses, thereby minimizing trip length. Local plans specifying locations for high density developments should seek to complement planned regional transit trunk routes and transit stations.

Local jurisdictions are encouraged to initiate the following land use actions to support demand management programs:

- New development should achieve a balance of employment, shopping and housing to reduce the need for long trips and to make bicycle and pedestrian travel more attractive.

- Employment opportunities should be developed throughout the metropolitan area in both urban and suburban locations. This development should be concentrated and located to maximize the feasibility of being served by transit or located along regional transit trunk routes. Employment, commercial and residential densities should be maximized around planned transit stations and regional transit trunk route stops compatible with other local objectives. Compatible increases in density should also be considered along subregional and

~~local transit routes. Locations farther from transit trunk routes should be considered for lower density uses.~~

- ~~Adjacent to transit trunk routes, local jurisdictions should consider allowing higher densities than would otherwise be the case if the development is designed to be positively oriented toward transit and pedestrian access.~~

- ~~Pedestrian movements should be encouraged within major activity centers by clustering hotel, entertainment, residential, retail and office services to utilize common parking areas.~~

- ~~Land development patterns, site standards and densities which make transit, bicycle and pedestrian travel more attractive should be promoted.~~

- ~~Local jurisdictions should seek to improve the streetside environment affecting the transit user, bicyclist and pedestrian.~~

~~*Flextime/Staggered Work Hours/Four Day Work Week*~~

~~Flexible work schedules imply individual choice as to when an employee begins and ends his work day. This is an important travel demand measure, as several studies have found that existing transportation systems would function more effectively if workers were given more latitude in the design of their commute trip. Flextime programs would also help Tri-Met, because spreading peak transit ridership over a longer time period would result in a need for fewer buses and drivers, while providing more seats for riders during the peak period. Flexible work schedules and the associated reduction in peak hour travel lessen the need for both transit and highway capacity. Guidelines for implementation of flexible work schedules which local jurisdictions are encouraged to support are as follows:~~

- ~~Flexible work schedules are encouraged at all places of employment where such programs would not interfere with the productivity or effectiveness of the employee.~~

- ~~Flexible work schedules are particularly encouraged at large employment centers, in central business districts and in areas experiencing traffic and circulation problems.~~

METRO

ISTEA Public Involvement Provisions

excerpted from the Metropolitan Area Planning regulations

SECTION 450.316 (b):

In addition, the metropolitan transportation planning process shall:

(1) Include a proactive involvement process that provides complete information, timely public notice, full public access to key decisions, and supports early and continuing involvement of the public in developing plans and TIPs and meets the requirements and criteria specified as follows:

(i) Require a minimum public comment period of 45 days before the public involvement process is initially adopted or revised;

(ii) Provide timely information about transportation issues and processes to citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation, other interested parties and segments of the community affected by transportation plans and projects (including, but not limited to, central city and other local jurisdiction concerns);

(iii) Provide reasonable public access to technical and policy information used in the development of plans and TIPs and open public meetings where matters related to the Federal-Aid highway and transit programs are being considered;

(iv) Require adequate public notice of public involvement activities and time for public review and comment at key decision points, including, but not limited to, approval of plans and TIPs (in nonattainment areas, classified as serious and above, the comment period shall be at least 30 days for the plan, TIP and major amendment(s));

(v) Demonstrate explicit consideration and response to public input received during the planning and program development processes;

(vi) Seek out and consider the needs of those traditionally underserved by existing transportation systems, including, but not limited to, low-income and minority households;

(vii) When significant written and oral comments are received on the draft transportation plan or TIP (including the financial plan) as a result of the public involvement process or the interagency consultation process under the U.S. EPA's conformity regulations, a summary, analysis, and report on the disposition of comments shall be made part of the final plan and TIP;

(viii) If the final transportation plan or TIP differs significantly from the one which was made available for public comment by the MPO and raises new material issues which interested parties could not reasonably have foreseen from the public involvement efforts, an additional opportunity for public comment on the revised plan or TIP shall be made available;

(ix) Public involvement processes shall be periodically reviewed by the MPO in terms of their effectiveness in assuring that the process provides full and open access to all;

(x) These procedures will be reviewed by FHWA and FTA during certification reviews for TMAs, and as otherwise necessary for all MPOs, to assure that full and open access is provided to MPO decision-making processes; and

(xi) Metropolitan public involvement processes shall be coordinated with statewide public involvement processes wherever possible to enhance public consideration of the issues, plans, and programs and reduce redundancies and costs.

(2) Be consistent with Title VI of the Civil Rights Act of 1964 and the Title VI assurance executed by each state under 23 U.S.C. 324 and 29 U.S.C. 794, which ensure that no person shall, on the grounds of race, color, sex, national origin, or physical handicap, be excluded from participation in, be denied benefits of, or be otherwise subjected to discrimination under any program receiving federal assistance from the United States Department of Transportation;

(3) Identify actions necessary to comply with the Americans With Disabilities Act of 1990 (Pub. L 101-336, 104 Stat. 327, as amended) and U.S. DOT regulations "Transportation for Individuals With Disabilities" (49 CFR parts 27, 37, and 38);

(4) Provide for the involvement of traffic, ridesharing, transportation safety and enforcement agencies; commuter rail operators; airport and port authorities; toll authorities; appropriate private transportation providers and, where appropriate, city officials; and

(5) Provide for the involvement of local, state, and federal environmental, resource and permit agencies as appropriate.

MH - copies for TPAC Andy

Oregon

TRAN Handout

March 29, 1995

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The federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) requires metropolitan planning organizations (MPOs) to develop financially constrained metropolitan transportation plans.

One component MPOs will need for this effort is an estimate of funding levels that can reasonably be expected from state and federal sources. ODOT, in consultation with your staff, the Department of Environmental Quality (DEQ) and Federal Highway Administration (FHWA), developed methodologies which provide planning estimates of annual revenue available from these sources.

The enclosed document describes the methodologies ODOT adopted for meeting the ISTEA requirement as it concerns state and federal funding sources and the expected use and distribution of these resources. Estimates concerning locally-generated revenue are not developed in this document and must be developed by the individual MPOs.

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You may find the results of this effort to be overly restrictive. This stems from the restrictive nature of federal regulation that, in practice, does not permit assumption of new revenue sources in out-years, even when predicted economic conditions suggest they will be warranted.

If you have questions about this process, please contact Dave Williams (503) 731-8231 or Jack Svadlenak (503) 986-3467.

Donald E. Forbes, PE
Director

Enclosure

FINANCIAL ASSUMPTIONS FOR THE DEVELOPMENT OF METROPOLITAN TRANSPORTATION PLANS

Oregon Department of Transportation
Transportation Development Branch
Policy Section

March 1995

INTRODUCTION

The federal Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 requires metropolitan planning organizations (MPOs) to develop financially constrained metropolitan transportation plans (MTPs).[1] This requirement is one part of a new federal effort to encourage more effective planning and decisionmaking. Financially constrained MTPs force early choices to be made about projects affecting land use, mobility, and air quality.

It is quite difficult to forecast transportation revenues over a long period of time. Fortunately, MTPs are revised and updated on a frequent basis. Revenue assumptions will be reconsidered as part of this process.

It is reasonable to assume increased revenues based on current conditions and historical trends. During the spring of 1994, the Oregon Department of Transportation (ODOT) initiated a process to establish basic assumptions about funding levels and to ensure uniformity of funding assumptions among the various MPOs as they develop financially constrained MTPs.

This document describes the methodology ODOT adopted to meet the ISTEA requirement as it concerns state and federal funding sources and the distribution and use of revenue expected from these sources.

The methodology was developed by an ad hoc committee. The committee consisted of ODOT staff, staff of each of Oregon's four MPOs (which also represented major transit providers), and the Oregon Department of Environmental Quality (DEQ). These entities plus FHWA were consulted on the methodology prior to adoption by ODOT.

The process of developing this methodology requires (1) projections of state and federal revenue, (2) consideration of other factors affecting revenue availability (e.g., inflation, sharing with local governments), (3) an estimate of how much of this revenue will be required for highway maintenance, preservation, and other uses (e.g., debt service), and (4) the geographic distribution of remaining funds for highway modernization or other uses.

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[1] A MTP is a long-range (20+ year) transportation plan that considers all modes and describes projects expected to be constructed in that time period.

Projections of revenue from highway user fees depend not only upon political climate, but also economic structure and conditions, population and demographics, and patterns of land use. The latter is particularly important for state-imposed fees because of the goals in place under Oregon's Transportation Planning Rule (TPR) requiring a 10 percent reduction in per capita vehicle miles of travel (VMT) in MPO planning areas by 2015, and a 20 percent reduction by 2025. This significantly affects 20 year revenue forecasts from this source.

Once revenue projections are developed, the effects of inflation must be considered and amounts needed to maintain present infrastructure should be subtracted from the total to determine amounts that can be expended on highway or transit capacity improvements. This amount can then be distributed among regions.

This paper is organized in three sections. The first examines individual revenue sources, the second considers remaining factors, and the third presents findings and implications of the results.

REVENUE SOURCES

Revenue sources pertinent to this exercise are those received from the federal government and those generated by the State of Oregon. Assumptions and the process of developing assumptions about these sources of funding are discussed below.

Assumptions concerning locally-generated revenue will be developed by individual MPOs.

State Highway Fund Revenue

The committee considered 13 scenarios concerning the growth of Highway Fund revenue. Scenarios ranged from no significant growth to an annual increase of 6.94 percent which represents the annual average rate of growth (AARG) during the last 20 years.

1. Current law
2. Current law while meeting the TPR
3. Increase with inflation (3.7 percent AARG)
4. 1¢ per year fuel tax increase
5. 1¢ per year fuel tax increase while meeting the TPR
6. 1¢ per year fuel tax increase, with another 1¢ every fourth year
7. 1¢ per year fuel tax increase, with another 1¢ every fourth year while meeting the TPR
8. 2¢ per year fuel tax increase
9. 2¢ per year fuel tax increase while meeting the TPR

10. DRI growth
11. DRI growth while meeting the TPR
12. Personal income growth
13. 20 year historical growth rate (6.94 percent AARG)

Revenue projections under these scenarios are based upon a set of econometric equations that include factors such as fuel price, fuel efficiency, population, per capita personal income, trade sector employment, new vehicle titles and historical data.

The scenarios are discussed below. The discussion illustrates the process the committee followed to narrow the possible range of conclusions. This discussion is followed by committee reasoning and conclusions.

An assumption of no change in highway tax rates would result in only modest revenue increases over the course of the next 20 years. Such increases would not come anywhere near the level needed to maintain the purchasing power of the State Highway Fund. This is the case for both the "current law" and the "current law while meeting the TPR" scenarios. This situation would result in no modernization of the state's highway system beginning around 2000, and failure of the state to attain its 90 percent "fair-or-better" (FOB) pavement condition goal. The legislative record indicates rejection of this scenario is warranted.

An assumption that State Highway Fund revenue will increase to maintain purchasing power (i.e., 3.7 percent AARG) would result in state highway system modernization levels of one-quarter to one-half current levels.[2] This decline in modernization effort occurs because other revenue sources (see below) are not expected to maintain purchasing power, and preservation needs are expected to increase.

If fuel taxes (and corresponding weight-mile fees) increase at a rate of 1¢ per gallon per year, then revenue growth would slightly exceed the expected inflation rate in the early years, and grow at a rate slightly below the inflation rate in later years. The early year impact would produce an only slightly higher spending level on modernization than the "increase with inflation" case. If the TPR goals are assumed to be met, spending on modernization would be significantly lower in later years than the "increase with inflation" case.

With two exceptions, the other scenarios produce significantly higher revenue to the State Highway Fund. The lowest of these is the "2¢ per year fuel tax increase while meeting the TPR" scenario. This scenario would **increase** the state highway system modernization effort by 0-95 percent over current levels (depending upon year).

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[2]1995-98 STIP modernization commitments average $113 million/year.

Committee consensus indicated that while it is reasonable to assume some revenue increases beyond those needed to maintain purchasing power of the highway fund (based on the legislative record), an assumption of a 2¢ per gallon per year fuel tax increase does not appear to be politically realistic.

Therefore, the committee proposes to assume fuel tax (and corresponding weight-mile fee) increases of about 1¢ per gallon per year, with an additional 1¢ per gallon added every fourth year. Increases in vehicle registration fees or other highway fund revenue sources could substitute for fuel tax increases. The committee also proposes to assume the TPR goals are met. Under this scenario (scenario #7), inflation adjusted modernization effort would range between 50 and 130 percent of current effort during the 1999-2015 period.[3] The percentage is not stable because of variation in TPR implementation, assumed variation in preservation expenditures, inflation, and the irregularity of fuel tax increases.

Finally, Highway Fund revenue distribution is legislatively established. Currently, 60.05 percent of this revenue is dedicated to state highway programs, 24.38 percent is dedicated to county road programs, and 15.57 percent is dedicated to city road programs. The county share is proportionately distributed according to vehicle registrations, except that $500,000 per year is reserved to improve county equity. The city share is proportionately distributed according to population. However, $500,000 per year is reserved from this share to fund the Special City Allotment (SCA) program. The state contributes another $500,000 per year to the SCA program.

Federal-Aid Highway Revenue

The next largest transportation funding source is revenue from the Highway Account of the federal Highway Trust Fund. The committee considered four scenarios concerning the growth of federal-aid highway revenue. Scenarios ranged from no growth to an annual increase of 2.85 percent:

1. No-growth
2. 20 year trend & ISTEA
3. 10 year trend & ISTEA
4. Recent inflation (2.85% AARG)

An assumption of no growth in federal-aid highway revenue does not seem appropriate. There is recognition at all levels of society and the federal government of the need to repair and improve the nation's surface transportation infrastructure. Also, there is the need to maintain Interstate System performance, which is a responsibility that has been accepted by the

[3]Under this scenario, modernization effort tends to be higher near the beginning of the period, and lower towards the end of the period. Modernization effort rapidly declines after 2015.

federal government. Unfortunately, federal infrastructure spending programs are directly affected by efforts to reduce the budget deficit. As a result, it does not seem reasonable to assume federal-aid highway funding will increase much above historical trends. These trends are significantly lower than historical rates of inflation. However, these trends do indicate some growth in federal funding will occur.

The federal-aid highway funding trend line based on 20 years of history (1974-1993) and a projection through the expiration of the current authorizing act seem quite low given growing awareness of a national infrastructure problem. On the other hand, during the same period, federal-aid highway expenditures did not keep pace with increases in the general price level. Therefore, neither the 20 year trend line alternative, nor the inflation rate-based alternative seem appropriate. An alternative based on a 10 year trend (1984-1993) and a projection through the expiration of the current authorizing act falls in between these two outer bounds. This alternative appears reasonable as the nation continues its shift from building a modern highway system to maintaining a mature highway system.

Therefore, the committee proposes to assume federal-aid highway revenue will increase based on a 10 year trend (1984-1993) and a projection through the expiration of the current authorizing act (scenario #3). This results in an average annual increase of about $4 million per year beginning in FFY 1998.

FTA Section 9

The committee considered three scenarios concerning the growth of federal-aid transit revenue. Scenarios included:

1. No growth
2. Assumption based on federal-aid highway assumption
3. Tri-Met's forecast (constant 1994-1999, increasing 3.5 percent per year 2000-2015)

As with federal-aid highway revenue, an assumption of no growth in federal-aid transit revenue does not seem appropriate. The recognition of the need to repair and improve the nation's surface transportation infrastructure includes the need to improve the nation's transit systems. However, federal-aid transit expenditures remain subject to efforts to reduce the budget deficit.

Federal-aid highway revenue and FTA Section 9 revenue are largely derived from the same revenue source. As federal fuel tax rates have increased, the increased revenue has supported both highway and transit programs in a roughly fixed proportion. Therefore, these sources of financial support for transportation programs are likely to increase in a parallel manner.

Tri-Met is Oregon's primary recipient of FTA Section 9 funds. While Tri-Met has used a different forecast methodology, long-run revenue forecasts do not significantly differ. The committee preferred a methodology linking Section 9 revenue to that expected from federal highway programs, as they are largely derived from the same revenue source.

Most FTA Section 9 funds are used to finance capital equipment purchases. However, some of these funds are used to finance transit operations. Persistent sentiment in the federal government is not to increase, and perhaps to decrease, the amount of FTA Section 9 funds that can be used to support transit operations. Therefore, the committee proposes to assume no increase in the amount of Section 9 funds that can be used for operations. This assumption does not affect the total amount of Section 9 funds expected to be available.

In conclusion, the committee proposes to assume the total FTA Section 9 revenue projection should parallel the total federal-aid highway revenue projection. The amount of Section 9 revenue available for operating expenditures is not expected to increase. This results in an average annual increase of about $406,000 beginning in FFY 1998.

FTA Section 3

Most FTA Section 3 funding is provided on a discretionary basis, and is only provided after application by an eligible transit provider.

The committee only considered one FTA Section 3 scenario. Section 3 requests for non-LRT items (primarily bus replacement) have a proven success record; in part because FTA considers regional distribution of these funds. Future non-LRT Section 3 requests are expected to be quite modest. Therefore, past performance indicates it is reasonable to assume these requests will be met.

The Portland area has had remarkable success in obtaining Section 3 funding to finance LRT construction. This region is in the process of planning for a South/North LRT line from Clackamas County, Oregon into Clark County, Washington. Given the region's desire for the project (as evident in the 1994 bond measure vote tally), the region's historical success, and the positioning and commitment of the Oregon and Washington congressional delegations, the committee proposes to assume that one-half of the South/North LRT line will be financed by Section 3 discretionary "new start" funds.

Lastly, a limited amount of LRT rehabilitation funding (i.e., Section 3 formula "rail modernization" funds) is expected to be available in the Portland area as LRT facilities age.

In summary, the committee proposes to assume (1) modest capital assistance requests from MPOs are expected to be 80 percent funded by FTA Section 3

allocations, and will average $7.5 million per year, including upward adjustments to reflect expected inflation; (2) the South/North LRT line is expected to be 50 percent funded by FTA Section 3 allocations, providing an average of $95 million per year for 15 years, and; (3) a limited amount of LRT rehabilitation funding is expected to be available in the Portland area, averaging $2.3 million per year.

Lottery Revenue for LRT

State of Oregon participation in the South/North LRT project is assumed to total $475 million, provided at the "front-end" of the project. Two revenue sources have been identified as having the potential for supplying this amount. One is lottery funds, the other is federal STP funds, or other revenue sources yet to be determined.

The decision of how much lottery support will be sought for the South/North LRT project is up to the Oregon Transportation Commission (OTC) and policy decisionmakers involved in the Portland area. The committee proposes to assume the lottery revenue sought will be appropriated. Ample precedent exists in the lottery support provided the Westside LRT project.

Two options are under consideration by policy makers for providing $475 million for this project from sources under state control. The first option is to provide the entire amount by lottery funds and a bond issue backed by lottery funds.

The second option is to assume $355 million in lottery funds or bond sale revenues backed by lottery funds (provided in FYs 1999 and 2000), and $120 million or more in STP funds (provided in FYs 2000-2007). The STP funds would be provided by the State of Oregon, all derived from Portland area allocations. Hence, ODOT only guarantees availability of sufficient transit-flexible STP funds. The expenditure of these funds will have to be assumed in Metro's MTP.

The committee is willing to assume either of these options is chosen. A determination of which option to assume does not need to be made until the completion of Metro's next MTP.

State Match of FTA Capital Funds

The committee considered two scenarios concerning state support of transit capital programs:

1. Cessation of current efforts
2. Continued efforts to provide one-half the local match for non-LRT capital expenditures financed by federal-aid

The state has tried to provide one-half the local match for non-LRT capital expenditures financed by federal-aid during the last two decades. This level of support has usually, but not always, been achieved. Accordingly, it seems reasonable to assume that the state will continue such support.

The source of state support has varied. General Fund revenue, stripper well oil overcharge revenue, and lottery funds have been used at various times in the past to provide this support. Due to the passage of the 1990 Ballot Measure 5, the competition for General Fund support is fierce. Stripper well funds are not expected to be available in the future. However, lottery proceeds continue to increase. Therefore, the most likely source of future state support of non-LRT transit capital expenditures financed by federal-aid appears to be proceeds from the state lottery.

Based on Oregon's track record and the effect this activity has on expenditures in Oregon, state support that leverages federal-aid is likely to continue. Therefore, the committee proposes to assume the state will provide one-half the local match for non-LRT capital expenditures financed by federal-aid. Amounts expected for this purpose will average $3.1 million per year, including upward adjustments to reflect some increase in federal revenue.

FTA Sections 16 & 18

FTA Sections 16 and 18 are not usually considered as funding sources for development of MTPs. Section 16 revenue finances specialized equipment purchases by non-profit organizations that provide transportation service to the elderly and disabled. Section 18 revenue finances public transportation projects outside urbanized areas and/or beyond MPO jurisdiction. Neither program has a significant impact on air quality in areas under MPO jurisdiction. If programs supported by these revenue sources are incorporated into MTPs, their rate of growth should parallel that of Section 9 growth. Also, the state match assumption would apply.

Special Transportation Fund

For 1995 MTP updates, the committee suggests that Oregon's Special Transportation Fund (STF) not be considered a funding source for development of MTPs. STF revenue (derived from a 2¢ per pack cigarette tax) provides financial support for operations, as well as funding for specialized equipment purchases, by non-profit organizations that provide transportation service to the elderly and disabled. Since this program may be incorporated into future MTP updates, a STF revenue forecast is provided in the Appendix.

Additional State Support for Transit

Many discussions have taken place concerning the need for state financial support of transit service. Many proposals have been presented to both the

voters and the Legislature that would provide such support. As a result of these activities, the committee considered two scenarios concerning additional state support for transit programs:

1. No additional support
2. $20/year vehicle registration fee increase

Oregon's transportation system must be able to handle one million additional residents during the next 20 years. Conventional wisdom concludes that transit systems must provide a large portion of the resulting increase in demand for transportation services. Unfortunately, farebox revenue will not be sufficient to pay for the operation of substantially increased transit services. Therefore, some form of transit service subsidy is necessary to ensure that additional transit service is provided.

The only such proposal having significant political backing proposes to finance additional transit service with a $20 per year (collected biennially) vehicle registration fee. This requires a change in Oregon's Constitution. Similar efforts to change Oregon's Constitution have never been successful (although a few elections were close).

The combination of a widely perceived need and a high level of political backing for this measure provide a strong argument for assuming this proposal will be adopted. However, the committee could not fully accept this line of reasoning. A Constitutional change is a significant policy change that is not necessarily popular with the state's voters. Such a change cannot just be assumed to occur. The historical record on related measures indicates pessimism is warranted. Organized groups can be expected to oppose the measure, should it be approved by the Legislature.

All of this led the committee to propose to assume in the next MTP updates that no additional state support will be supplied to transit providers beyond the federal-aid capital match discussed above. However, in light of Oregon's expected growth, it is reasonable to expect this issue to be re-examined in the course of developing future MTPs.

Private Participation

The committee discussed private sector participation in regional transportation projects. The discussion touched on three options:

1. Develop statewide assumptions about private sector participation
2. Develop assumptions at the MPO level
3. Ignore private-sector contributions as a revenue source

No major private sector highway or transit facilities are currently planned or anticipated in Oregon. Other types of private-sector participation in Oregon

highway or transit projects are on a very small scale and are not predictable. Possible funding from such sources is more easily dealt with on a local level rather than in this forum. Therefore, the committee believes estimates of private sector participation should be left with the individual MPOs.

OTHER ASSUMPTIONS

Additional factors, beyond direct funding amounts, affect the availability of resources for highway and transit system improvements. Such factors include the expected rate of inflation, the need to maintain and preserve the existing transportation system, and factors affecting geographic distribution of funds. These are discussed below.

Inflation

The rate of inflation has a direct impact on the purchasing power of transportation funds. It is the purchasing power of available funds that will ultimately determine the expansiveness of MTPs.

The committee considered five scenarios of general price level trends. Scenarios were based on previously published reports or documents:

1. DRI "Trend" forecast, 1994-2018: 3.7 percent
2. Oregon Department of Administrative Services forecast, 1994-2000: 2.7 percent - 4.2 percent (varies by year and geography)
3. Oregon Highway Plan, 1991-2010: 5 percent
4. 1995-98 STIP: 3.75 percent (implicit; varies by type of expenditure)
5. 1993 Roads Finance Study, 1991-2012: 2.8 percent - 5.6 percent (varies by year and type of expenditure)

The DRI (3.7 percent) figure reflects expert opinion in this field. It is in the middle of the range of figures that have been used in recent studies or planning documents. The committee wished to avoid the complexity of developing a cyclical forecast that varied by year. Such information would add nothing to the usefulness of the data generated. For these reasons, the committee proposes to assume inflation averages 3.7 percent per year through 2020.

State System Maintenance and Preservation

A high priority of the Oregon Transportation Commission (OTC) has been to maintain and preserve the existing transportation system. Expenditures on maintenance, preservation and miscellaneous activities preclude expenditures on system expansion (i.e., modernization). In order to estimate resources available for modernization activities in MTPs, transportation providers must know the amount of available resources that will be expended on all other activities. One of the largest and potentially most controversial of

these is the preservation program. Proposals concerning ODOT's maintenance and preservation expenditures are discussed below.

The committee considered two scenarios of state highway system maintenance, preservation and miscellaneous need:

1. 1991 Highway Plan basis
2. 1991 Highway Plan modified

The most recent comprehensive attempt to estimate ODOT's highway maintenance, preservation and miscellaneous needs occurred as part of the effort to develop the 1991 Highway Plan.[4] These figures were generated by the Highway Performance Monitoring System (a 1997-2000 jump in the preservation needs estimate appears to reflect the end of the useful life of a major interstate highway preservation effort of the late 1970s). Since 1991, several new preservation needs have been identified. These include seismic retrofit improvements on bridges, and Portland area freeway rehabilitation.

The committee identified the relevant issues as (1) whether these estimates were reasonable, and (2) whether they would be funded. Since the transportation environment is constantly changing, the age of the 1991 data was a cause for some concern. However, the committee conditionally accepted these figures as reasonable. The required conditions included a lower inflation rate than originally forecast (see above), some adjustment for seismic retrofit of bridges, and an adjustment to reflect an unexpected freeway preservation need in the Portland area.

The issue of whether funding will be provided to meet these maintenance and preservation needs is much more complex. These needs reflect ODOT's commitment to raise pavement condition ratings to 90 percent fair-or-better (FOB) by 2010.[5] An assumption not to fully fund these programs would question the commitment of the OTC to meet this goal.

The OTC is unlikely to change its maintenance and preservation goals because (A) it is most cost-effective to meet reasonable preservation needs as they arise, rather than waiting until they become more serious at a later date, (B) the committee accepts these needs as reasonable, and (C) pressure to divert resources from preservation to modernization will continue to be manageable.

The primary reason the OTC would postpone or abandon its 90 percent FOB goal is a lack of available resources for modernization efforts. Since this

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[4]The ISTEA required Pavement Management System will enable similar analyses to be quickly performed, but will not be available until the end of 1995.

[5]Current (1994) condition rating is 80 percent FOB.

committee has assumed revenue increases which appear capable of funding a moderate modernization program, the modernization program will not divert resources from maintenance and preservation programs. Therefore, the OTC preservation goals are assumed to be maintained.

In conclusion, the committee proposes to assume a maintenance, preservation and miscellaneous expenditure level based on modified findings of the 1991 Highway Plan. The modifications reflect a lower inflation rate, increased Portland freeway rehabilitation needs, and a modest seismic-retrofit bridge program. This program level averages $681 million per year, including upward adjustments to reflect expected inflation.

TMA Designations

When metropolitan areas exceed 200,000 in population, they become eligible to be designated as transportation management areas (TMAs). Among other things, TMA status reallocates federal apportionments within a state. TMAs receive a direct apportionment of federal funds, while a state's apportionment is reduced by the amount received by TMAs within the state. For this reason, it is important to consider the impacts of these changes when estimating amounts of federal funds expected to be received in coming decades.

The committee considered four scenarios concerning population forecasts and transportation management area (TMA) status of the Eugene and Salem metropolitan areas.[6] These included:

1. No new TMAs
2. A new TMA in Eugene in 2000
3. New TMAs in Eugene and Salem in 2000.
4. A new TMA in Eugene in 2000, and a new TMA in Salem in 2010.

Available data indicate a high probability that Eugene will become a TMA by 2000. Therefore, this is assumed to be the case. However, the situation in Salem is less clear. Reasonable population forecasts differ on whether Salem will reach TMA status by 2000. Current state budget problems could restrain Salem's growth. The committee proposes to assume the Eugene area attains TMA status by 2000 (effective 2002), and the Salem area attains TMA status by 2010 (effective 2012).

The next MTP update will have more reliable forecasts available. Salem's expected TMA status can be reviewed at that time.

[6]The Medford area is not expected to reach TMA status in the foreseeable future.

Federal-Aid Highway Distribution by Location

Most federal-aid highway funds are apportioned or allocated to the state. However, some funds are allocated directly to local governments (i.e., the TMA case). Other funds are apportioned to the state for expenditure in local areas defined by formula (e.g., CMAQ funds, STP funds, Bridge funds). Still others are distributed to local jurisdictions by the state through intergovernmental agreement. Completion of this project requires an assumption to be made concerning how federal-aid highway funds are distributed.

To meet this requirement, the committee proposes to assume most existing agreements and distribution methods remain unchanged. However, beginning in FFY 1998, amounts received by Oregon for the CMAQ program are expected to become STP funds, resulting in a slight shift in the pattern of revenue distribution. This occurs as a result of Oregon's MPOs achieving air quality goals and adopting air quality maintenance plans by 1997. This modification is incorporated in the committee's proposal.

Regional Distribution of State-controlled Money available for modernization

MTP development requires an assumption indicating how and where funds under OTC control and available for modernization will be distributed. The assumption applies only to funds remaining after maintenance, preservation and other priority needs (e.g., debt service) are met. The OTC determines allocation of these resources. The committee recognizes that OTC decisionmaking depends on many elements and in the long-run cannot be precisely predicted. However, since this is a necessary component to MTP development, the committee developed a formula using factors that seem to simulate the OTC allocation process, including many of the elements the OTC considers.

The committee considered several factors and factor combinations:

1. Historical expenditures by region
2. A combination of population and state system lane-miles
3. A combination of population, state system lane-miles and estimated revenues paid into the Highway Fund

Historical expenditures are not necessarily related to existing needs and future development patterns. Therefore, this factor was eliminated from consideration.

The factors of population and state system lane-miles both reflect system extensiveness and system usage, but to differing degrees. The committee believed these were reasonable factors. In order to address regional equity concerns, the committee added a factor that would allocate funds for projects based upon payments into the Highway Fund (scenario #3). These three

factors are equally weighted to produce the committee's method for estimating how and where the OTC will allocate funds available for modernization.

This formula applies only to funds remaining after maintenance, preservation and other priority needs (e.g., debt service) are met. The committee assumes that such needs will be funded as they arise, where they arise. Over the relatively long-term planning horizon of MTPs, these needs are not expected to be disproportionately distributed.

The distribution of modernization funds according to the above formula is assumed to be by ODOT Region. The use of these funds within MPO areas will be determined by deliberation among the MPOs, other affected local governments, ODOT Region Managers, and the OTC.

In summary, the OTC considers many elements when allocating resources. The allocation formula assumed by the committee as estimating factors (population, state system lane-miles and estimated revenues paid into the Highway Fund) is only a surrogate for this exercise, and in no way should be seen to constrain future OTC actions.

FINDINGS

The methodological restriction included in federal regulation against the assumption of new revenue sources in this financial constraint analysis introduced an unintended but significant flaw which renders the findings problematic.

The problem lies in the 20 year length of the revenue projections that correspond with a time period (1999-2020) in which changes, albeit unforeseen, in revenue sources for both highways and public transit appear inevitable. For example, substantially increased automobile fuel efficiency coupled with the introduction of large numbers of alternative-fueled vehicles would significantly reduce the revenue raising efficiency of the gasoline tax. In this case, some supplemental source of replacement revenue (e.g., tolling, mileage based fees) would be necessary if the road system is to keep pace with the economic demands placed upon it.

Unfortunately, these replacement sources are not adequately defined today such that they "can reasonably be expected." To keep pace with system needs, fuel and weight-mile tax rate increases would have to be projected far in excess of historical trends, which in terms of the regulatory guidance also is unreasonable.

Similarly, the result of this exercise shows state highway modernization funding in later years to be at historically low levels as inflation and other factors (e.g., fuel efficiency) overcome "reasonable" fuel and weight-mile tax rate increases.

A comparable result also occurs with funding for public transit operations. Again, because we would have to assume some new revenue source which is not "reasonable" under the regulations, public transit systems are shown to be unable to keep pace with population growth, a strange anomaly given Oregon's Transportation Planning Rule which mandates significant reductions in vehicle miles traveled by automobile over the same period.

APPENDIX

STATE HIGHWAY FUND REVENUE SCENARIOS

($ Million)

Year	Revenue
1971	112.3
1972	120.8
1973	132.5
1974	138.0
1975	137.6
1976	136.2
1977	152.5
1978	155.5
1979	174.7
1980	170.8
1981	170.3
1982	166.7
1983	184.0
1984	196.6
1985	221.9
1986	243.8
1987	277.4
1988	305.6
1989	356.6
1990	399.1
1991	442.9
1992	468.8
1993	510.2
1994	546.9
1995	563.8

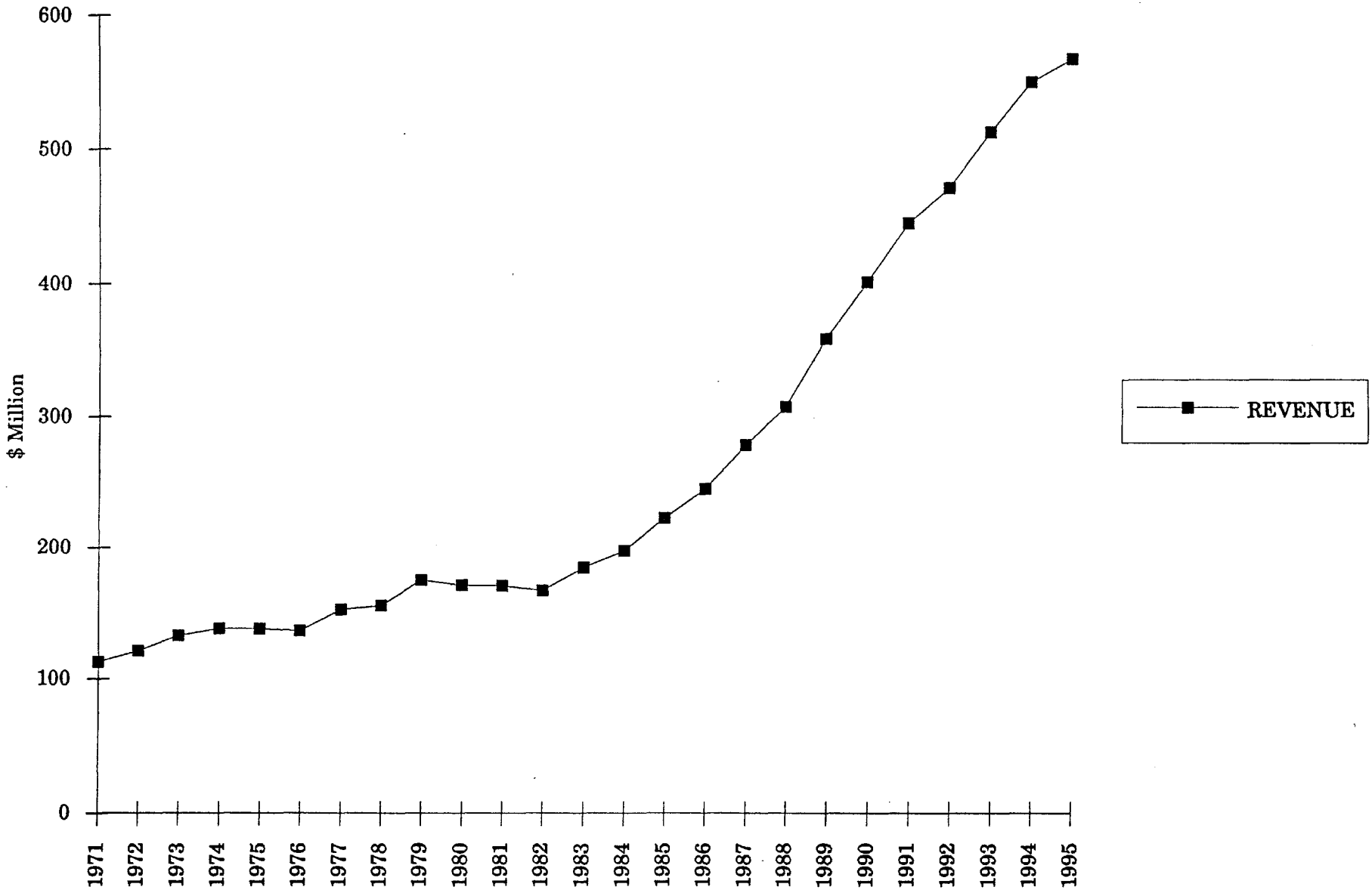
STATE HIGHWAY FUND REVENUE SCENARIOS

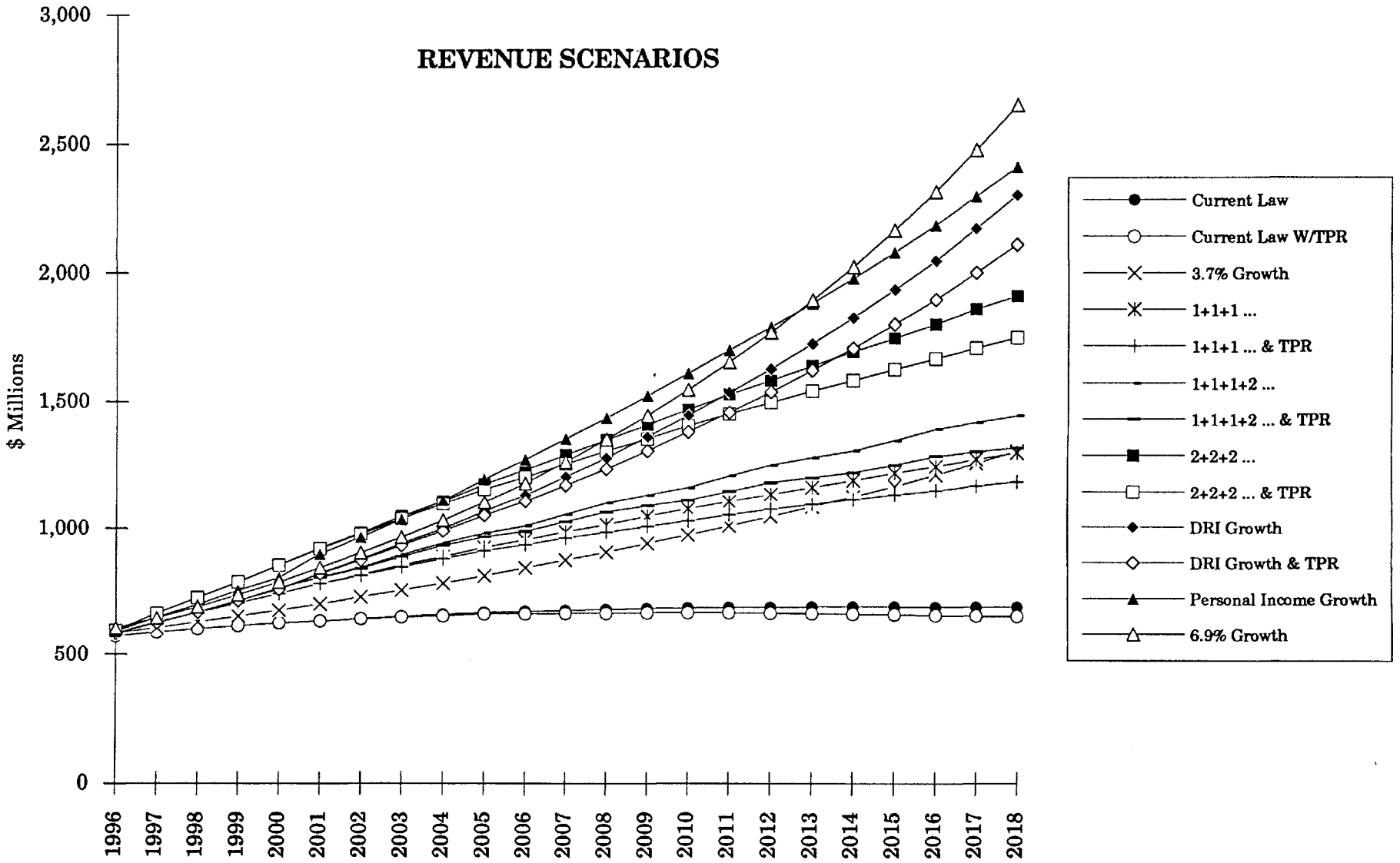
($ Million)

State Fiscal Year	Current Law	Current Law W/TPR	3.7% Growth	1+1+1 ...	1+1+1 ... & TPR	1+1+1+2 ...	1+1+1+2 ... & TPR	2+2+2 ...	2+2+2 ... & TPR	DRI Growth	DRI Growth & TPR	Personal Income Growth	6.9% Growth
1996	572.5	572.5	584.7	584.3	584.3	584.3	584.3	594.3	594.3	583.1	583.1	590.5	602.9
1997	588.8	588.8	606.3	628.3	628.3	628.3	628.3	663.2	663.2	625.8	625.8	648.7	644.8
1998	601.4	601.4	628.7	665.0	665.0	665.0	665.0	724.6	724.6	667.2	667.2	699.3	689.5
1999	614.4	614.4	652.0	703.4	703.4	712.2	712.2	788.3	788.3	714.0	714.0	755.0	737.4
2000	624.7	624.7	676.1	741.6	741.6	764.7	764.7	854.2	854.2	758.8	758.8	804.9	788.5
2001	633.1	632.4	701.1	781.5	780.7	808.1	805.6	921.1	918.4	821.7	819.9	898.0	843.3
2002	641.1	639.5	727.1	815.6	813.6	842.9	839.1	982.1	977.9	876.3	872.4	963.5	901.8
2003	650.4	647.4	754.0	852.7	846.6	894.2	886.4	1,046.5	1,037.9	937.8	931.7	1,036.1	964.4
2004	657.4	652.9	781.9	886.6	877.9	941.1	930.9	1,108.0	1,096.5	997.8	988.3	1,111.3	1,031.3
2005	666.0	659.4	810.8	923.9	909.5	979.2	963.6	1,173.8	1,155.8	1,067.1	1,050.4	1,194.1	1,102.9
2006	668.8	659.7	840.8	952.7	933.2	1,008.6	986.7	1,230.1	1,202.2	1,131.5	1,106.4	1,271.0	1,179.4
2007	673.5	661.9	871.9	985.0	959.6	1,054.2	1,025.5	1,288.0	1,254.1	1,203.9	1,170.0	1,351.2	1,261.3
2008	676.4	662.4	904.2	1,014.8	982.3	1,099.3	1,063.3	1,346.0	1,303.4	1,278.1	1,234.7	1,432.0	1,348.8
2009	680.5	664.0	937.6	1,046.5	1,006.5	1,131.8	1,087.1	1,406.0	1,351.5	1,358.9	1,305.0	1,518.5	1,442.4
2010	683.2	664.2	972.3	1,075.9	1,028.6	1,162.0	1,110.0	1,464.8	1,400.2	1,442.5	1,377.2	1,606.9	1,542.5
2011	685.0	663.9	1,008.3	1,105.7	1,053.1	1,205.1	1,146.1	1,522.8	1,448.3	1,530.2	1,453.5	1,696.0	1,649.6
2012	685.6	662.1	1,045.6	1,134.5	1,073.1	1,248.1	1,180.4	1,577.0	1,491.4	1,622.0	1,532.3	1,784.8	1,764.0
2013	686.5	660.7	1,084.3	1,162.0	1,092.7	1,276.8	1,200.8	1,632.9	1,536.2	1,718.4	1,615.1	1,875.8	1,886.5
2014	686.0	658.0	1,124.4	1,187.8	1,112.3	1,302.8	1,219.1	1,687.6	1,577.3	1,819.6	1,701.6	1,971.5	2,017.4
2015	686.4	656.1	1,166.0	1,216.7	1,131.1	1,343.3	1,248.9	1,740.0	1,619.1	1,927.3	1,793.5	2,072.7	2,157.4
2016	685.6	653.0	1,209.1	1,242.3	1,147.9	1,384.7	1,280.3	1,794.8	1,661.0	2,040.6	1,889.4	2,177.5	2,307.1
2017	685.9	651.0	1,253.9	1,269.7	1,166.1	1,413.5	1,299.4	1,851.4	1,701.0	2,164.4	1,993.7	2,288.8	2,467.2
2018	684.7	647.6	1,300.3	1,295.0	1,181.9	1,438.4	1,313.2	1,902.9	1,741.8	2,293.4	2,101.7	2,402.2	2,638.5

Source: ODOT Policy Section.

REVENUE HISTORY




REVENUE SCENARIOS
$ Millions
3,000
2,500
2,000
1,500
1,000
500
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1996
1997
1998
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2001
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2004
2005
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2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
Current Law
Current Law W/TPR
3.7% Growth
1+1+1 ...
1+1+1 ... & TPR
1+1+1+2 ...
1+1+1+2 ... & TPR
2+2+2 ...
2+2+2 ... & TPR
DRI Growth
DRI Growth & TPR
Personal Income Growth
6.9% Growth

FEDERAL REVENUE PROJECTION
FUNDS AVAILABLE FOR USE BY THE STATE
($ Million)

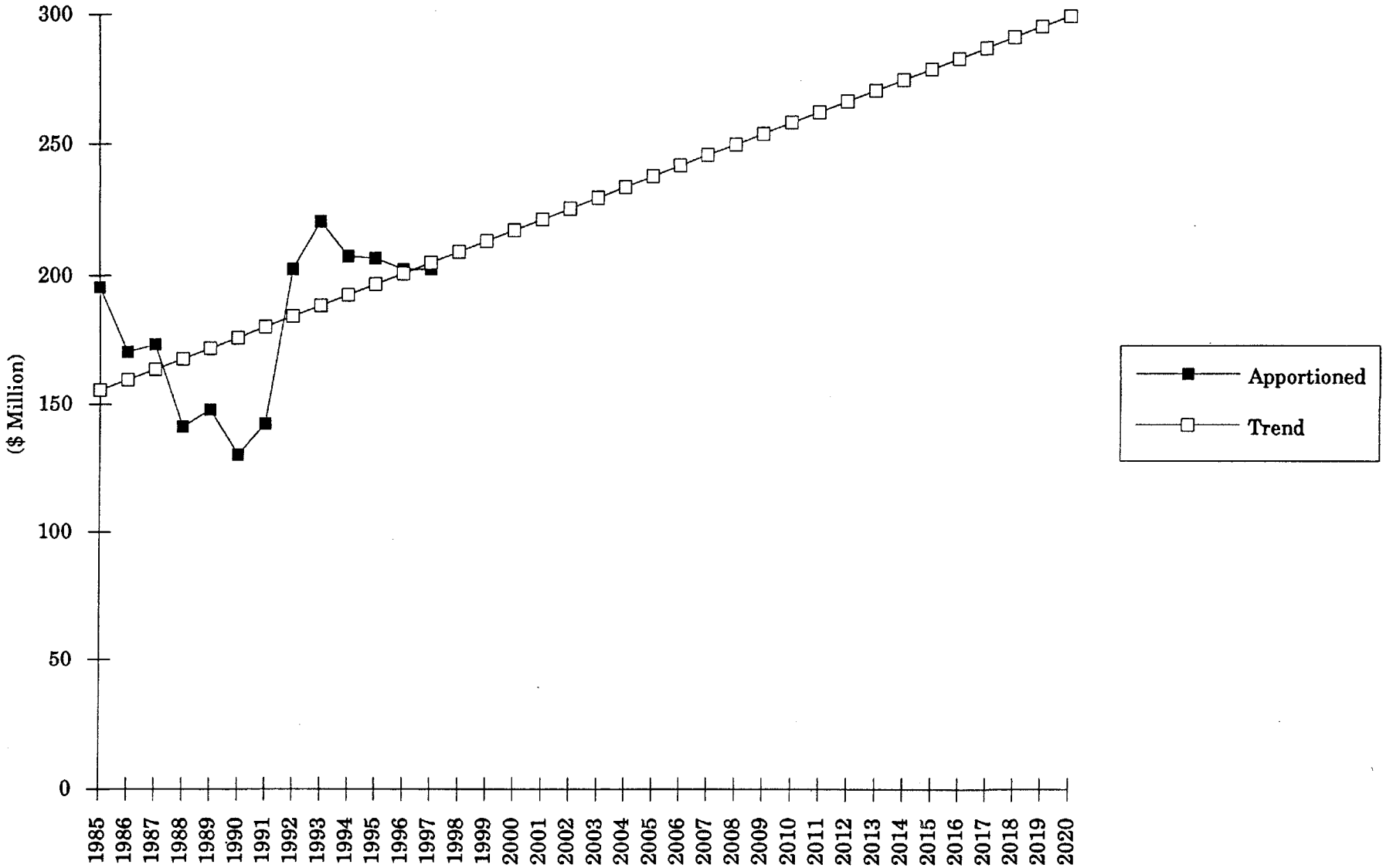
Federal Fiscal Year	Apportioned	Trend Total	County Allocation	Small City Allocation	Large City Allocation	Other Local Allocations	Balance To State
1985	195.4	155.7					
1986	170.6	159.7					
1987	173.5	163.8					
1988	141.2	167.8					
1989	147.9	171.9					
1990	130.4	176.0					
1991	142.2	180.0					
1992	202.2	184.1					
1993	220.2	188.1					
1994	206.8	192.2					
1995	206.2	196.2					
1996	201.8	200.3					
1997	201.8	204.4				19.055	
1998		208.4	7.260	5.177	10.570	20.466	164.942
1999		212.5	7.401	5.278	10.809	20.864	168.120
2000		216.5	7.543	5.379	11.047	21.263	171.299
2001		220.6	7.684	5.479	11.311	21.661	174.451
2002		224.6	7.825	5.580	13.590	22.060	175.589
2003		228.7	7.967	5.681	13.903	22.458	178.693
2004		232.8	8.108	5.782	14.221	22.856	181.791
2005		236.8	8.249	5.882	14.542	23.255	184.887
2006		240.9	8.391	5.983	14.868	23.653	187.977
2007		244.9	8.532	6.084	15.194	24.052	191.068
2008		249.0	8.673	6.185	15.522	24.450	194.157
2009		253.0	8.815	6.286	15.860	24.848	197.235
2010		257.1	8.956	6.386	16.200	25.247	200.312

FEDERAL REVENUE PROJECTION
FUNDS AVAILABLE FOR USE BY THE STATE
($ Million)

Federal Fiscal Year	Apportioned	Trend Total	County Allocation	Small City Allocation	Large City Allocation	Other Local Allocations	Balance To State
2011		261.2	9.097	6.487	16.491	25.645	203.438
2012		265.2	9.239	6.588	18.784	26.044	204.561
2013		269.3	9.380	6.689	19.12	26.442	207.642
2014		273.3	9.521	6.789	19.453	26.840	210.726
2015		277.4	9.663	6.890	19.800	27.239	213.795
2016		281.4	9.804	6.991	20.124	27.637	216.888
2017		285.5	9.945	7.092	20.458	28.036	219.970
2018		289.6	10.087	7.193	20.796	28.434	223.049
2019		293.6	10.228	7.293	21.140	28.832	226.122
2020		297.7	10.369	7.394	21.490	29.231	229.188

NOTE: Other Local Allocations consist of bridge funds subject to statewide ranking, and Enhancement and CMAQ funds.
See attached list for assumptions.

FEDERAL REV UE PROJECTION



FEDERAL HIGHWAY REVENUE PROJECTION FOR DEVELOPMENT OF MTPS: ASSUMPTIONS

Revenue

- Growth in the federal program is established using a linear trend based on 10 years history and levels established by law through the end of the federal Intermodal Surface Transportation Efficiency Act (ISTEA).
- Revenue designated for the Federal Lands program and specific projects earmarked under ISTEA are excluded.
- Revenue received to date through discretionary programs is included.
- Existing programs under the ISTEA are projected to increase in proportion to the total program.
- CMAQ funds become available in 1998 in the Oregon Unadjusted STP category.
- 1998 is used as base year, with future years deflated to account for an annual inflation of 3.7 percent.

Distribution

- The amount of STP funds calculated for distribution to counties and cities with populations less than 200,000 is based on existing agreements with the League of Oregon Cities and the Association of Oregon Counties.
- STP funds distributed in areas with populations greater than 200,000 is based on the ISTEA guidelines.
- Other funds available for local use include Bridge Improvement, Metro Planning, Enhancement, CMAQ, and Demonstration programs. The CMAQ program is the only one calculated for local distribution.

Population Growth

- Base population figures for metropolitan areas are those established in the 1990 Federal Census.
- Population growth is based on the average county annual growth rates established in the demographic and economic forecasts published by the Strategic Planning Section of the Oregon Department of Transportation.
- An average growth rate is used for cities lying in more than one county.

OTHER LOCA. .LLOCATIONS
($ Million)

Federal Fiscal Year	Apportioned	Trend Total	Metro Planning	Local Bridge (Large)	Local Bridge (Others)	Enhancement	CMAQ	Total
1985	195.4	155.7						
1986	170.6	159.7						
1987	173.5	163.8						
1988	141.2	167.8						
1989	147.9	171.9						
1990	130.4	176.0						
1991	142.2	180.0						
1992	202.2	184.1						
1993	220.2	188.1						
1994	206.8	192.2						
1995	206.2	196.2						
1996	201.8	200.3						
1997	201.8	204.4	1.183	2.599	10.396	4.877	0.000	19.055
1998		208.4	1.206	2.651	10.602	6.007	0.000	20.466
1999		212.5	1.230	2.702	10.809	6.124	0.000	20.865
2000		216.5	1.253	2.754	11.015	6.241	0.000	21.263
2001		220.6	1.277	2.805	11.222	6.358	0.000	21.662
2002		224.6	1.300	2.857	11.428	6.475	0.000	22.060
2003		228.7	1.324	2.909	11.634	6.592	0.000	22.459
2004		232.8	1.347	2.960	11.841	6.709	0.000	22.857
2005		236.8	1.371	3.012	12.047	6.826	0.000	23.255
2006		240.9	1.394	3.063	12.254	6.942	0.000	23.654
2007		244.9	1.418	3.115	12.460	7.059	0.000	24.052
2008		249.0	1.441	3.167	12.666	7.176	0.000	24.451
2009		253.0	1.465	3.218	12.873	7.293	0.000	24.849
2010		257.1	1.488	3.270	13.079	7.410	0.000	25.247

OTHER LOCA. .LLOCATIONS

($ Million)

Federal Fiscal Year	Apportioned	Trend Total	Metro Planning	Local Bridge (Large)	Local Bridge (Others)	Enhancement	CMAQ	Total
2011		261.2	1.512	3.321	13.285	7.527	0.000	25.646
2012		265.2	1.535	3.373	13.492	7.644	0.000	26.044
2013		269.3	1.559	3.425	13.698	7.761	0.000	26.443
2014		273.3	1.582	3.476	13.905	7.878	0.000	26.841
2015		277.4	1.606	3.528	14.111	7.995	0.000	27.239
2016		281.4	1.629	3.579	14.317	8.112	0.000	27.638
2017		285.5	1.653	3.631	14.524	8.229	0.000	28.036
2018		289.6	1.676	3.683	14.730	8.346	0.000	28.435
2019		293.6	1.700	3.734	14.937	8.463	0.000	28.833
2020		297.7	1.723	3.786	15.143	8.580	0.000	29.232

MPO FEDERAL RE. .NUE FORECAST
FUNDS DISTRIBUTED FOR USE AT LOCAL DISCRETION
($ Million)

PORTLAND

Federal Fiscal Year	Portland MPO Actual	Clackamas County Actual	Multnomah County Actual	Washington County Actual
1998	10.570	0.527	0.107	0.238
1999	10.809	0.541	0.109	0.243
2000	11.047	0.554	0.111	0.249
2001	11.311	0.568	0.113	0.255
2002	11.580	0.581	0.115	0.261
2003	11.852	0.595	0.117	0.267
2004	12.126	0.609	0.119	0.273
2005	12.406	0.623	0.121	0.279
2006	12.688	0.637	0.123	0.285
2007	12.968	0.651	0.125	0.291
2008	13.255	0.666	0.127	0.298
2009	13.548	0.680	0.129	0.304
2010	13.843	0.695	0.131	0.310
2011	14.099	0.710	0.133	0.317
2012	14.356	0.725	0.135	0.323
2013	14.622	0.740	0.137	0.330
2014	14.886	0.756	0.139	0.336
2015	15.159	0.771	0.141	0.343
2016	14.482	0.787	0.143	0.349
2017	15.684	0.803	0.145	0.356
2018	15.957	0.819	0.146	0.363
2019	16.232	0.835	0.148	0.370
2020	16.508	0.851	0.150	0.377

MPO FEDERAL RE[illegible]NUE FORECAST
FUNDS DISTRIBUTED FOR USE AT LOCAL DISCRETION
($ Million)

SALEM / KEIZER

Federal Fiscal Year	Salem MPO Actual	Marion County Actual	Polk County Actual
1998	0.935	0.376	0.147
1999	0.953	0.384	0.150
2000	1.166	0.391	0.153
2001	1.188	0.398	0.156
2002	1.210	0.406	0.159
2003	1.232	0.413	0.161
2004	1.254	0.420	0.164
2005	1.275	0.427	0.167
2006	1.297	0.435	0.170
2007	1.319	0.442	0.172
2008	1.341	0.449	0.175
2009	1.363	0.457	0.178
2010	1.385	0.464	0.181
2011	1.407	0.471	0.183
2012	1.997	0.479	0.186
2013	2.029	0.486	0.189
2014	2.060	0.493	0.192
2015	2.092	0.501	0.194
2016	2.119	0.508	0.197
2017	2.151	0.515	0.200
2018	2.178	0.523	0.203
2019	2.209	0.530	0.205
2020	2.241	0.537	0.208

MPO FEDERAL RE NUE FORECAST
FUNDS DISTRIBUTED FOR USE AT LOCAL DISCRETION
($ Million)

EUGENE / SPRINGFIELD

Federal Fiscal Year	Eugene MPO Actual	Lane County Actual
1998	1.126	0.484
1999	1.148	0.494
2000	1.170	0.503
2001	1.192	0.513
2002	2.010	0.522
2003	2.050	0.531
2004	2.095	0.541
2005	2.136	0.550
2006	2.180	0.560
2007	2.225	0.569
2008	2.267	0.579
2009	2.312	0.588
2010	2.357	0.597
2011	2.392	0.607
2012	2.431	0.616
2013	2.469	0.626
2014	2.507	0.635
2015	2.550	0.644
2016	2.584	0.654
2017	2.622	0.663
2018	2.661	0.673
2019	2.699	0.682
2020	2.742	0.692

MPO FEDERAL RE .NUE FORECAST
FUNDS DISTRIBUTED FOR USE AT LOCAL DISCRETION
($ Million)

MEDFORD / CENTRAL POINT

Federal Fiscal Year	Medford MPO Actual	Jackson County Actual
1998	0.399	0.382
1999	0.406	0.389
2000	0.414	0.396
2001	0.422	0.403
2002	0.530	0.410
2003	0.540	0.417
2004	0.549	0.424
2005	0.559	0.430
2006	0.569	0.437
2007	0.578	0.444
2008	0.588	0.450
2009	0.597	0.457
2010	0.607	0.463
2011	0.616	0.470
2012	0.756	0.476
2013	0.768	0.483
2014	0.779	0.489
2015	0.791	0.495
2016	0.802	0.502
2017	0.814	0.508
2018	0.825	0.514
2019	0.837	0.520
2020	0.848	0.526

MPO 20 YEAR PLAN
ODOT FIXED PRESERVATION, MAINTENANCE, OPERATIONS, BRIDGE AND OTHER COSTS

Inflation Factor 3.70%	Year	Preserva-tion Uninflated	Inflated	Mainten-ance Uninflated	Inflated	Operations Uninflated	Inflated	Bridge* Uninflated	Inflated	Other** Uninflated	Inflated	All Programs Uninflated	Inflated
120%	1996	90	107	126	151	8	10	45	54	76	91	344	413
124%	1997	137	171	126	156	8	10	45	56	76	95	392	488
129%	1998	137	177	126	162	8	11	45	58	77	99	393	507
134%	1999	137	184	126	168	8	11	45	60	65	87	381	510
139%	2000	137	191	126	174	8	12	45	62	66	91	382	530
144%	2001	91	131	126	180	8	12	45	65	66	95	336	483
149%	2002	91	136	126	187	8	12	45	67	67	100	337	502
155%	2003	91	141	126	194	8	13	45	70	67	104	337	521
160%	2004	106	170	126	201	8	13	45	72	68	109	353	566
166%	2005	106	176	126	209	8	14	45	75	69	114	353	588
172%	2006	103	177	126	216	8	14	45	78	69	119	351	605
179%	2007	103	184	126	224	8	15	45	80	69	125	351	628
185%	2008	103	190	126	233	8	15	45	83	70	131	352	653
192%	2009	103	198	126	241	8	16	45	87	71	137	353	678
199%	2010	103	205	126	250	8	17	45	90	71	143	353	705
207%	2011	103	212	126	260	8	17	45	93	72	149	353	731
214%	2012	103	220	126	269	8	18	45	97	72	154	353	758
222%	2013	103	228	126	279	8	18	45	100	72	160	353	786
231%	2014	103	237	126	289	8	19	45	104	72	166	353	815
239%	2015	103	246	126	300	8	20	45	108	72	172	353	845
248%	2016	103	255	126	311	8	21	45	112	72	178	353	876
257%	2017	103	264	126	323	8	21	45	116	72	185	353	909
267%	2018	103	274	126	335	8	22	45	120	72	192	353	943
277%	2019	103	284	126	347	8	23	45	124	72	199	353	977
287%	2020	103	295	126	360	8	24	45	129	72	206	353	1,014

* Bridges costs include only bridge reconstruction, rehabilitation, and maintenance. The costs do not include widening for capacity. Those costs are contained in the modernization portion of the 1991 Oregon Highway Plan.

** Other costs include debt service, local government pass-through, right-of-way property management, special city allotment, bikeway program, rail program, capital construction, and research.

DERIVATION OF FUNDS AVAILABLE TO FINANCE STATE HIGHWAY MODERNIZATION OR OTHER ACTIVITIES

($ Million)

Fiscal Year	60.05% of Statewide Highway User Fee Revenue Under 1+1+1+2 ... & TPR	Total Federal Funds	Federal Highway Funds Allocated To Local Govenments	Federal Highway Funds Available To State	Total Highway Funds Available To State	Non-Modernization State Needs	Statewide Funds Available For Highway Modernization Or Other Purposes	1995-98 Purchasing Power
1996	350.9	201.8	42.1	159.7	510.6	413	97.6	
1997	377.3	201.8	42.1	159.7	537.0	488	49.0	
1998	399.3	208.4	43.5	164.9	564.2	507	57.2	
1999	427.7	212.5	44.4	168.1	595.8	510	85.8	76.9
2000	459.2	216.5	45.2	171.3	630.5	530	100.5	86.9
2001	483.8	220.6	46.1	174.5	658.3	483	175.3	146.1
2002	503.9	224.6	49.0	175.6	679.5	502	177.5	142.7
2003	532.3	228.7	50.0	178.7	711.0	521	190.0	147.3
2004	559.0	232.8	51.0	181.8	740.8	566	174.8	130.7
2005	578.6	236.8	51.9	184.9	763.5	588	175.5	126.6
2006	592.5	240.9	52.9	188.0	780.5	605	175.5	122.0
2007	615.8	244.9	53.8	191.1	806.9	628	178.9	120.0
2008	638.5	249.0	54.8	194.2	832.7	653	179.7	116.2
2009	652.8	253.0	55.8	197.2	850.0	678	172.0	107.3
2010	666.6	257.1	56.8	200.3	866.9	705	161.9	97.3
2011	688.2	261.2	57.8	203.4	891.6	731	160.6	93.1
2012	708.8	265.2	60.6	204.6	913.4	758	155.4	86.9
2013	721.1	269.3	61.7	207.6	928.7	786	142.7	76.9
2014	732.1	273.3	62.6	210.7	942.8	815	127.8	66.4
2015	750.0	277.4	63.6	213.8	963.8	845	118.8	59.6
2016	768.8	281.4	64.5	216.9	985.7	876	109.7	53.1
2017	780.3	285.5	65.5	220.0	1,000.3	909	91.3	42.6
2018	788.6	289.6	66.6	223.0	1,011.6	943	68.6	30.8
2019	806.6	293.6	67.5	226.1	1,032.7	977	55.7	24.2
2020	825.6	297.7	68.5	229.2	1,054.8	1,014	40.8	17.1

REGIONAL DISTRIBUTION ESTIMATOR

	Region 1	Region 2 (a)(b)	Region 3 (a)(b)	Region 4	Region 5
Population	43.6%	30.8%	13.3%	7.0%	5.3%
Lane Miles	13.9%	24.7%	14.0%	21.6%	25.8%
Revenue Generated (c)	33.0%	29.5%	16.0%	11.3%	10.3%
Simple Average	30.2%	28.3%	14.4%	13.3%	13.8%

(a) Lane County is in Region 2.

(b) Lane miles estimated from mileage.

(c) Source: 1994 County Study, Table 4.

PROJECTIONS OF SEC. ON 9 FORMULA FUNDS

	Oregon Total	Tri-Met			Salem		
Year	Projected Section 9	Total	Capital	Operating	Total	Capital	Operating
1995	$19,013,000	$15,147,800	$10,759,800	$4,388,000	$1,471,400	$651,800	$819,600
1996	$19,419,000	$15,471,200	$11,083,200	$4,388,000	$1,502,800	$683,200	$819,600
1997	$19,825,000	$15,794,700	$11,406,700	$4,388,000	$1,534,200	$714,600	$819,600
1998	$20,231,000	$16,118,200	$11,730,200	$4,388,000	$1,565,600	$746,000	$819,600
1999	$20,637,000	$16,441,600	$12,053,600	$4,388,000	$1,597,100	$777,500	$819,600
2000	$21,043,000	$16,765,100	$12,377,100	$4,388,000	$1,628,500	$808,900	$819,600
2001	$21,449,000	$17,088,500	$12,700,500	$4,388,000	$1,659,900	$840,300	$819,600
2002	$21,855,000	$17,412,000	$13,024,000	$4,388,000	$1,691,300	$871,700	$819,600
2003	$22,261,000	$17,735,500	$13,347,500	$4,388,000	$1,722,700	$903,100	$819,600
2004	$22,667,000	$18,058,900	$13,670,900	$4,388,000	$1,754,200	$934,600	$819,600
2005	$23,073,000	$18,382,400	$13,994,400	$4,388,000	$1,785,600	$966,000	$819,600
2006	$23,479,000	$18,705,900	$14,317,900	$4,388,000	$1,817,000	$997,400	$819,600
2007	$23,885,000	$19,029,300	$14,641,300	$4,388,000	$1,848,400	$1,028,800	$819,600
2008	$24,291,000	$19,352,800	$14,964,800	$4,388,000	$1,879,800	$1,060,200	$819,600
2009	$24,697,000	$19,676,200	$15,288,200	$4,388,000	$1,911,300	$1,091,700	$819,600
2010	$25,103,000	$19,999,700	$15,611,700	$4,388,000	$1,942,700	$1,123,100	$819,600
2011	$25,509,000	$20,323,200	$15,935,200	$4,388,000	$1,974,100	$1,154,500	$819,600
2012	$25,915,000	$20,646,600	$16,258,600	$4,388,000	$2,005,500	$1,185,900	$819,600
2013	$26,321,000	$20,970,100	$16,582,100	$4,388,000	$2,036,900	$1,217,300	$819,600
2014	$26,727,000	$21,293,600	$16,905,600	$4,388,000	$2,068,400	$1,248,800	$819,600
2015	$27,133,000	$21,617,000	$17,229,000	$4,388,000	$2,099,800	$1,280,200	$819,600
2016	$27,539,000	$21,940,500	$17,552,500	$4,388,000	$2,131,200	$1,311,600	$819,600
2017	$27,945,000	$22,263,900	$17,875,900	$4,388,000	$2,162,600	$1,343,000	$819,600
2018	$28,351,000	$22,587,400	$18,199,400	$4,388,000	$2,194,000	$1,374,400	$819,600
2019	$28,757,000	$22,910,900	$18,522,900	$4,388,000	$2,225,500	$1,405,900	$819,600
2020	$29,163,000	$23,234,300	$18,846,300	$4,388,000	$2,256,900	$1,437,300	$819,600

PROJECTIONS OF SEC ON 9 FORMULA FUNDS

	Lane			Rogue Valley			Rainier (Transfer to Section 18)		
Year	Total	Capital	Operating	Total	Capital	Operating	Total	Capital	Operating
1995	$1,819,500	$806,000	$1,013,500	$562,300	$249,100	$313,200	$12,100	$12,100	$0
1996	$1,858,300	$844,800	$1,013,500	$574,300	$261,100	$313,200	$12,400	$12,400	$0
1997	$1,897,200	$883,700	$1,013,500	$586,300	$273,100	$313,200	$12,600	$12,600	$0
1998	$1,936,000	$922,500	$1,013,500	$598,300	$285,100	$313,200	$12,900	$12,900	$0
1999	$1,974,900	$961,400	$1,013,500	$610,300	$297,100	$313,200	$13,100	$13,100	$0
2000	$2,013,700	$1,000,200	$1,013,500	$622,300	$309,100	$313,200	$13,400	$13,400	$0
2001	$2,052,600	$1,039,100	$1,013,500	$634,300	$321,100	$313,200	$13,700	$13,700	$0
2002	$2,091,400	$1,077,900	$1,013,500	$646,300	$333,100	$313,200	$13,900	$13,900	$0
2003	$2,130,300	$1,116,800	$1,013,500	$658,400	$345,200	$313,200	$14,200	$14,200	$0
2004	$2,169,100	$1,155,600	$1,013,500	$670,400	$357,200	$313,200	$14,400	$14,400	$0
2005	$2,208,000	$1,194,500	$1,013,500	$682,400	$369,200	$313,200	$14,700	$14,700	$0
2006	$2,246,800	$1,233,300	$1,013,500	$694,400	$381,200	$313,200	$14,900	$14,900	$0
2007	$2,285,700	$1,272,200	$1,013,500	$706,400	$393,200	$313,200	$15,200	$15,200	$0
2008	$2,324,500	$1,311,000	$1,013,500	$718,400	$405,200	$313,200	$15,500	$15,500	$0
2009	$2,363,400	$1,349,900	$1,013,500	$730,400	$417,200	$313,200	$15,700	$15,700	$0
2010	$2,402,200	$1,388,700	$1,013,500	$742,400	$429,200	$313,200	$16,000	$16,000	$0
2011	$2,441,100	$1,427,600	$1,013,500	$754,400	$441,200	$313,200	$16,200	$16,200	$0
2012	$2,479,900	$1,466,400	$1,013,500	$766,400	$453,200	$313,200	$16,500	$16,500	$0
2013	$2,518,800	$1,505,300	$1,013,500	$778,400	$465,200	$313,200	$16,800	$16,800	$0
2014	$2,557,600	$1,544,100	$1,013,500	$790,400	$477,200	$313,200	$17,000	$17,000	$0
2015	$2,596,500	$1,583,000	$1,013,500	$802,400	$489,200	$313,200	$17,300	$17,300	$0
2016	$2,635,300	$1,621,800	$1,013,500	$814,400	$501,200	$313,200	$17,500	$17,500	$0
2017	$2,674,200	$1,660,700	$1,013,500	$826,500	$513,300	$313,200	$17,800	$17,800	$0
2018	$2,713,100	$1,699,600	$1,013,500	$838,500	$525,300	$313,200	$18,000	$18,000	$0
2019	$2,751,900	$1,738,400	$1,013,500	$850,500	$537,300	$313,200	$18,300	$18,300	$0
2020	$2,790,800	$1,777,300	$1,013,500	$862,500	$549,300	$313,200	$18,600	$18,600	$0

Transportation Development Branch
Public Transit Section

PROJECTIONS OF SEC. ON 9 FORMULA FUNDS

Year	Capital Only Total
1995	$12,466,700
1996	$12,872,300
1997	$13,278,100
1998	$13,683,800
1999	$14,089,600
2000	$14,495,300
2001	$14,901,000
2002	$15,306,700
2003	$15,712,600
2004	$16,118,300
2005	$16,524,100
2006	$16,929,800
2007	$17,335,500
2008	$17,741,200
2009	$18,147,000
2010	$18,552,700
2011	$18,958,500
2012	$19,364,100
2013	$19,769,900
2014	$20,175,700
2015	$20,581,400
2016	$20,987,100
2017	$21,392,900
2018	$21,798,700
2019	$22,204,500
2020	$22,610,200

ASSUMED NON-LRT SECTION 3 DISTRIBUTIONS

($ Million)

Year	Rogue Valley	Lane	Albany/ Corvallis	Salem	Tri-Met	Total
1996				1.161		1.161
1997		6.468	0.446	1.333		8.247
1998				1.382		1.382
1999				1.199		1.199
2000	4.353			1.244		5.596
2001		7.222		1.290		8.511
2002			1.070	1.337		2.407
2003				1.387		1.387
2004		8.629	0.288	1.438		10.354
2005	5.220			1.491		6.711
2006			0.619	1.546		2.165
2007		9.622	0.641	1.604		11.867
2008				1.663		1.663
2009			1.035	1.725		2.759
2010	5.365	10.730		1.788		17.884
2011				1.855	9.273	11.127
2012				1.923		1.923
2013		11.966		1.994		13.960
2014			1.654	2.068		3.723
2015	6.434			2.145		8.579
2016		13.344		2.224	11.120	26.688

REVENUE AVAILABLE FOR TRANSIT CAPITAL

($ Million)

Year	Section 9 Capital	Section 3 (Non-LRT)		State Lottery Match
1996	12.9	1.2		1.8
1997	13.3	8.2		2.7
1998	13.7	1.4		1.9
1999	14.1	1.2		1.9
2000	14.5	5.6		2.5
2001	14.9	8.5		2.9
2002	15.3	2.4		2.2
2003	15.7	1.4		2.1
2004	16.1	10.4		3.3
2005	16.5	6.7		2.9
2006	16.9	2.2		2.4
2007	17.3	11.9		3.7
2008	17.7	1.7		2.4
2009	18.1	2.8		2.6
2010	18.6	17.9		4.6
2011	19.0	11.1		3.8
2012	19.4	1.9		2.7
2013	19.8	14.0		4.2
2014	20.2	3.7		3.0
2015	20.6	8.6		3.6
2016	21.0	26.7		6.0
2017	21.4	8.8	(*)	3.8
2018	21.8	9.1	(*)	3.9
2019	22.2	9.4	(*)	4.0
2020	22.6	9.8	(*)	4.0

(*) Estimate based on previous data.

SPECIAL TRANSPORTATION FUND: PROJECTIONS OF REVENUE AND DISBURSEMENTS

Fiscal Year	Cigarette Tax Revenue	Interest Earnings	Special Transportation Fund Total	Formula Program	Tri-Met (JPACT)	Salem Transit (SKATS)	Lane Transit (LCOG)	Rogue Valley (C/P-MATS)	Discretionary Program
1995	$5,375,000	$65,000	$5,440,000	$4,080,000	$1,703,000	$404,000	$400,000	$211,000	$1,360,000
1996	4,909,091	60,000	4,969,091	3,681,818	1,537,000	365,000	361,000	190,000	1,287,273
1997	4,727,273	50,000	4,777,273	3,545,455	1,480,000	351,000	348,000	183,000	1,231,818
1998	4,636,364	45,000	4,681,364	3,477,273	1,451,000	345,000	341,000	180,000	1,204,091
1999	4,636,364	40,000	4,676,364	3,477,273	1,451,000	345,000	341,000	180,000	1,199,091
2000	4,454,546	35,000	4,489,546	3,340,910	1,394,000	331,000	328,000	173,000	1,148,637
2001	4,272,728	35,000	4,307,728	3,204,546	1,338,000	318,000	314,000	166,000	1,103,182
2002	4,090,910	35,000	4,125,910	3,068,183	1,281,000	304,000	301,000	159,000	1,057,728
2003	3,909,092	35,000	3,944,092	2,931,819	1,224,000	291,000	288,000	152,000	1,012,273
2004	3,727,274	35,000	3,762,274	2,795,456	1,167,000	277,000	274,000	145,000	966,819
2005	3,545,456	35,000	3,580,456	2,659,092	1,110,000	264,000	261,000	137,000	921,364
2006	3,363,638	35,000	3,398,638	2,522,729	1,053,000	250,000	247,000	130,000	875,910
2007	3,181,820	35,000	3,216,820	2,386,365	996,000	236,000	234,000	123,000	830,455
2008	3,000,002	35,000	3,035,002	2,250,002	939,000	223,000	221,000	116,000	785,001
2009	2,818,184	35,000	2,853,184	2,113,638	882,000	209,000	207,000	109,000	739,546
2010	2,636,366	35,000	2,671,366	1,977,275	825,000	196,000	194,000	102,000	694,092
2011	2,454,548	35,000	2,489,548	1,840,911	768,000	182,000	181,000	95,000	648,637
2012	2,272,730	35,000	2,307,730	1,704,548	711,000	169,000	167,000	88,000	603,183
2013	2,090,912	35,000	2,125,912	1,568,184	655,000	155,000	154,000	81,000	557,728
2014	1,909,094	35,000	1,944,094	1,431,821	598,000	142,000	140,000	74,000	512,274
2015	1,727,276	35,000	1,762,276	1,295,457	541,000	128,000	127,000	67,000	466,819

Note: Revenue source is 2¢ per pack cigarette tax.

FY 1996
Metropolitan
Transportation
Improvement Program

$27 Million
Regional Reserve Fund

Region 2040
Implementation

Public Review Draft

April 7, 1995

METRO

FY 1996 Metropolitan Transportation Improvement Program
$27 Million Regional Reserve Fund

Region 2040 Implementation

Background

Metro, the regional government, is the lead agency for identifying and prioritizing transportation projects which utilize federal and state funds. $27 million remain in a regional reserve for funding projects to be constructed in the years 1996 to 1998. Once adopted by the Metro Council and the Joint Policy Advisory Committee on Transportation, or JPACT (consisting of local elected officials and transportation agency directors), the projects will be included in Metro's funding document, the *"Metro Transportation Improvement Program (MTIP) for Fiscal Year 1996."*

Over the past five months, Metro, in cooperation with local governments, Tri-Met, the Oregon Department of Transportation, and most importantly, the public, has identified a candidate list of projects for funding. The projects are intended to implement the growth policy identified in Metro's adopted *Region 2040 Growth Concept* (see below). The projects have gone through an initial analysis using technical criteria. Metro is now soliciting public comment on the candidate list of projects before a recommended list is submitted for JPACT and Metro Council adoption.

ATTACHMENTS

Attached for your review and comment is the following information

1. A summary sheet of projects submitted to Metro. The sheet identifies the mode (i.e, road, bike, transit, etc.) and the submitting agency or jurisdiction (aggregated by county, City of Portland, or agency).

2. A brief description of the nominated projects.

3. A summary of the technical scores by mode. The projects are currently listed in a preliminary order based on solely on the technical analysis.

TECHNICAL CRITERIA

Technical criteria varied somewhat by mode, consistent with their purpose. However, all projects were evaluated on their ability to support Region 2040, on safety enhancement aspects, and on cost benefit. Potential usage, whether it was for bicycles or roadways was also considered. If a project benefited more than one mode it received additional points (see summary matrix).

ADMINISTRATIVE CRITERIA

The technical analysis is only one part of determining a final list of projects to be funded. The Metro Council and JPACT will also consider a number of administrative criteria prior to adopting a funding package. These criteria include:

Strength of Project Support.. Has a sponsoring agency/jurisdiction provided more than the required match and, if so, how much more? Is the project strongly supported by more than one agency?

Phasing. Ac a project be broken into reasonable phases in order that a priority phase receive funding and/or that a larger number of projects receive some level of support? Can the phases for which funding has been requested complete Plans, Specifications and Estimates (PS & E) by October, 1998 (i.e., the end of the current federal assistance act)?

Relationship to Future Projects. Are there upcoming projects that will meet some or all of the goals of a nominated project?

Equity. Is there equitable distribution of funds based on geography and mode?

Professional Judgment. The technical criteria attempt to quantify certain common project elements. Both Metro and local agency staff recognize that limitations of available data cause some projects to perform at a level differently than indicated through the technical analysis. Prior to recommendation of final funding package, professional staff will review projects for anomalies and to ensure reasonableness of the package.

PUBLIC COMMENT

Perhaps the most important "administrative" consideration is public comment. Again, Metro and local agencies recognize that technical criteria are only part of the decision-making process. Consequently, as the next step in our public involvement process (which began with our January, 1995 Transportation Fair), the Metro Council and JPACT invite you to comment on the technical rankings.

You may provide written or oral testimony as follows;

- **Attend a *Priorities '95* public meeting on either April 13, 17, or 18. See the Priorities '95 attachment for more information.**
- **Provide written comment through May 8, 1995.**

- **Testify before the Metro Council on May 4, 1995, beginning at 5:30 p.m.**

In addition to commenting on projects, we are particularly interested in your ideas on the distribution of funds between modes. The current policy direction, reflected in the Regional Transportation Plan, and reflecting federal and state policy, is to provide multi-modal choices for the public. The plan also must address freight movement as well as person-travel. Please give us your thoughts.

REGION 2040 IMPLEMENTATION

In addition to providing multi-modal choices, the Metro Council and JPACT will support a package of projects that support Metro's adopted Region 2040 Growth Concept. The concept is a first step in identifying actions to efficiently accommodate the growth expected in the region over the next 50 years. The concept focuses on a more balanced distribution of employment and population within the region; more concentrated development, particularly retail and commercial; a strong and vital Central City; and strong, concentrated subareas known as regional or town centers (areas such as downtown Beaverton and Gresham). The concept also identifies multi-modal travel corridors which include a number of traditional main streets to encourage local shopping.

These key locations are intended to be served with quality transportation services which maintain auto access but also provide safe and convenient public transit and bicycle and pedestrian networks. Region 2040 and Metro's 20-year Regional Transportation Plan(RTP) also recognize the need to maintain the system we have and to make it work better. Finally, Region 2040 encourages "Transit Oriented Development" (TOD) near quality public transit service. Consequently, eligible project areas under Region 2040 include:

- Bicycle
- Pedestrian
- Transit Oriented Development (TOD)
- Transportation Demand Management (TDM, or programs to reduce system demand, such as carpool programs, telecommunications)
- Transportation System Management (TSM, including signal and other operational improvements)
- Public Transit
- Freight
- Road Reconstruction
- Road Preservation

Metro is also considering funding a number of engineering and planning activities associated with critical regional needs. Those projects are also included.

ADDITIONAL BACKGROUND

As mentioned, Metro is the lead agency in the selection of transportation projects for federal and state funding in the region. Metro must work with other agencies and local jurisdictions and the public in the selection process. Metro began the process in January, 1995 with our Transportation Fair. Project ideas were solicited from the public and were considered by local jurisdictions as part of their submittals. Jurisdictions were asked to limit requests to approximately $30 million. The total of all projects submitted was nearly $150 million.

Finally, all projects must derive from the 20-year Regional Transportation Plan for the Metro area. Information will also be provided at *Priorities '95* on the plan.

INFORMATION

If you have questions or need additional information, please call either Terry Whisler, TIP Project Manager at 797-1747, or Pamela Peck, Public Involvement Coordinator at 797-1866.

Meeting Notice

METRO
600 NE Grand Ave.
Portland, OR 97232-2736
(503) 797-1866

Priorities '95

A series of meetings to receive public comment on regional transportation issues

Thurs., April 13 – Clackamas County meeting
Pioneer Community Center, 615 Fifth St., Oregon City
4 to 9 p.m. (oral comment period: 6:30 to 9 p.m.)
Tri-Met bus line 33

Mon., April 17 – Portland meeting
Metro Regional Center, 600 NE Grand Ave., Portland
4 to 9 p.m. (oral comment period: 6:30 to 9 p.m.)
Tri-Met bus line 6 or take MAX to the Oregon Convention Center stop

Mon., April 17 – East Multnomah County meeting
Gresham City Hall, 1333 NW Eastman Parkway, Gresham
4 to 9 p.m. (oral comment period: 6:30 to 9 p.m.)
Tri-Met bus lines 4 and 23 or take MAX to the Gresham City Hall stop

Tues., April 18 – Washington County meeting
Beaverton City Hall, 4755 SW Griffith Drive, Beaverton
4 to 9 p.m. (oral comment period: 6:30 to 9 p.m.)
Tri-Met bus lines 54 and 59

orities '95 meetings will provide an opportunity for comment on:

The interim Regional Transportation Plan (RTP)
The plan is a 20-year blueprint for the region's transportation system that takes into consideration expected population and economic growth. The RTP addresses how to best move people and goods through the region and identifies strategies for highways, arterial streets, transit, freight, bikes and pedestrians.

The FY '96 Metropolitan Transportation Improvement Program (MTIP)
A regional transportation funding program. Local jurisdictions submit transportation projects to Metro for funding consideration annually. For 1996 there are $27 million of federally authorized funds available for allocation to new projects.

Drafts of both the interim RTP update and MTIP funding information will be available for public review in early April. There will be a 30-day comment period following the release of the draft recommendations. All written comments received during the comment period will be entered into the formal record. Written comments should be mailed to: Metro,Transportation Planning, 600 NE Grand Ave., Portland, OR 97232 or faxed to 797-1794.

Priorities '95 meetings will provide an opportunity for the public to make oral comments to a panel of Metro councilors and local elected and appointed officials from 6:30 to 9 p.m. Metro staff will be available to answer questions and provide background information from 4 to 9 p.m.

more information or to obtain copies of the draft interim RTP update and the draft MTIP information, call Metro at 797-1866 or call Metro's Transportation Planning Hotline (503) 797-1900. A schedule of key decision points for the RTP update and FY'96 MTIP is on the back of this notice.

Regional Transportation Plan (RTP) Update
FY '96 Metropolitan Transportation Improvement Program (MTIP)
Schedule of Key Decision Points

The following schedule includes key decision points and other important dates related to the Regional Transportation Plan (RTP) update and the FY '96 Metropolitan Transportation Improvement Program (MTIP). **Key decision points are in bold face type.** Best opportunties for public comment are underlined.

The RTP will be updated in two phases. An interim update to meet federal requirements will be completed by June 1995. A full update intended to meet state and federal requirements, and to be consistent with Metro's Regional Framework Plan for growth will be completed in mid-1996. The FY '96 MTIP allocation process will be completed by June of 1995.

January 1995

28 Transportation Fair held to kick-off RTP update process and receive comments on FY '96 MTIP project selection criteria.

April 1995

7 Draft interim RTP and MTIP information available for public review.
30 day public comment on interim RTP update and FY '96 MTIP begins.

13-18 *Priorities '95* public meetings on interim RTP update and FY '96 MTIP.

20 RTP Citizens Advisory Committee appointed by Metro Council.

May 1995

4 Metro Council public hearing on interim RTP update and FY '96 MTIP.

7 30 day comment period on interim RTP update and FY '96 MTIP ends.

11 Metro Joint Transportation Policy Advisory Committee (JPACT) considers adoption of interim RTP update and FY '96 MTIP.

25 Metro Council considers adoption of interim RTP update and FY '96 MTIP.

RTP CAC holds first meeting in May (date not yet determined).

June 1995 Phase 2 of RTP update process begins.

Publication on interim RTP document.

mid-1996 Phase 2 RTP update adopted by Metro Council.

Metro 2040 Implementation Program

Project Nominations Key

Jurisdiction/Agency:

C = Clackamas County
M = Multnomah County
W = Washington County
P = City of Portland
Pt = Port of Portland
O = ODOT
E = ODOE
MET = Metro
T = Tri-Met
S = Studies
MISC = Miscellaneous

Modes:

RX = Roadway Expansion
RXt = Roadway Expansion consisting of Transportation System Management (TSM) measures
RP = Roadway Preservation
P = Pedestrian
B = Bikes
F = Freight
TOD = Transit Oriented Development
TDM = Transportation Demand Management
TR = Transit

Example: CRXt1 is the identification for the first Clackamas County Road Expansion (TSM) project

rtpb:\2040key.324jf

2040 Implementation Program

Project Nominations Summary
(as of April 7, 1995)

Roadway Preservation

CRP1	**Kruse Way Reconstruction (Boones Ferry Road to Bangy Road)** Deep structural improvements requiring 4 inch grind and replacement with 7 inches of asphalt.	**1,229,200**
CRP2	**Lake Road Preservation Project (SE 21st Avenue to Oatfield Road)** Half-roadway reconstruction that would include adequate base rock, widening of pavement to include bike lanes, and reconstructed curb on south side of roadway.	**699,000**
MRP1	**Hawthorne Bridge Deck Structure** Several options for deck replacement are possible. Multnomah County has hired a consultant to more specifically determine structural repairs, structural systems, and materials, and critical path to implementation. It would be advantageous to coordinate development of this project with the proposed Hawthorne Bridge Sidewalk Widening Project.	**5,159,200**
MRP2	**NE Hood Street (Division Street to Powell Boulevard)** Street reconstruction, paving overlay, safety access for bikes and pedestrians including curb extensions, decorative street lights and bomanite crosswalks. Undergrounding of overhead utilities and landscape tree plantings.	**453,200**
MRP3	**NE Fifth Street (Main Street to Cleveland Avenue)** Facilitate incorporation of pedestrian enhancements between N. Main and NE Hood; roadway reconstruction and storm drainage.	**302,900**
PRP1	**City of Portland: Front Avenue Multi-Use Path** Project will construct a Multi-Use path directly east of Front Avenue to provide an alternative bicycle access to Waterfront Park and enhance pedestrian amenities along Front Avenue. Project will improve bicycle and pedestrian access in the Central City.	**2,368,720**
	Total	**$10,212,220**

Roadway Expansion

CRX1	**147th Alignment (North of Sunnyside Road to 142nd/Sunnyside Road)** Realign 147th North of Sunnyside Road to connect to the intersection of 147th and Sunnyside Road. Includes sidewalk and bike lanes in urban section.	375,000
CRX2	**Sunnyside Road (Sunnybrook to 122nd Avenue)** Widen existing 3 lane road to accommodate 4 travel lanes including curbs, sidewalks, bike lanes and additional ROW for turn lanes, median pedestrian refuge and HCT as shown on Metro's 2040 plan.	6,000,000
CRX3	**122nd Avenue (Sunnyside Road to Hubbard Road)** Widen 122nd Avenue to 3 lanes, including curbs, sidewalks and bike lanes.	3,227,000
CRX4	**92nd Avenue Reconstruction (Idleman Road to Multnomah County Line)** Widen 92nd Avenue to 3 lanes, including curbs, sidewalks and bike lanes.	850,000
CRX5	**Oatfield Road (Webster Road to 82nd Drive)** Widen to 3 lanes to include continuous left-turn lane and sidewalk; redesign Webster/Oatfield traffic signal to include a southbound left-turn lane; install traffic signal at Gloucester Street; coordinate traffic signals at Webster, Gloucester and 82nd Drive. Increase capacity and safety of bike lanes.	1,166,425
CRXt6	**Abernethy Realignment (Abernethy Road to Washington Street)** Realign Abernethy Road between County shops and Washington.	554,000
CRXt7	**Johnson Creek Blvd. Improvements - Phase II (SE 35th to SE 45th Streets)** Roadway improvement that would include right-of-way acquisition, widening of pavement to add bicycle lanes, construction of curbs and sidewalk on south side to provide access to the Springwater Trail at 45th Avenue.	1,272,301
CRXt8	**Highway 43/Terwilliger Intersection** Construct northbound left-turn lane on State Street to Terwilliger; reconfigure Terwilliger at its intersection with State Street; install traffic signal.	987,000
CRXt9	**Highway 43/A Avenue Intersection** Improve turning radius from A Avenue for southbound turn onto Highway 43, restripe turning lanes, and upgrade signal.	520,405
CRXt10	**Highway 43/McVey/Green Street Intersection** Construct turn lanes for both northbound and southbound traffic on Highway 43 while increasing pedestrian access.	1,150,723
CRXt11	**Highway 43/West A Street Realignment and Traffic Signal** Realign West A Street with Failing Street and install traffic signal.	1,094,645

CRXt12	**Highway 43/Willamette Falls Drive Traffic Signal** Signalize and restripe approaches to the intersection.	**115,500**
CRXt13	**Highway 43/Failing Street** Install traffic signal at Failing Street; close six streets on the east side of Highway 43.	**140,000**
CRXt14	**Highway 43/Pimlico Street** Install traffic signal.	**105,000**
CRXt15	**Highway 43/Jolie Point Traffic Signal** Install traffic signal at Jolie Point Road to complement ODOT Highway 43 improvements.	**120,000**
CRXt16	**City of Happy Valley: 129th Avenue Improvements** Realign roadway, widen for bike lanes and construct sidewalks from Scott Creek Road to Mountain Gate Road. The project will provide bicycle and pedestrian access in a town center area.	**900,000**
MRXt1	**238th Avenue/Halsey Street Intersection** Add left and right turn lanes and install new traffic signal; new sidewalks, bike lanes and street lights.	**376,531**
MRXt2	**US26/Orient Drive Safety/Congestion Project** Rebuild intersections of US 26/Orient Drive, US 26/Palmquist Road, and US 26/Kane Road to urban standards with traffic signals, bike lanes and sidewalks.	**751,100**
MRXt3	**UPRR Bridge Replacement (201st Avenue/I-84, and 223rd Avenue/I-84)** Construct 2 new railroad bridges to accommodate 44 feet of pavement width, including bike lanes and sidewalks.	**1,742,000**
MRX4	**Halsey Street Enhancements (223rd Ave. to Columbia Hwy)** Project would add a center turn lane or landscape median, and curbs, gutters, drainage, lighting, sidewalk and bike lanes with landscaping the entire length.	**4,448,000**
WRX1	**Glencoe Road (Lincoln Street to Evergreen)** Widen to 3 lanes, with bike lanes and sidewalks.	**3,116,000**
WRX2	**Walker Road (Westfield Avenue to Murray Boulevard)** Widen to 3 lanes, with bike lanes and sidewalks.	**1,611,000**
WRX3	**Cornell Road (Bethany Boulevard to 179th Avenue)** Widen to 5 lanes, with bike lanes and sidewalks.	**2,722,000**
WRX4	**Murray Boulevard Overpass** (Terman Road to Millikan Way) Widen 2 lane overpass to 4 lanes, with bike lanes	**4,201,000**

WRX5	**Henry Street Eastward Extension** (Cedar Hills Boulevard to Mill Street) Two lane cross-section with bike lanes and wide sidewalks.	**1,229,233**
WRX6	**Mill Avenue Southern Extension** (Canyon Road to Farmington Road/Downtown grid) Two lane cross-section with bike lanes and sidewalks; protected crossing at SPRR tracks; new signalized intersection with Farmington Road.	**1,126,946**
WRX7	**Mill Avenue/Henry Street LRT Connection** (Beaverton Central LRT Station to Canyon Road/Watson Avenue) Lane cross-section with bike lanes and sidewalks to provide access between LRT station and surrounding street network.	**1,740,665**
WRX8	**Heather Street Connection** (Mt. View Lane, Cornelius to East City Limits, Forest Grove) Two lanes with sidewalks to connect Cornelius and Forest Grove parallel to TV Highway.	**358,900**
WRX9	**NE 28th Avenue Improvement (North of Grant Street to East Main Street)** Reconstruct existing 2 lane roadway to 3 lanes with bike lanes, curbs, and sidewalks.	**1,750,000**
WRX10	**124th Avenue/99W/Tualatin Road Intersection** Shift the location of existing Highway 99W/Tualatin Road intersection approximately 400 feet southwesterly, continuing bicycle and pedestrian facilities and combine/relocate accesses.	**4,486,000**
WRXt11	**Greenburg/Mapleleaf Improvements (Locust Street to Highway 217 ramp)** Add northbound left turn lane at Washington Square Road, and a right turn lane to the northbound off-ramp.	**358,900**
WRXt12	**Barnes Signal Interconnect (Suntek to Miller)** Portions of interconnect already exist but additional conduit, wiring, and upgraded controller software are needed.	**18,000**
WRXt13	**Murray North Signal Interconnect (Highway 26 to Cornell Road)** Interconnect signals; placement of master controller, conduit and development of signal system timing plans.	**9,000**
WRXt14	**Murray South Signal Interconnect (Farmington to Millikan Avenue)** Install a master controller, an interconnect, and develop coordinated signal timing plans.	**31,000**
WRXt15	**Scholls Ferry Signal Interconnect (Nimbus Drive to Highway 217)** Interconnect Washington County signal system along Scholls Ferry Road with ODOT signals at Highway 217.	**31,000**

PRX1	**SE Water Avenue Extension** (SE Water Avenue at Clay to SE Division Place at 4th Avenue) Three lane facility with bike lanes and sidewalks; industrial access arterial with connections to local streets and regional highway network.	**1,600,000**
PRX2	**SE Tacoma Street (SE 28th Avenue to SE 32nd Avenue)** Two travel lanes, bike lanes, curbs, sidewalks, storm drainage, improved street lighting and street trees.	**553,000**
PRX3	**SE Foster Road Realignment (162nd Avenue to Jenne Road)** Realign 2 lane roadway, provide for left turn lanes, and add bike lanes and sidewalks.	**2,112,900**
PRXt4	**Multnomah/Garden Home Intersection Improvement** Realign east leg of the intersection, install sidewalks and bike lanes to match improvements to the west of 71st Avenue, and signalize the intersection.	**785,100**
PRXt5	**ITS Program - Portland** Includes 4 components: Central Computer Traffic Control/Signal Timing Program, Transit Signal Priority, Congestion Management Monitoring/Surveillance, and Traffic Signal Preservations.	**1,884,000**
ORXt1	**Arterial Signal Optimization Projects** Includes a number of projects that are part of the ATMS Implementation Plan, including: •SE Division Street (SE 60th Avenue to SE 174th Avenue) •NE Sandy Blvd. (E. Burnside Street to 82nd Avenue) •SE Powell Blvd. (SE 11th Avenue to SE 98th Avenue) •SE Division Street (SE 182nd Avenue to SE 257th Avenue) •SE 181st Avenue (I-84 to Powell Blvd.) •TV Highway (Beaverton City Limits to Baseline Rd)	**830,000**
ORXt2	**ATMS Pilot Program: I-5 Tow Service Patrol (Marquam Bridge to Wilsonville)** Demonstration program to reduce incident detection and response times, promptly removing disabled and accident vehicles.	**90,000**
ORXt3	**US 26 Throughway Enhancement** A TSO project with the intent to improve a bottle-neck location, lane embalance and correct geometric conditions that exist today.	**202,000**
ORXt4	**I-205 Ramp Metering** Retrofit ramp meters and the communication system at each entrance location, except freeway to freeway connections on I-205.	**1,795,000**
ORXt5	**I-5 Southbound at Front Avenue Ramp Metering** Retrofit ramp meters and the communication system at each entrance location.	**90,000**

ORXt6	**I-5 & I-84 Connection Ramp Metering** Retrofit ramp meters and the communication system at each entrance location.	**449,000**
ORXt7	**Motorist Info. System; Telephone System** Telephone System Traffic Report to provide pre-trip and enroute, real-time traffic conditions; information of incidents, road conditions and alternative routes.	**45,000**
ORXt8	**Oregon 43 Traffic Signal Improvement** Coordinate signal operations; control from a remote location; monitoring and fault reporting.	**1,122,000**
	Total	**$60,243,274**

Transit

TTR1	**Fastlink - Northwest Corridor** The proposed Fastlink northwest corridor would connect the CBD and the high density Northwest Portland Neighborhood with key regional attractors such as Civic Stadium, Westside LRT, Good Samaritan Hospital, and the retail center along NW 23rd Avenue.	**1,640,000**
TTR2	**Fastlink - Eastside** Fastlink is transit service designed to provide frequent and fast transit service in corridors linking regional centers, town centers and main streets. The proposed Southeast Corridor would connect the CBD and 82nd Avenue along one of the high activity eastside corridors like Hawthorne, Belmont or Division Street.	**1,678,372**
	Total	**$3,318,372**

Transit Oriented Development (TOD)

MTOD1	**Civic Neighborhood - Station Plaza** The Station Plaza is part of the Gresham Civic Neighborhood Transit Centered Development Plan. The plaza will be the focal point for light rail, pedestrian friendly streets, and shopping. It will include street trees, pedestrian scaled street lights, seating, planters and other transit oriented furnishings.	**960,000**
MTOD2	**Civic Neighborhood - LRT Station** The station will be located immediately west of the grade track crossing near the central north-south collector (Burnside to Division). This location will put the majority of the Civic Neighborhood within a five minute walk of a MAX station. Mixed use development is planned surround the station.	**2,180,000**
MTOD3	**Civic Neighborhood- Central-NS-Collector** North-South Collector from Burnside to Division (Length = 2,450'). It will function as the main point of access and egress between the Civic Neighborhood and Division and Burnside. It will also function as the main pedestrian link in the western half of the neighborhood.	**1,844,000**
TTOD1	**Millikian Way Purchase and Development** Proposal to improve SW Millikian Way from SW Murray Boulevard to SW Hocken Street from a two-lane private roadway to a three-lane public facility, with sidewalks and bike paths.	**2,480,000**
WTOD1	**Ground Floor Retail at Jail** This proposal would fund ground level retail within the new Criminal Justice Facility in central Hillsboro.	**1,000,000**
WTOD2	**Beaverton Creek Master Plan** 122 acres of integrated development centered on the Beaverton Creek Station of the West Side LRT, adjacent to Nike and Tektronix campuses between 153rd, Murray Boulevard, and Jenkins Road.	**2,220,544**
METTOD1	**TOD Implementation Program** This proposal will provide $7.0 million for a Regional Revolving Fund to acquire property at key areas immediately adjacent to a transit station for the purpose of TOD implementation and/or to make other public investments (site preparation and site improvements) in a TOD project that encourage TOD implementation.	**2,229,468**
	Total	**$17,684,544**

Transportation Demand Management (TDM)

TTDM1	**Regional Transportation Demand Management** This request is for funds to continue and enhance the region's TDM service, through FY 1999. Services include carpool matching, emergency ride home, employer outreach, etc.	**1,077,000**
TTDM2	**Regional Center Management Association** This proposal is to fund Regional Center Management Associations (RCMA) in Gresham, Hillsboro, Oregon City and Milwaukie for three years. The goals of the RCMA are to coordinate business, citizen and government efforts to transform these areas into regional centers by formulating and implementing strategic action plans; aiding implementation of existing downtown plans, and managing area transportation system. The cities, in partnership with their downtown associations and/or chambers of commerce, have agreed to provide matching funds. Livable Oregon, Inc. will help form the RCMAs, offering training and technical assistance.	**1,007,100**
PTDM1	**Central City TMA** The proposal is to fund the creation of TMAs in the Portland Central city business districts, including the Central Eastside Industrial District. The TMAs would develop TDM programs and strategies for employers in these more densely populated employment centers.	**300,000**
PTDM2	**Central City Vanpool Program** This would be a demonstration vanpool program aimed at providing an alternative to the single occupant vehicle in the Central City Business Districts (ie., Central Eastside Industrial Area, the Lloyd District, and other industrial sites and universities). The program is recommended in the Central City Transportation Management Plan (CCTMP).	**120,000**
ETDM1	**Portland Area Telecommuting Project** This proposal requests funding to expand the scope and duration of the Portland Area Telecommuting Project. Key elements include: (1) expanding the number of Metropolitan area employers by providing information, technical assistance and training; (2) establishing a telework center at possibly two locations; and (3) expanding monitoring and evaluation activity.	**400,000**
PtTDM1	**Swan Island Transportation Management Association** Funds to formalize and expand the Swan Island Transportation Management Association and provide operating funds for 2 years.	**150,000**
	Total	**$3,054,100**

Bicycle Projects

CB1	**Clackamas County: Clackamas Town Center East-West Connector** Construct a multi-use path from connecting North Clackamas Park and Clackamas Town Center. Project improves access in a regional center area.	$915,000
CB2	**Clackamas County: SE 82nd Drive Bikeway** Construct bike lanes on SE 82nd Drive from Highway 212/224 to Jennifer Street.	80,000
CB3	**Clackamas County: Linwood Avenue Bikeway** Construct bike lanes on Linwood Avenue from King Road to Johnson Creek Boulevard. Project will provide a missing bikeway link in a regional center.	208,000
CB4	**Clackamas County: Carmen Drive Bikeway** Construct bike lanes on Carmen Drive from I-5 to Quarry Road. Provides improved bicycle access in a town center area.	540,000
MB1	**Multnomah County: Hawthorne Bridge Sidewalk Widening** Reconstruct and widen sidewalks on the Hawthorne Bridge main span. Project will relieve severe congestion problem for bicycles and pedestrians and improve safety for both modes. Project will complete a link for several bikeways from inner neighborhoods to the central city.	1,755,000
MB2	**Multnomah County: Hogan Road Bikeway** Widen road to provide shoulder bikeways along Hogan Road from Powell Boulevard to Palmquist Road.	87,500
WB1	**Washington County: Walker Road Bikeway Improvement** Construct bike lanes on Walker Road from 173rd to 185th Street. The project would complete a bikeway from Cedar Hills to 185th Street and provide access to a town center.	296,000
WB2	**Washington County: Bethany Bike Lanes** Project provides bike lanes from West Union Avenue to Highway 26; the project will provide connections to a town center.	410,000
WB3	**Washington County: 170th Avenue Bikeways** Project provides sidewalks on one side and bike lanes on 170th Avenue from Alexander to Westside LRT alignment. The project will provide access to an LRT station.	1,259,000
PB1	**City of Portland: Gateway and Hollywood Bike to Transit** Provide bike lanes and bike boulevards on several streets providing access to Hollywood and Gateway town and regional centers/LRT stations.	400,000
PB2	**City of Portland: Burnside Bridge Waterfront Park Ramp** Project will construct a multi-use ramp from the Burnside Bridge to Waterfront Park. The project will improve bicycle and pedestrian access in a regional center.	856,000

PB3	**City of Portland: Burnside Bridge Eastside Esplanade Ramp** Project will construct a multi-use ramp from the Burnside Bridge to the Eastside Esplanade, providing bicycle and pedestrian access in a central city.	**856,000**
PB4	**City of Portland: Sellwood Bridge Access Connection** Construct ramps from the Sellwood Bridge to the planned Oaks Park Access road to provide improved bicycle and pedestrian access to the Sellwood Bridge. The project would improve access across the river in the central city.	**128,000**
OB1	**ODOT: SW Beaverton-Hillsdale Highway Bicycle Lanes and Sidewalks** Section A. Construct bicycle lanes and sidewalks from SW 65th Street to Scholls Ferry Road to improve access to the central city.	**460,000**
OB2	**ODOT: SW Barbur Boulevard Bicycle Lanes and Sidewalks** Construct bicycle lanes and sidewalks from Terwilliger Boulevard to Multnomah Boulevard to improve access to the central city.	**2,300,000**
OB3	**ODOT: SW Beaverton-Hillsdale Highway Bicycle Lanes and Sidewalks** Section B. Construct bicycle lanes and sidewalks from Scholls Ferry Road to Highway 217. Project will provide access in a Central City/Regional Center area.	**4,400,000**
OB4	**ODOT: Hall Boulevard Bicycle and Pedestrian Project** Construct bicycle lanes and sidewalks on Hall Boulevard from Oak Street to Pacific Highway. The project will improve access to a Regional Center.	**800,000**
OB5	**ODOT : I-205 Multi-Use Trial Intersection Improvements** Improve several street crossing along the I-205 trail to improve bicycle access on a major regional trail providing access to several regional centers.	**196,000**
OB6	**ODOT: SW Barbur Boulevard Bicycle Lanes and Sidewalks** Construct bicycle lanes and sidewalks on Barbur Boulevard from SW Hamilton Street to SW Front Street. The project will provide a missing link in bicycle and pedestrian access to the Central City.	**1,440,000**
	Total	**$17,386,500**

Pedestrian Projects

CP1	**City of Oregon City, Sidewalks on Warner Parrot and Telford Roads** Install sidewalks on north side of Warner Parrot Road between Linn Avenue and South End Road to serve local schools, commercial and residential and complement sidewalks on the south side. Install sidewalks on one side of Telford Road between Center Street and Davis.	255,000
CP2	**City of Lake Oswego: Pathway Adjacent to Greentree Road** Construct a 685 foot link from an existing pathway to South Shore Blvd.	64,000
CP3	**City of Lake Oswego: Pathway Along Glenmorrie Road** Construct a 250 foot pedestrian pathway from Chapin and Green Bluff Road.	8,500
CP4	**City of Lake Oswego: Pathway Along A Avenue** Construct a 150 foot pedestrian pathway between 9th and 10th.	7,200
CP5	**City of Lake Oswego: Pathway Along Carman Drive** Construct an 1800 foot pathway from Meadows Road to Waluga Drive.	64,000
CP6	**City of Lake Oswego: Pathway Along Upper Drive** Construct a 1650 foot pathway between Reese and Bryant Roads.	68,000
CP7	**City of Milwaukie: 17th Avenue Multi-Modal Project** Remove and reconstruct sidewalks and provide bike lanes along SE 17th Avenue from Lava Drive to Ochoco Street. Project will improve bicycle and pedestrian access to a regional center.	494,000
MP1	**Multnomah County: Division Street Bikeway/Pedestrian Improvements** Acquire additional right-of-way and construct sidewalks along SE Division Street from 202nd to 212th Avenue. Project will provide sidewalks and bike lanes on a major arterial street providing access to a regional center.	180,000
MP2	**Multnomah County: Sidewalks on Various Arterial Streets** Construct sidewalks on various improved arterial streets in East Multnomah County/Gresham. Projects will provide connections near and within a regional center.	180,000
MP3	**City of Gresham: Sidewalks on Various Collector Streets** Construct sidewalks on several collector streets to complete missing links in the local pedestrian system and provide connections to a regional center, transit and the Springwater Trail.	141,000
MP4	**City of Gresham: Pedestrian to Max Capital Program Phase II** Construct sidewalks, signals and other pedestrian amenities to enhance access around Central Gresham light rail stations.	481,000

MP5	**City of Gresham: Springwater Trail Bicycle/Pedestrian Access Improvements** Construct bike lanes and sidewalks on several local streets providing access to the Springwater Trail.	**500,000**
WP1	**City of Forest Grove: Pacific Avenue Pedestrian/Bikeway** Construct curb, sidewalk and bike lanes along the south side of Pacific Avenue from Hawthorne Street to Quince Street Project will provide pedestrian access along a main street and bus corridor.	**102,000**
WP2	**City of Forest Grove: 19th Street Sidewalk Improvement Project** Repair existing sidewalk and construct new sidewalk along 19th Street from B Street to Hawthorne Street Project will improve pedestrian access in a town center.	**225,000**
WP3	**City of Hillsboro: Downtown Hillsboro Pedestrian Improvements** Reconstruct downtown sidewalks to provide intersection bulb outs, curb ramps, lighting and pedestrian amenities. Project will improve access in a regional center.	**250,000**
PP1	**City of Portland: SW Capitol Highway Pedestrian Crossing Signals** Realign the driveway to Wilson High School and provide two pedestrian activated signals to provide safe crossing of SW Capitol Highway providing access to transit in a town center.	**1,120,000**
PP2	**City of Portland: SE Hawthorne Boulevard Pedestrian Improvements** Project will design and construct pedestrian crossing and amenities on SE Hawthorne Boulevard from SE 32nd to 39th Street The project will enhance pedestrian access along a main street and bus corridor.	**400,000**
PP3	**City of Portland: SE Woodstock Pedestrian Improvements** Design and construct median islands, curb extensions and other improvements to improve pedestrian access and crossing on SE Woodstock between SE 39th and SE 49th. Project will enhance pedestrian access along a main street and bus corridor.	**200,000**
PP4	**City of Portland: Wildwood Trial Pedestrian Bridge** Construct a pedestrian bridge for the Wildwood Trail across West Burnside Street. Project would improve safety for users of the Wildwood Trail.	**280,000**
PP5	**City of Portland: Broadway/Weidler Bicycle/Pedestrian Improvements** (Phase 1) Reconfigure Broadway/Weidler within the existing right-of-way from NE 9th to NE 16th Avenue to provide bicycle lanes and enhanced pedestrian access. The project includes wider sidewalks, transit amenities and intersection bulb outs to reduce crossing distances. Improvements will provide bicycle access and improve pedestrian access in the central city.	**2,500,000**
PP6	**City of Portland: NE 33rd - NE Broadway to Columbia Boulevard** Construct various traffic calming measures and pedestrian facilities along NE 33rd Avenue from NE Broadway to NE Columbia Boulevard. The project will enhance pedestrian access to a town center.	**280,000**

PP7	**City of Portland: Lents Pedestrian and Bicycle Enhancement Project** Provide pedestrian and bicycle improvements on the SE Foster/Woodstock couplet from SE 87th to SE 103rd Avenue. Specific projects to be selected by June 1995. This project would enhance bicycle and pedestrian access in a town center.	**1,000,000**
PP8	**City of Portland: Cully Boulevard Bicycle and Pedestrian Improvements** Provide bicycle and pedestrian access on Cully Boulevard from Killingsworth Street to Prescott Street to improve access to a town center.	**1,680,000**
OP1	**ODOT: Canyon Road Sidewalks** Construct sidewalks on Canyon Road from SW 110th to SW Campbell Drive. Project will provide pedestrian access to a regional center.	**371,000**
OP2	**ODOT: McLoughlin Boulevard Sidewalks** Construct and replace sidewalks on McLoughlin Boulevard for Harrison Street in Milwaukie to the Oregon city Shopping Center. Project provides access between two regional centers.	**2,400,000**
	Total	**$13,250,700**

Miscellaneous Projects

MISC1	**City of Portland: Lovejoy Ramp Replacement PE** Preliminary engineering for removal of the existing Lovejoy Ramp and construction of a new shorter ramp to the Broadway Bridge to encourage development of the River District section of the Central City. Estimated construction cost for the project is $11.8 million.	1,054,000
MISC2	**City of Portland: NE 12th Avenue Banfield Bridge Seismic Retrofit** Project will modify the bridge to provent the bridge deck, beams and girders from separating from the supports in the event of a moderate earthquake.	312,000
MISC3	**Port of Portland: Alternative Fuel Buses for PDX** Replace existing PDX shuttle fleet used to provide access from economy. Long-term and employee parking to the terminal area.	825,000
MISC4	**City of Oregon City: High Speed Rail Improvements** Develop projects to support future high speed rail stop in Oregon City.	500,000
	Total	**$2,462,000**

Freight Projects

PF1	**City of Portland: N/NE Columbia Boulevard Improvements** Signal interconnection system on Columbia Boulevard from Rivergate to I-205 and preliminary engineering for most promising alternatives for cross-overs between I-205 and I-5. Project will improve freight traffic flow in an industrial sanctuary.	250,000
PF2	**City of Portland, Port of Portland: Columbia/N. Lombard Overcrossing PE** Preliminary engineering for overcrossing Columbia Boulevard at N. Lombard to grade separate the facilities. Project will improve truck access in an industrial sanctuary, estimated construction cost for the project is $15 million.	897,000
PF3	**City of Portland, Port of Portland: Columbia Blvd. N. Burgard Intersection** Reconstruct and signalize intersection of Columbia Boulevard and N. Burgard Street to improve access and increase safety.	886,000
PF4	**Portland of Portland Marine Drive Modernization to Terminal Six Entrance** Expand N. Marine Drive from 3 to 5 lanes with bike lanes for 12,350 feet from the end of the new section to the Terminal Six entrance. Project will improve safety and access for freight within an industrial sanctuary.	2,400,000
PF5	**NE 148th Avenue Reconstruction (NE Marine Drive to NE Sandy Blvd.)** Reconstruct substandard 2 lane farm road to handle existing and future truck traffic; add continuous left turn lane, bike lanes and sidewalks.	2,963,300
PF6	**Lower Albina Overcrossing** (N. Interstate to N. Lewis/N. Loring/N. Tillamook) Eliminate a series of at-grade crossings ion the N. Albina Industrial District adjacent to the Union Pacific Rail Yards. Provide overpass with sidings, and secondary improvements to local streets and N. Interstate.	4,000,000
	Total	**$10,510,300**

Studies

S1 **Metro Transportation Planning** **1,958,000**

Fund Metro Regional Transportation Planning activites including:

*	Meeting ISTEA/Rule 12 mandates	1,050,000
*	Commodity flow modelling	340,000
*	General technical assistance	150,000
*	Westside Station Area Planning	418,000

S2 **PDC Transit Station Area Development Opportunity Strategy** **361,000**

Develop strategies and analysis to implement mixed-use development in transit station areas. Project will develop examples of complete projects including concept design, market research and financial analysis.

S3 **City of Portland Stark/Washington Corridor Study** **360,000**

Develop preliminary enginneering for signal and pedestrian improvements to improve traffic flow and increase pedestrian safety and access.

S4 **ODOT I-5/Hwy 217 Subarea Transportation Plan** **50,000**

Continue to develop a regional subarea plan to address transportation needs at the I-5/217 Interchange.

S5 **Tri-Met Transit Finance Task Force** **400,000**

Establish a blue-rilbbon task force to review plans for transit expansion, assess performance of the existing system, measure community attitiudes, examine options for new funding and prepare a package of reccomendations with public input.

S6 **Port of Portland Commodity Flow Analysis Refinement** **45,000**

Refine commodity flow analysis model developed by Metro and the Port of Portland with better defined variables and forecasts.

S7 **City of Lake Oswego Transit Center Relocation Study** **45,000**

Study alternative locations for the Lake Oswego transit center to relieve parking pressure on adjacent neighborhoods.

S8 **Cornelius Tualatin Valley Highway Corridor Enhancement** **60,000**

(4th Avenue to 26th Avenue) Enhance traffic control and circulation.

S9 **W. Burnside Redevelopment (Burnside Bridge to NW 23rd Avenue)** **950,000**

Rebuild Burnside between bridge and NW 23rd Avenue to reduce structural/ functional obstacles to pedestrians and bicyclists; special attention to urban design and intersection treatments which enhance the continuity of the Transit Mall and the Park Blocks.

S10 **City of Portland: Capitol Highway Multi-Modal Improvements** **200,000**

(Preliminary Engineering) Project will conduct project development and preliminary engineering for several projects to improve bicycle and pedestrian access along SWCapitol Highway.

S11	**Portland Traction Company Right-of-Way Trail/Project Issues/PE** Research issues to be addressed in order to develop a 7 mile bike/pedestrian trail running roughly parallel to the Willamette River from downtown Milwaukie to the City of Gladstone.	180,000
S12	**Clackamette Cove Master Plan** This site was identified in the Tier 1 Final Recommendation Report as a regionally significant area for TOD development. The proposal is to fund the plan to develop the entire lagoon area known as the "Clackamette Cove."	75,000
	Total	**$4,684,000**

STP REGIONAL RESERVE FUNDING REQUEST SUMMARY

Jurisdiction	Roadway Preservation	Roadway Expansion	Transit	TOD	TDM	Bike	Pedestrian	Freight	Studies	Misc.	Total
Clackamas Co.	$1,928,200	$18,577,999				$1,743,000	$960,700		$300,000	$500,000	$25,089,300
Multnomah Co.	$5,915,300	$7,317,631		$4,984,000		$1,842,500	$1,482,000				$18,970,600
Washington Co.		$22,789,644		$3,220,544		$1,965,000	$577,000		$60,000		$29,453,244
City of Portland	$2,368,720	$6,935,000			$420,000	$2,240,000	$7,460,000	$8,110,300	$1,871,000	$1,137,000	$32,866,495
Tri-Met			$3,318,372	$2,480,000	$2,084,100				$400,000		$9,665,372
ODOE					$400,000						$400,000
ODOT		$4,623,000				$9,596,000	$2,771,000		$50,000		$17,932,000
Metro				$7,000,000					$1,958,000		$8,958,000
Port of Portland					$150,000			$2,400,000	$45,000	$825,000	$3,420,000
Total	$10,212,220	$60,243,274	$3,318,372	$17,684,544	$3,054,100	$17,386,500	$13,250,700	$10,510,300	$4,684,000	$2,462,000	$146,755,011

ROADWAY PRESERVATION PROJECTS

	AG'CY	MODE	PROJ NO.	PROJECT NAME	TOTAL SCORE	PAVEMENT CONDITION		ACCIDENT FACTOR		2040 SUPPORT FACTOR	COST/BENEFIT FACTOR				MULTI-MODAL FACTOR				FUNDS REQ.	CUM TOTAL
						SCALE 1990 FAIR = 15 POOR = 8 VERY POOR = 0	SCALE 2002 FAIR = 0 POOR = 5 VERY POOR = 10	ACCIDENT RATE	SCALE > 124% = 20 100 -124% = 10 <100% = 0	SCALE HIGH= 25 MEDIUM = 10 LOW = 0	2015 LINK VMT	PROJECT COST	$/VMT	SCALE LOW $$ = 15 MED $$ = 8 HI $$ = 0	REG. BIKE SYS BENE COMPLET EXTENDS= ISOLATED	PED BENEFIT HELPS= 5 NA= 0 HINDERS = -5	TRANSIT BENEFIT EXIST'G SYS= 5 2040 SYS= 3 OTHER= 0	TOTAL MULT-MODE		
						POINTS	POINTS		POINTS	POINTS				POINTS				POINTS		
1	M	RP	1	Hawthorne Bridge Deck Stucture	85	15	10	*	20	25	17250	$5,750,000	$17	0	5	5	5	15	$5,159,200	$5,159,200
2	C	RP	1	Kruse Way Reconstr (Boones Ferry Rd.-Bangy Rd.)	68	8	10	*	10	10	44000	$1,370,000	$2	15	5	5	5	15	$1,229,200	$6,388,400
3	C	RP	2	Lake Road Preservat'n(SE 21st Ave. to Oatfield Rd.	66	8	10	*	0	25	3250	$779,000	$12	8	5	5	5	15	$699,000	$7,087,400
4	P	RP	1	SW Front Ave (NW Everett St to SW Harrison St.)	63	8	5	*	10	25	*	$2,960,900	$148,045	0	5	5	5	15	$2,368,720	$9,456,120
5	M	RP	2	NE Hood Street (Division St. to Powell Blvd.)	56	8	10	*	0	25	2380	$893,400	$19	0	3	5	5	13	$453,200	$9,909,320
6	M	RP	3	NE Fifth Street (Main St. to Cleveland Ave.)	56	0	10	*	0	25	2380	$605,746	$13	8	3	5	5	13	$302,900	$10,212,220

ROADWAY EXPANSION PROJECTS

	AG'CY	MODE	PROJ NO.	PROJECT NAME	TOTAL SCORE	VOLUME TO CAPACITY FACTO				ACCIDENT FACTOR		2040 SUPPORT FACTOR	COST/BENEFIT FACTOR						MULTIMODAL FACTOR				REQUESTED FUNDS	CUMULATIV TOTAL
						1998 V/C	SCALE 1998 >1.0 = 15 0.9-1 = 8 <0.9 = 0	SCALE 2015 >1.0 = 10 0.9-1 = 5 <0.9 = 0	2015V/C	ACCIDENT RATE	SCALE >124% = 20 100 -124% = 10 <100% = 0	SCALE HIGH= 25 MEDIUM = 13 LOW = 0	VHD 2015 COMMITD (with targets)	VHD 2015 BUILD (with targets)	DELAY DELTA	PROJECT COST (cost/20 yr)	$/VHD (20 yr annualized benefit)	SCALE LOW $$ = 15 MED $$ = 8 HI $$ = 0	REG. BIKE SYS BENEFIT COMPLETES= 5 EXTENDS= 3 ISOLATED= 0	PED BENEFIT HELPS= 5 NA= 0 HINDERS = -5	TRANSIT BENEFIT EXIST'G SYS= 5 2040 SYS= 3 OTHER= 0	TOTAL MULTI-MODE POINTS		
							POINTS	POINTS			POINTS	POINTS						POINTS							
1	C	RX	2	Sunnyside Road (Sunnybrook to 122nd Ave.)	100	1.01	15	10	1.76	2.9	20	25	116.66	65.4	51.26	$10,500,000	$10,242	15	5	5	5	15	$8,000,000	$8,000,000
2	W	RXt	14	Murray S. Sig. Intercon (Farmington - Millikan Ave.)	90	1.09	15	10	1.27	3.55/1.89	20	25	21.82	22.64	-0.82	$35,000	($2,134)	**15	0	0	5	5	$31,000	$8,031,000
3	M	RXt	1	238th Ave./Halsey St. Intersection	88	1.41	15	10	1.17	*	20	13	5.77	3.36	2.41	$419,850	$8,706	15	5	5	5	15	$376,531	$8,407,531
4	W	RX	10	124th Ave/99W/Tualatin Rd. Intersection	88	1.01	15	10	1.43	9.56	20	25	6.72	2.93	3.79	$5,000,000	$65,983	8	5	5	0	10	$4,486,000	$10,893,531
5	P	RXt	2	Multnomah/Garden Home Intersection Improvement	86	*	15	10	*	5.74	20	13	6.17	0	6.17	$875,000	$7,091	15	5	5	3	13	$785,100	$11,678,631
6	W	RXt	15	Scholls Ferry Sig. Intercon (Nimbus Dr to Hwy. 217)	83	0.82	8	10	1.05	3.79/1.89	20	25	2.44	1.79	0.65	$35,000	$2,892	15	0	0	5	5	$31,000	$11,709,631
7	O	RXt	5	I-5 Southbound at Front Ave. Ramp Metering	83	*	15	10	*		20	25			0	$100,000	$100,000	8	0	0	5	5	$90,000	$11,799,631
8	W	RXt	11	Greenburg/Mapleleaf (Locust St. to Hwy. 217 ramp)	78	0.91	8	5	0.99	*	20	25	17	10	7	$400,000	$2,857	15	0	0	5	5	$358,900	$12,158,531
9	W	RXt	13	Murray N. Sig. Intercon. (Hwy. 26 to Cornell Rd.)	78	1.55	15	10	1.79	8.03/1.89	20	13	52.1	51.19	0.91	$10,000	$549	15	0	0	5	5	$9,000	$12,167,531
10	C	RXt	12	Hwy. 43/Willamette Falls Drive Traffic Signal	76	1.13	15	10	1.70	5.07	20	13	*	*	0	$165,000	$165,000	8	0	5	5	10	$116,500	$12,283,031
11	C	RXt	7	Johnson Cr. Blvd. - Ph. II (SE 35th - SE 45th St.)	76	1.33	15	10	1.29	*	10	13	19.67	11.98	7.69	$1,418,000	$9,220	15	3	5	5	13	$1,272,301	$13,555,331
12	O	RXt	1	Arterial Signal Optimization Projects	75	1.09	15	10	1.19		14	16.4	275.2	266.19	9.01	$925,000	$5,133	15	0	0	5	5	$830,000	$14,385,331
				SE Division St. (SE 60th Ave. to SE 257th Ave.)		1.08	15	10	1.12	COP LIST	20	19		n.a.		n.a.	n.a.		0	0	5	5		
				NE Sandy Blvd. (E. Burnside St. to 82nd Ave.)		1.09	15	10	1.14	COP LIST	20	19		n.a.		n.a.	n.a.		0	0	5	5		
				SE 181st Ave. (I-84/Burnside to Powell Blvd.)		1.02	15	10	1.27	NO DATA	10	25		n.a.		n.a.	n.a.		0	0	5	5		
				SE Powell Blvd. (SE 11th Ave. to SE 98th Ave.)		1.14	15	10	1.20	5.18/3.55	20	0		n.a.		n.a.	n.a.		0	0	5	5		
				TV Highway (Beaverton City Limits to Baseline Rd)		1.14	15	10	1.23	2.96/3.55	0	19		n.a.		n.a.	n.a.		0	0	5	5		
13	O	RXt	6	I-5 & I-84 Connection Ramp Metering	75	*	15	10	*		20	25	0	0	0	$500,000	$500,000	0	0	0	5	5	$449,000	$14,834,331
14	P	RXt	3	ITS Program - Portland**	74	1.02	15	10	1.06	cop list	10	19	68.34	62.56	5.78	$1,000,000	$8,651	15	0	0	5	5	$1,884,000	$16,718,331
15	O	RXt	4	I-205 Ramp Metering	70	*	15	10	*		0	25	939	931	8	$2,000,000	$12,500	15	0	0	5	5	$1,795,000	$18,513,331
16	W	RXt	12	Barnes Signal Intercon (Suntek to Miller)	68	1.35	15	10	1.36	2.27/1.89	10	13	29.08	19.44	9.64	$20,000	$104	15	0	0	5	5	$18,000	$18,531,331
17	C	RX	5	Oatfield Road (Webster Rd. to 82nd Dr.)	66	1.18	15	10	1.20	*	10	13	4.62	2.98	1.64	$1,300,000	$39,634	8	0	5	5	10	$1,166,425	$19,697,756
18	C	RXt	10	Hwy. 43/McVey/Green Street Intersection	66	0.98	8	10	1.15	3.68	10	13	35.49	25.1	10.39	$1,282,500	$8,172	15	0	5	5	10	$1,150,723	$20,848,480
19	W	RX	4	Murray Blvd. OXing (Terman Rd. to Millikan Way)	66	1.04	15	10	1.88	.9/1.89	0	13	56.82	1.49	55.33	$4,682,000	$4,231	15	5	5	3	13	$4,201,000	$25,049,480
20	W	RX	2	Walker Road (Westfield Ave. to Murray Blvd.)	64	0.93	8	10	1.07	2.18	10	13	19.16	13.89	5.27	$1,796,000	$17,040	8	5	5	5	15	$1,611,000	$26,660,480
21	W	RX	1	Glencoe Road (Lincoln St. to Evergreen)	63	0.46	0	0	0.89	3.28/1.89	20	25	3.71	0.45	3.26	$3,472,000	$53,262	8	5	5	0	10	$3,116,000	$29,776,480
22	O	RXt	2	ATMS Pilot Program: I-5 So. Tow Service Patrol	53	*	*	*	*		20	25			0	$100,000	$100,000	8	0	0	0	0	$90,000	$29,866,480
23	P	RX	2	SE Tacoma Street (SE 28th Ave. to SE 32nd Ave.)	53	1.3	15	10	1.02	*	0	13	3	2.93	0.07	$563,000	$395,000	0	5	5	5	15	$553,000	$30,419,480
24	O	RXt	8	Ore. 43 Traffic Signal Improvement	51	1.05	15	10	1.22		0	13	47.75	44.71	3.04	$1,250,000	$20,559	8	0	0	5	5	$1,122,000	$31,541,480
25	P	RX	3	SE Foster Road Realignment (162nd Ave. to Jenne Rd.)	48	0.82	0	10	1.17	*	0	13	3.42	0.84	2.58	$800,000	$11,628	15	5	5	0	10	$2,112,900	$33,654,380
26	M	RXt	3	UPRR Bridge Replace (201st Ave./I-84 & 223rd Ave./I-84)	47	0.95	8	10	1.14	*	0	13	3.44	0	3.44	$1,941,000	$28,212	8	3	5	0	8	$1,941,000	$35,595,380
27	M	RX	4	Halsey St. Enhancements (223rd to Columbia Blvd)	46	0.45	0	10	1.05	*	0	13	2.28	0.14	2.14	$4,448,000	$103,925	8	5	5	5	15	$4,448,000	$40,043,380
28	C	RXt	15	Hwy. 43/Jolie Point Traffic Signal	46	0.65	0	0	0.80	10.54	20	13	0	0	0	$120,000	$120,000	8	0	0	5	5	$84,000	$40,127,380
29	M	RXt	2	US26/Orient Drive Safety/Congestion Project	43	*	0	10	*	4.28	10	13	*	*	0	$1,016,000	$1,016,000	0	5	5	0	10	$751,100	$40,878,480
30	P	RX	1	SE Water Ave. Ext. (SE Water @ Clay to SE Divis'n Pl. @ 4th	41	0.76	0	5	0.90	*	0	25	0	0	0	$3,200,000	$3,200,000	0	3	5	3	11	$1,600,000	$42,478,480
31	W	RX	3	Cornell Road (Bethany Blvd. to 179th Ave.)	41	0.68	0	5	0.97	0.52	0	13	6	0	6	$3,023,000	$30,230	8	5	5	5	15	$2,712,000	$45,190,480
32	C	RX	1	147th (N. of Sunnyside Rd.-142nd/Sunnyside Rd.)	39	0.18	0	0	0.89	*	10	13	1.14	0	1.14	$750,000	$32,895	8	3	5	0	8	$375,000	$45,565,480
33	W	RX	6	Mill Avenue S. Ext. (Canyon - Farmington)	38		0	0		n/a	0	25	*	*	0	$1,256,000	$1,256,000	0	3	5	5	13	$1,126,946	$46,692,426
34	O	RXt	7	Motorist Info. System Telephone System	38	*	*	*	*		NA	25			0	$50,000	$50,000	0	0	0	5	5	$45,000	$46,737,426
35	W	RX	7	Mill Ave./Henry St. LRT Connect (Cent. BV Station - Canyon)	38		0	0		n/a	0	25	*	*	0	$1,940,000	$1,940,000	0	3	5	5	13	$1,740,685	$48,478,091
36	W	RX	5	Henry Street E. Ext. (Cedar Hills Blvd. to Mill St.)	38		0	0		n/a	0	25	*	*	0	$1,370,000	$1,370,000	0	3	5	5	13	$1,229,233	$49,707,323
37	W	RX	9	NE 28th Avenue (North of Grant St. to E. Main St.)	37	0.78	0	5	1.18	*	0	13	11.62	6.7	4.92	$2,200,000	$22,358	8	3	5	3	11	$1,750,000	$51,457,323
38	C	RXt	13	Hwy. 43/Failing Street	34	0.54	0	0	0.66	2.73	0	13	0	0	0	$200,000	$200,000	8	3	5	5	13	$140,000	$51,597,323
39	O	RXt	3	US 26 Throughway Enhancement	33	*	*	*	*			25			0	$250,000	$250,000	8	0	0	0	0	$202,000	$51,799,323
40	C	RXt	8	Hwy. 43/Terwilliger Intersection	33	0.77	0	5	0.96	1.25	0	13	0	0	0	$1,100,000	$1,100,000	0	5	5	5	15	$987,000	$52,786,323
41	C	RXt	11	Hwy. 43/West "A" Street Realign & Signal	28	0.64	0	0	0.66	2.52	0	13	0	0	0	$1,220,000	$1,220,000	0	5	5	5	15	$1,094,645	$53,880,968
42	C	RXt	14	Hwy. 43/Pimlico Street	26	0.66	0	0	0.81	3.52	0	13	*	*	0	$150,000	$150,000	8	0	0	5	5	$105,000	$53,985,968
43	C	RXt	16	129th Ave. Imprvmn't (Happy Valley)	26	0.21	0	5	0.99	*	0	13	*	*	0	$1,000,000	$1,000,000	0	3	5	0	8	$1,000,000	$54,985,968
44	C	RX	3	122nd Ave. (Sunnyside Rd. to Hubbard Rd.)	20	0.43	0	10	1.07	*	0	0	2.79	3.14	-0.35	$4,610,000	($658,571)	0	5	5	0	10	$3,227,000	$58,212,968
45	C	RXt	6	Abernethy Realign (Abernethy Rd. -Wash. St.)	18	*	0	5	*	*	0	13	*	*	0	$1,253,000	$1,253,000	0	0	0	0	0	$554,000	$58,766,968
46	C	RXt	9	Hwy. 43/A Avenue Intersection	18	0.62	0	0	0.62	1.57	0	13	*	*	0	$580,000	$580,000	0	0	0	5	5	$520,405	$59,287,373
47	W	RX	8	Heather St. Connect (Mt. View Lane	18		0	0		n/a	0	13	*	*	0	$400,000	$400,000	0	0	5	0	5	$358,900	$59,646,273
48	C	RX	4	92nd Ave. Reconstr (Idleman Rd. to Mult. Co. Line)	5	0.22	0	0	0.80	0.9	0	0	0	0	0	$1,385,000	$1,385,000	0	0	5	0	5	$850,000	$60,496,273

TRANSIT

	AGCY	MODE	PROJ NO.	PROJECT NAME	TOTAL SCORE	INCREASE MODAL SHARE							2040 SUPPORT FACTOR	COST/BENEFIT FACTOR Cost/VMT Reduced				MULTI-MODAL FACTOR	Funds Requested
						2015 RIDERSHI TARGET	1995 RIDERSHIP	DELTA	% DELTA ASSIGNED TO PROJECT	TRIPS REDUCED	VMT REDUCTION	SCALE HIGH = 30 MEDIUM = 15 LOW = 0	SCALE HIGH= 25 MEDIUM = 13 LOW = 0	PROJECT COST	VMT REDUCED	$/VMT	SCALE LOW $$ = 20 MED $$ = 10 HI $$ = 0	SCALE HIGH = 25 Med = 13 Low = 0	
												POINTS	POINTS				POINTS	POINTS	
1	T	Transit	1	Fastlink - Northwest Corridor	100	5,013	4,100	913	100%	913	13,421	30	25	$2,050,000	13,421	$7.64	20	25	$1,640,000
2	T	Transit	2	Fastlink - Eastside	90	5,948	4,930	1,018	100%	1,018	14,965	30	25	$2,748,322	14,965	$9.18	10	25	$1,678,372

TRANSIT ORIENTED DEVELOPMENT (TOD)

	AGCY	MODE	PROJ NO.	PROJECT NAME	TOTAL SCORE	INCREASE MODAL SHARE				INCREASE IN DENSITY				2040 SUPPORT FACTOR	COST/BENEFIT FACTOR				MULTI-MODAL FACTOR	Funds Requested	Funds Requested Cum.
						PEF w/o TOD	PEF w/ TOD	DELTA % CHG non-auto Tr + bike	SCALE HIGH = 25 MEDIUM = 1 LOW = 0	2015 DENSI w/o TOD HH/acre	2015 DENSI with TOD HH/acre	DELTA	SCALE HIGH = 25 MEDIUM = 1 LOW = 0	SCALE HIGH= 25 MEDIUM = LOW = 0	PROJECT COST	VMT Reduced	$/VMT	SCALE LOW $$ = 1 MED $$ = 8 HI $$ = 0	Four = 10 < Four = 0		
									POINTS				POINTS	POINTS				POINTS	POINTS		
1	Met*	TOD	1	TOD Implementation Program	100	5	12	15	25	8.5	38	29.5	25	25	2,477,186	11475	10.79	15	10	$2,229,468	2,229,468
2	M	TOD	3	Civic Neighborhood - Station Plaza	85	6	12	12	25	12	30	18	25	25	1,200,000	869	69.04	0	10	$960,000	3,189,468
3	W	TOD	2	Beaverton Creek Master Plan	76	5	12	15	25	7.03	22	14.97	13	13	2,775,680	13984	9.92	15	10	$2,220,544	3,420,544
4	M	TOD	5	Civic Neighborhood - Central N/S Collector	73	6	12	12	25	5.62	25	19.38	13	25	2,049,000	1336	76.68	0	10	$1,844,000	5,264,544
5	M	TOD	4	Civic Neighborhood - LRT Station	73	6	12	12	25	8.74	25	16.26	13	25	2,721,000	1972	68.99	0	10	$2,180,000	7,444,544
6	T	TOD	6	Millikan Way Purchase and Development	69	7	12	10.5	13	10.31	25	14.69	13	25	3,100,000	3121	49.66	8	10	$2,480,000	9,924,544
7	W	TOD	7	Ground Floor Retail	56	12	12	0	0	0	13	13	13	25	1,102,750	1805	30.55	8	10	$1,000,000	10,924,544

*** Metro TOD represents prototypical project in Gresham or Hillsboro. Cost reflect average of other TOD proposals.**

TRANSPORTATION DEMAND MANAGEMENT (TDM)

	AG'CY	MODE	PROJ NO.	PROJECT NAME	TOTAL SCORE	MODAL SHARE FACTOR				2040 SUPPOR FACTOR	COST/BENEFIT FACTOR				MULTI-MODAL FACTOR		Funds Requested	Funds Requested Cum.
						2015 VEHICLE TRIPS REDUCED	VMT AVOIDED PER TRIP	TOTAL 2015 VMT AVOIDED	SCALE HIGH = 30 MED = 15 LOW = 0	SCALE HIGH= 25 MEDIUM LOW = 0	TOTAL 2015 VMT AVOIDED	PROJECT COST	$/VMT	SCALE LOW $$ = 25 MED $$ = 13 HI $$ = 0	# OF OTHER MODES AIDED	SCALE High = 20 Med = 10 Low = 0		
									POINTS	POINTS				POINTS		POINTS		
1	T	TDM	1	Regional TDM Program	100	4645	5.1	47,379	30	25	47,379	1,435,600	$8	25	2	20	$1,077,000	$1,077,000
2	P	TDM	2	Central City TMA	85	1155	7.35	16,972	15	25	16,972	330,000	$4	25	2	20	$300,000	$1,377,000
3	T	TDM	3	Regional Center Mgt. Assoc.	73	1087	4.98	10,827	15	25	10,826	1,237,000	$23	13	2	20	$1,007,100	$2,384,100
4	P	TDM	4	Central City Vanpool Program	60	160	16	5,936	0	25	5,936	132,000	$6	25	1	10	$120,000	$2,504,100
5	Port	TDM	5	Swan Island TMA	58	392	6.93	5,433	0	13	5,433	250,000	$9	25	2	20	$150,000	$2,654,100
6	E	TDM	6	Portland Area Telecommuting Project	48	330	8.5	5,610	0	25	5,610	440,000	$16	13	1	10	$400,000	$3,054,100

BIKE SYSTEM PROJECTS

	AGCY	MODE	PROJ NO.	PROJECT NAME	TOTAL SCORE	RIDERSHIP POTENTIAL				REGIONAL SYSTEM CONNECTIVITY	SAFETY		2040 SUPPORT FACTOR	COST/BENEFIT FACT				CUMULATIVE TOTAL	
						1990 TRIPS	2016 TRIPS	DELTA	SCALE HIGH= 15 MEDIUM = 8 LOW=0	SCALE COMPLETES=20 EXTENDS = 10 ISOLATED=0	SCALE HIGH ADT/NARROW=10 High ADT/Wide = 5 LOW ADT=0	SCALE YES=5 No = 0	SCALE HIGH=25 MED=10 LOW = 0	PROJECT COST	BENEFIT (Avoided VMT)	$/BENEFIT	SCALE low$$=25 Med$=13 HIGH$$=0		
									POINTS	POINTS	POINTS	POINTS	POINTS				POINTS	Request	Cumulative
1	M	B	1	Hawthorne Brdg Sidewalk Widening (Mult. Co)	100	974	3080	2106	15	20	10	5	25	$1,950,000	3,704	$23.69	25	$1,755,000	$1,755,000
2	O	B	2	SW Barbur Boulevard Hamilton/Front (ODOT)	88	515	1663	1148	15	20	10	5	25	$1,800,000	2,019	$35.66	13	$1,440,000	$3,195,000
3	W	B	1	Walker Rd. Bikeway Imprvmn't (Wash. Co.)	83	253	1499	1246	15	20	10	0	13	$370,000	2,191	$6.75	25	$296,000	$3,491,000
4	P	B	1	Gateway & Hollywood Bike to Transit (COP)	81	495	919	424	8	20	10	5	25	$500,000	746	$26.82	13	$400,000	$3,891,000
5	O	B	5	I-205 Multi-Use Trial Intersection Imprvmn't (ODOT	73	150	350	200	0	20	10	5	25	$245,000	352	$27.86	13	$196,000	$4,087,000
6	C	B	2	SE 82nd Dr. Bikeway (Clack. Co.)	71	75	490	415	8	20	0	5	13	$99,900	730	$5.48	25	$80,000	$4,167,000
7	W	B	2	Bethany Bike Lanes (Wash. Co.)	69	67	490	423	8	20	10	5	13	$510,000	744	$27.56	13	$410,000	$4,577,000
8	O	B	6	SW Barbur Blvd Terwilliger/Multnomah (ODOT)	68	164	467	303	8	20	10	5	25	$3,300,000	533	$215.82	0	$2,300,000	$6,877,000
9	O	B	3	SW BV-Hillsdale Hwy Bike Lanes/S'walks (ODOT)	68	331	1015	684	8	20	10	5	25	$5,500,000	1,203	$182.89	0	$4,400,000	$11,277,000
10	M	B	2	Hogan Rd. Bikeway (Mult.Co.)	68	46	150	104	0	20	10	0	13	$111,000	183	$23.92	25	$87,500	$11,364,500
11	C	B	1	Clack. Town Cntr. E/W Connect (Clack. Co.)	68	92	434	342	8	20	10	5	25	$1,144,800	601	$76.07	0	$915,000	$12,279,500
12	P	B	5	Sellwood Bridge Access Connection (COP)	61	333	1018	685	8	10	0	5	13	$160,000	1,205	$5.31	25	$128,000	$12,407,500
13	P	B	2	Burnside Bridge Waterfront Park Ramp (COP)	61	254	946	692	8	10	0	5	25	$1,070,000	1,217	$35.17	13	$856,000	$13,263,500
14	C	B	3	Linwood Ave. Bikeway (Clack. Co.)	61	171	334	163	0	20	10	5	13	$259,875	287	$36.28	13	$208,000	$13,471,500
15	W	B	3	170th Ave. Bikeways (Wash. Co.)	59	110	589	479	8	10	10	5	13	$1,574,000	842	$74.73	13	$1,259,000	$14,730,500
16	O	B	1	SW BV-Hillsdale Hwy Bike Lanes/S'walk (ODOT)	48	89	214	125	0	20	10	5	13	$575,000	220	$104.63	0	$460,000	$15,190,500
17	P	B	3	Burnside Brdg Eastside Esplanade Ramp (COP)	48	378	624	248	8	10	0	5	25	$1,070,000	436	$98.13	0	$856,000	$16,046,500
18	O	B	4	Hall Boulevard Bike and Ped Project (ODOT)	43	116	352	236	0	20	10	0	13	$1,000,000	415	$96.38	0	$800,000	$16,846,500
19	C	B	4	Carmen Dr. Bikeway (Clack. Co.)	41	96	271	175	0	10	5	0	13	$675,000	308	$87.73	13	$540,000	$17,386,500

PEDESTRIAN SYSTEM PROJECTS

	AGCY	MODE	PROJ NO.	PROJECT NAME	TOTAL SCORE	INCREASE MODAL SHARE		SAFETY FACTOR	2040 SUPPORT FACTOR	COST/BENEFIT FACTOR					MULTI-MODAL FACTOR		CUMULATIVE COSTS	
						POTENTIAL FOR PEDESTRIAN TRIPS (Based on Pedestrian Environmental Factor) SCALE HIGH = 15 MED = 8 LOW = 0	PROJECT'S IMPACT ON PEDESTRIAN TRIP-MAKING (Based on importance of project relative to land uses/densities & other ped. facilities) SCALE HIGH = 10 MED = 5 LOW = 0	SCALE EXTREME = 25 MODERATE= 13 NONE = 0	SCALE HIGH= 25 MEDIUM = 13 LOW = 0	PROJECT COST	20-YEAR ANNUALIZED COST	SUBTOTAL OF OTHER POINTS (=BENEFIT)	$ PER POINT	SCALE LOW $$ = 15 MED $$ = 8 HI $$ = 0	# OF OTHER MODES AIDED SCALE 2+ = 10 1 = 5		FUNDS REQUESTED	CUMULATIVE TOTAL
					POINTS	POINTS	POINT	POINTS	POINTS					POINTS		POINT		
1	W	P	2	Pacific Avenue Ped/Bicycle Imprvm't (F. Grove)	83	15	5	13	25	$113,000	$5,650	68	$83	15	2	10	$102,000	$102,000
2	P	P	1	Hillsdale Ped X'ing Signals (COP)	80	15	10	25	25	$1,400,000	$70,000	80	$875	0	1	5	$1,120,000	$1,222,000
3	P	P	3	Woodstock Boulevard Ped Imprvm't (COP)	78	15	5	13	25	$250,000	$12,500	63	$198	15	1	5	$200,000	$1,422,000
4	M	P	1	Division Street Bikeway/Pedestrian Improvements	76	8	5	13	25	$229,000	$11,450	61	$188	15	2	10	$180,000	$1,602,000
5	O	P	1	Canyon Rd. Sidewalks (ODOT)	76	8	5	25	25	$413,000	$20,650	68	$304	8	1	5	$371,000	$1,973,000
6	C	P	7	17th Ave. Multi-Modal Project (Milwaukie)	76	8	5	25	25	$618,000	$30,900	68	$454	8	1	5	$494,000	$2,467,000
7	O	P	2	McLoughlin Blvd Sidewalks (ODOT)	73	8	5	25	25	$3,000,000	**********	73	$2,055	0	2	10	$2,400,000	$4,867,000
8	W	P	3	19th Street Sidewalk Improvements (F. Grove)	73	15	5	13	25	$252,450	$12,623	58	$218	15	0	0	$225,000	$5,092,000
9	C	P	4	A Avenue Pedestrian Pathway (L. Oswego)	73	15	5	13	25	$9,000	$450	58	$8	15	0	0	$7,200	$5,099,200
10	P	P	7	Lents Ped and Bike Enhancement Project (COP)	73	15	10	13	25	$1,400,000	$70,000	73	$959	0	2	10	$1,000,000	$6,099,200
11	P	P	8	Cully Boulevard Bike and Ped Imprvmn't (COP)	73	8	5	25	25	$2,100,000	**********	73	$1,438	0	2	10	$1,680,000	$7,779,200
12	M	P	2	Mult. Co. Sidewalk Corridor Missing Links	71	8	5	13	25	$224,400	$11,220	56	$200	15	1	5	$180,000	$7,959,200
13	P	P	2	Hawthorne Boulevard Ped/Bicycle Imprvm't (COP)	71	15	5	13	25	$500,000	$25,000	63	$397	8	1	5	$400,000	$8,359,200
14	M	P	3	Gresham Missing Links Sidewalk Program	71	8	5	13	25	$282,746	$14,137	56	$252	15	1	5	$141,000	$8,500,200
15	M	P	4	Gresham Pedestrian to MAX Capital Program - Phase	71	15	5	13	25	$601,000	$30,050	63	$477	8	1	5	$481,000	$8,981,200
16	P	P	6	Broadway/Weidler Bike/Ped Imprvmn't (COP)	68	15	5	13	25	$2,787,000	**********	68	$2,049	0	2	10	$2,500,000	$11,481,200
17	W	P	1	Hillsboro Downtown Pedestrian Improvements	66	15	0	13	25	$850,000	$42,500	58	$733	8	1	5	$250,000	$11,731,200
18	C	P	6	Upper Drive Pedestrian Pathway (L. Oswego)	66	8	5	25	13	$85,000	$4,250	51	$83	15	0	0	$68,000	$11,799,200
19	M	P	5	Springwater Trail Pedestrian/Bicycle Access (Gresham	56	8	5	13	25	$855,000	$42,750	56	$763	0	1	5	$500,000	$12,299,200
20	C	P	5	Carman Drive Pedestrian Pathway (L. Oswego)	54	8	5	13	13	$80,000	$4,000	39	$103	15	0	0	$64,000	$12,363,200
21	P	P	5	NE 33rd - NE Broadway to Columbia Blvd. (COP)	54	15	0	13	13	$350,000	$17,500	46	$380	8	1	5	$280,000	$12,643,200
22	C	P	1	Sidewalks on Warner-Parrot & Telford (Oregon City)	47	8	5	13	13	$283,000	$14,150	39	$363	8	0	0	$255,000	$12,898,200
23	C	P	2	Greentree Road Pedestrian Pathway (L. Oswego)	46	0	5	13	13	$80,000	$4,000	31	$129	15	0	0	$64,000	$12,962,200
24	C	P	3	Glenmorrie Road Pedestrian Pathway (L. Oswego)	41	0	0	13	13	$12,500	$625	26	$24	15	0	0	$8,500	$12,970,700

MISCELLANEOUS

	AG'CY	MODE	PROJ NO.	PROJECT NAME	PROJECT COST	CUMULATIVE COST
1	P	MISC	1	COP: Lovejoy Ramp Replacement	$1,054,000	$1,054,000
2	P	MISC	2	COP: NE 12th Ave. Banfield brdg Seismic Retro.	$312,000	$1,366,000
3	PORT	MISC	3	Port: Alternative Fuel Buses for PDX	$825,000	$2,191,000
4	C	MISC	4	City of Oregon High Speed Rail Improvements	$500,000	$2,691,000

FREIGHT

	AG'C	MOD	PRO NO.	PROJECT NAME	TOTAL SCORE	IMPROVE CONNECTIVITY	SAFETY	2040 SUPPOR FACTOR	COST/BENEFIT FACTOR						MULTI-MODAL FACTOR			FUNDS REQUESTED	CUMULATIVE TOTAL
						SCORE COMPLETES LINK = 10 CONNECTS TO FACILITY = 10 TO FREIGHT AREA = 5	SCALE REDUCES CONFL FOR FREIGHT = 10 ADDRESSES HAZ PROBLEM = 10 ADDRESSES HIGH ACCIDENT RATE = 5	SCALE HIGH= 25 MEDIUM = 10 LOW = 0	VHD 2015 NO BUILD	VHD 2015 BUILD	DELAY DELTA	PROJECT COST	$/VHD	SCALE LOW $$ = 15 MED $$ = 8 HI $$ = 0	REG. BIKE SYS BENEFIT ADDS REG = 5 ADDS LOCAL = 3 NO CHG = 0	TRANSIT BENEFIT YES = 5 NO = 0	TOTAL MULT-MODE		
						POINTS	POINTS	POINTS						POINTS			POINTS		
1	P	F	2	COP/Port: Columbia/N. Lombard OXing (PE)	78	25	20	25	24	2	22	$1,000,000	$2,281	8	0	0	0	$897,000	$897,000
2	P	F	4	Port: Marine Drive Modernization to Term. 6 Entrance	73	25	10	25	74	21	53	$2,880,000	$2,733	8	5	0	5	$2,400,000	$3,297,000
3	P	F	3	COP/Port: Columbia Blvd. - N. Burgard Intersection	68	25	10	25	22	2	20	$1,100,000	$2,790	8	0	0	0	$886,000	$4,183,000
4	P	F	1	COP N/NE Columbia Blvd. Improvements	65	25	0	25	118	114	4	$278,629	$3,786	15	0	0	0	$250,000	$4,433,000
5	P	F	6	Lower Albina OXing (N. Interstate to N. Lewis/Loring/Tillamoo	60	25	10	25	3	0	3	$5,200,000	$75,581	0	3	0	0	$4,000,000	$8,433,000
6	P	F	5	NE 148th Ave. Reconstr (NE Marine Dr.-NE Sandy Blvd.)	55	15	10	25	0	0	0	$3,267,797	$628,423	0	5	0	5	$2,963,300	$11,396,300

STUDIES

	AG'CY	MODE	PROJ NO.	PROJECT NAME	PROJECT COST	CUMULATIVE
1		S	1	Metro Transportation Planning	$1,958,000	$1,958,000
2		S	2	PDC LRT Station Area Develop. Opport. Strategy	$361,000	$2,319,000
3		S	3	COP Stark/Washington Corridor Study	$360,000	$2,679,000
4		S	4	ODOT I-5/Hwy 217 Subarea Transportation Plan	$50,000	$2,729,000
5		S	5	Tri-Met Transit Finance Task Force	$400,000	$3,129,000
6		S	6	Port Commodity Flow Analysis Refinement	$45,000	$3,174,000
7		S	7	Lake Oswego Transit Center Relocation Study	$45,000	$3,219,000
8		S	8	Cornelius Tualatin Valley Hwy. Cor. (4th Ave. to 26th Ave.)	$60,000	$3,279,000
9		S	9	W. Burnside Redevelop (Burnside Bridge-NW 23rd Ave.)	$950,000	$4,229,000
10		S	10	Capitol Highway Multi-Modal Imprvmn't (COP)	$200,000	$4,429,000
11		S	11	Port. Traction Co. Project Issues/PE	$180,000	$4,609,000
12		S	12	Clackamette Cove Master Plan	$75,000	$4,684,000

SUMMARY OF BRUCE WARNER'S PRESENTATION TO JPACT ON 4/13/95

- Introduction
  - This is the first RTP update which is subject to the ISTEA financial constraint requirement.
  - I want to briefly describe:
    - 1. What the regulations require
    - 2. How ODOT and the MPOs in Oregon developed estimates of available state and federal resources for:
      - A. State highway modernization
      - B. Federal and state transit capital and operating assistance
    - 3. What ODOT feels these estimates mean in terms of highway related modernization improvements in the METRO area on the state system in the next 20 year RTP.

Source: ODOT

- Regulatory Requirements
  - In order to prevent overly optimistic assumptions of transit service levels and other roadway improvements including TSM/TDM measures which would provide an incorrect estimation of auto emissions, ISTEA created financial constraint assumptions for metropolitan transportation plans.
  - Transportation plans must be based on "reasonably expected" funding sources which are to be projected on data reflecting "the existing situation and historical trends".
  - These phrases, as seen in a moment, create very conservative parameters for the RTP.
- ODOT/MPO Committee
  - In order to insure a consistent set of assumptions statewide, ODOT established an ad hoc committee of ODOT staff, DEQ and MPOs.
  - Jack Svadlenak, (ODOT/Salem Transportation Development Branch), chaired this committee.

Source: ODOT

- In brief, the committee developed:
  - 20-year projections of federal highway and transit funding.
  - 20-year projections of state highway and transit funding.
  - Estimated ODOT's administrative, operation, maintenance and preservation needs.
  - Estimated how the remaining ODOT modernization funds would be distributed among the five ODOT regions.
  - Presented to the MPOs a 20-year estimate of:
    - Federal transit capital and operating assistance. (assumes S/N w/50% Section 3 with $475 million state match).
  - Report is available
  - Modernization funding coming to each ODOT region. (This must be further divided between rural and urban. See Attachment #1)
- The findings for highway modernization is shown on Attachment #2.

Source: ODOT

- Because of the conservative assumptions forced by the regulations, several odd findings result:
  - 1. No new revenue source for transit operations, including the proposed constitutional amendment and registration fee increase included in the state finance package, can be assumed.
    - (See Attachment #3)
  - 2. Inflation and preservation consume the modernization program so it is almost non-existent in 20 years.
  - 3. On the other hand, revenue projections may be high in the early years if no action is taken at the state legislature or in increasing federal funding in the next reauthorization.
  - 4. Reasonably expected revenues address only about 1/4 of modernization needs.
- As you can see, these financial constraint assumptions make this RTP different.
  - On paper at least, we are no longer setting forth what we desire and then seeking revenue to finance these desired improvements.

Source: ODOT

- Rather, we shall have a very narrow set of priorities we plan to work toward if the future is as austere as these regulations suggest.

- ODOT Recommendations
  - In developing the following set of recommendations:
    - We met with major jurisdictions (staff)
    - Reviewed ISTEA planning requirements
    - Reviewed 2040 plan
    - Analyzed overall system needs (past RTP + our analysis)
      - Attachment #4 shows the current RTP and those other major highway improvements.
      - Attachment #5 shows the constrained list of projects.
  - Criteria and recommendations (See ODOT Constrained Project List)
    - 1. We acknowledged the priority JPACT gave to certain projects delayed in the last TIP.
    - 2. We gave priority to projects which were the second phase of previously programmed improvements.

Source: ODOT

- 3. We propose to continue the regional ATMS plan, albeit at a somewhat slower pace.
- 4. We have tried to address the need for efficient freight movement.
- 5. We tried to reflect the access needs of regional centers inherent in 2040 plan.
- 6. We need to address our worst freeway safety and operational problems.
- 7. We want to implement low cost TSM improvements in several corridors needing attention.
- 8. There are several particular bike/pedestrian improvements we feel need addressing on the state system.
- 9. We want to encourage the use of local matching funds for state facilities and NHS routes, not on the state system.
  - This could be the leveraging mechanism which would help expand a regional arterial program.
  - Possible projects were suggested to us by the jurisdictions.

Source: ODOT

- 10. Reconnaissance/EIS work needs to occur in several places before specific solutions can be proposed for funding.
  - I-5 North
  - I-205 Corridor
  - I-405/US 26 connection
  - AOH MIS reports
- In preparing these recommendations, we tried:
  - Not to compete with S/N LRT
  - To ensure geographic equity

- Financing Cost
  - The total estimated ODOT cost for these projects in 1994 dollars is $435 million

Source: ODOT

ODOT Financial Assumptions for Portland Metro Area

- Regional Transportation Plan (RTP) Update Years 1995-2015
- Existing STIP Construction Projects through 1998 assumed in Constrained RTP
- Figures are deflated to Current STIP dollars
- Figures are totals for 1999 - 2015
- "Reasonably Expected" statewide funds available for Highway Modernization or other purposes: $1,802,900,000
- Region 1 share of statewide total (30.2%): $544,475,800
- METRO portion of Region 1 (80%): $435,580,640
- Outside METRO Boundary (20%): $108,895,160
- Additional Federal funds earmarked for METRO: $158,597,000

Source: ODOT

COMMITTEE MEETING TITLE JPACT

DATE 4-13-95

NAME	AFFILIATION
✓ Bruce Warner	ODOT
✓ [illegible]	Clackamas Co.
✓ David Lohman	Port of Portland
✓ Bob Post	TRI-MET
✓ Craig Lomnicki	City of Wilsonville
✓ Kathy Busse	Mult Co.
✓ Bob Bothman	MACCI
Keith Lawton	Metro.
✓ LARRY GARRETT	TRI-MET
John Stewart	Gresham
MAY TAC BOT	GRESHAM
✓ Sandra Doubleday	Gresham
✓ Jane Leeson	Gresham
✓ Les White	C-TRAN
MERRIE WAYKETT	METRO.
✓ Susie Lahsene	Port
✓ Tom Coffee	City of Lake Oswego
Mike Hoglund	Metro
✓ Mary Legry	WSDOT
✓ Dean Lookingbill	Southwest Washington Regional Transp. Council
✓ Claudiette La Vert	Cities of Mult County
✓ ROY R ROGERS	WASHINGTON COUNTY
DON MORISSETTE	METRO

COMMITTEE MEETING TITLE JPACT

DATE April 13, 1995

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✓ TANYA COLLIER	MULTNOMAH COUNTY
✓ ROB DRAKE	CITIES OF WASHINGTON CO.
✓ Mike Burton	METRO EXEC.
✓ Susan McLain	Metro Councilor
Andy Cotugno	Metro
✓ GREG GREEN	DEQ
✓ EARL BLUMENAUER	PORTLAND
✓ Dennis Mitchell	ODOT
✓ ~~FOXHOLER~~	ODOT
✓ Jack Svadlenak	ODOT
✓ Clair Bowman	Ada Planning Assoc. – Boise ID