WORK SESSION

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1700 | FAX 503 797 1797

METRO

MEETING: METRO COUNCIL WORK SESSION
DATE: April 11, 1995
DAY: Tuesday
TIME: 2:00 PM
PLACE: Metro Council Chamber

Approx. Time *			Presenter	Lead Councilor
2:00 PM		**CALL TO ORDER AND ROLL CALL**		
(5 min.)	**1.**	**INTRODUCTIONS**		
(5 min.)	**2.**	**CITIZEN COMMUNICATIONS**		
(5 min.)	**3.**	**EXECUTIVE OFFICER COMMUNICATIONS**		
	4.	**OTHER BUSINESS**		
2:15 PM (20 min.)	4.1	Risk Management Semi-Annual Report	Burton, Sims, Moss	
2:35 PM (30 min.)	4.2	Overview of JPAC Agenda That Includes: 1) Gresham Civic Neighborhood Report; 2) Res. No. 95-2123 Endorsing the Citizens' Advisory Committee For The 1996 RTP Update; 3) FY 96 MTIP/$27 Million Region 2040 Reserve Allocation; and 4) RTP Update	Cotugno	Monroe
3:05 PM (60 min.)	4.3	Update and Briefing on Regional Water Supply Planning Study	Furfey	McLain
4:05 PM (15 min.)	4.4	Update on Recycling Advertising Campaign	Gorham Gregory	Kvistad
4:20 PM (10 min)	**5.**	**COUNCILOR COMMUNICATIONS**		
4:30 PM (10 min.)	**6.**	**LEGISLATIVE ISSUES**		
4:40 PM		**ADJOURN**		

Items scheduled at the work session may be continued for further discussion or action at the regular Thursday Council meeting.

For assistance/Services per the Americans with Disabilities Act (ADA), dial TDD 797-1804 or 797-1540 (Council Office)

* All times listed on the agenda are approximate; items may not be considered in the exact order listed.

AGENDA ITEM 4.1
Meeting Date: April 11, 1995

Risk Management Semi-Annual Report

M E M O R A N D U M

METRO

Date: March 27, 1995

To: Metro Council

From: Mike Burton, Executive Officer

Re: Semi-Annual Report on Risk Management

Introduction

This report describes the Risk Management Division's activities for 1994. Risk Management is part of the Finance Department.

Risk Management has four primary areas of responsibility:

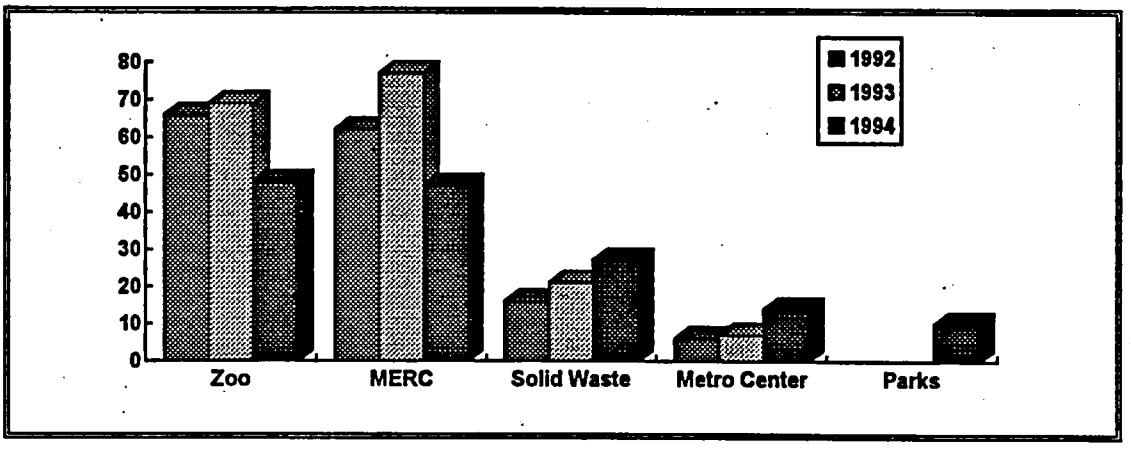
1. Save money by reducing the effects of claims and purchasing insurance only for potentially catastrophic losses.

2. Promote safety to assure Metro and Metro ERC is a safe place to work and visit.

3. Be a resource to Metro departments to identify and prevent risk.

4. Provide emergency management services and planning to all Metro facilities.

The following graph shows the number of total claims (liability, auto, and workers' compensation) by department for the last three years. In total, 1994 claims are down from prior years.

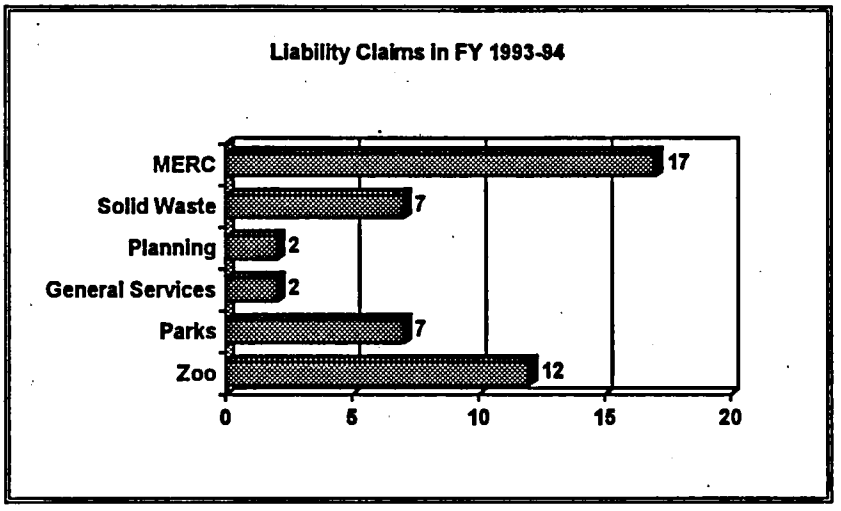


LIABILITY

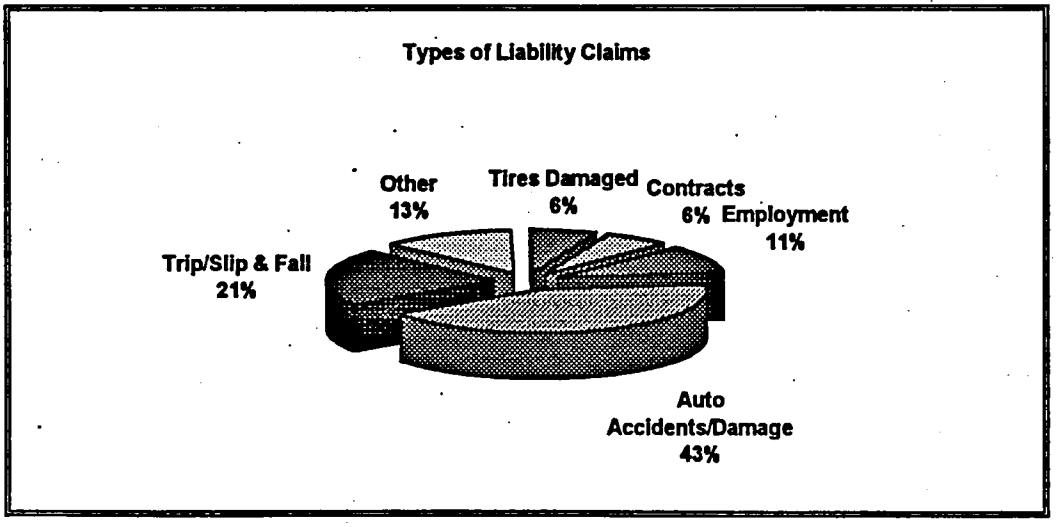
Metro became self-insured for liability exposures on July 1, 1992. Self-insurance has provided significant savings to Metro.

Claims

Metro consistently receives approximately 50 liability and auto claims annually. In 1994 there were 47, compared to 51 in 1993. Although fewer in number, there has been an increase in the cost of liability and auto claims. The following chart shows claim origination by facility.



Most claims involve minor auto damage. The most expensive claims are employment related. The following graph shows the types of causes for liability claims.



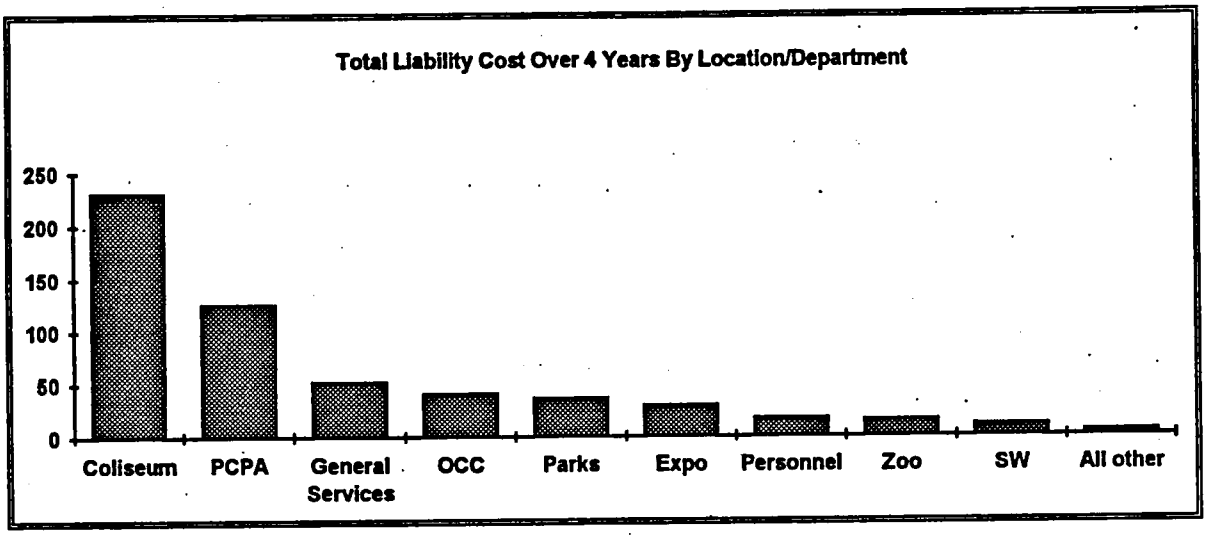
Claims Cost

Historically, liability claims have been recorded on a calendar year basis to coincide with the insurance coverage. The following chart shows the total claims paid over the past nine years compared to the final amount of claims to be paid as projected by an actuary in 1993.

Date	Paid Claims	Actuary Projected Claims 11/1/93
1986	$53,730	55,000
1987	$17,209	18,000
1988	$3,442	16,464
1989	$3,062	26,520
1990	$12,029	11,000
1991	$86,982	101,295
1992	$36,029	193,000
1993	$61,265	128,400
1994	$62,508	124,300
Total	**$336,256**	**673,979**

In addition to paid claims, there is $260,400 in reserve for known claims. Many of the reserved claims resulted from the transfer of the Coliseum. Reserves have been set aside in accordance with an actuarial study. In addition, the 1993 actuarial evaluation recommended $400,000 in additional reserves for future unknown and unexpected claims. Currently we have $750,000 in reserve. This difference of $350,000 is being used to reduce departmental allocation in the future.

The chart shows the cost of claims by facility or department for the last four years. Coliseum funds have been set aside to pay claims arising from the Coliseum.



Excess Insurance

Metro acts as its own insurance company. We do not purchase any liability insurance, except for a few high risk activities such as river rafting trips sponsored by the Parks, and concerts at the Zoo and Parks.

Risk Management has obtained preliminary quotes for ***excess*** liability insurance. Metro's actuary recommended purchase of excess insurance with a $500,000 deductible. Quotes were obtained in two layers as follows:

Deductible	Coverage Limit	Premium
$500,000	$1,000,000	$135,000
$500,000	$5,000,000	$200,000
$1,000,000	$5,000,000	$70,000

Purchase of excess insurance provides the following advantages:

- These rates are the lowest Risk Management has seen since prior to 1986.
- The actuary recommends purchase of excess coverage with a $500,000 deductible. The actuary projects a 30% probability that Metro will have a claim over $100,000 and a 15% probability that Metro will have a claim over $200,000.
- Provide catastrophic protection in case of the demise of the Oregon Tort Claims Act which caps losses at $500,000.

- Provide insurance protection for Federal Lawsuits such as employment and discrimination cases which are not capped by the Oregon Tort Claims Act. Portland Community College recently experienced a $900,000 adverse judgement in Federal Court for an employment-related claim.

Possible disadvantages are:

- Metro highest claim in the past has been $40,000, far below the amount to trigger excess insurance coverage.

- There is no expenditure appropriation in the current budget or the proposed budget for the purchase of excess insurance.

- The Oregon Tort Claims Act, which caps most claims at $500,000 has been upheld historically by the Oregon courts .

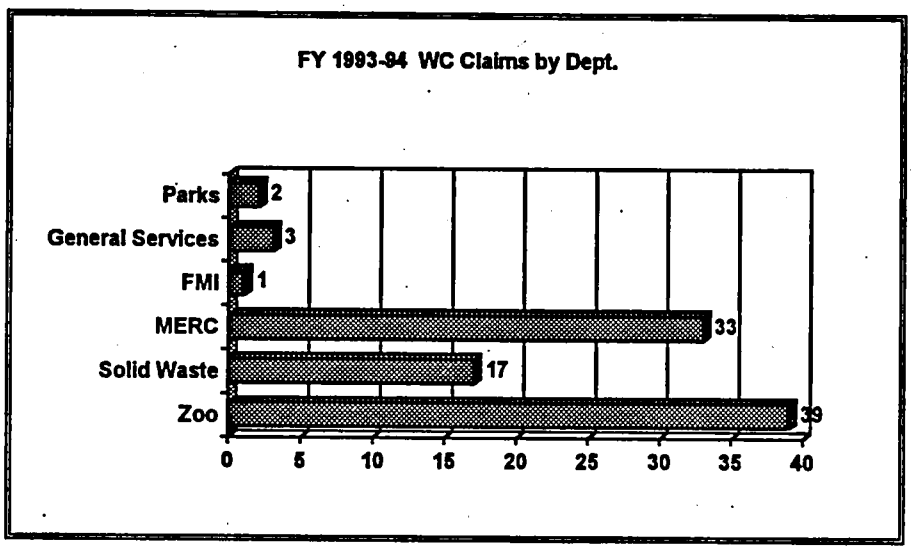
In FY 1995-96, Risk Management has not recommended excess insurance purchase. Should the Council express an interest in the purchase of excess insurance, Risk Management will provide suupplemental budget information for FY 1995-96. Based on the market price and the actuary's advice, a case can be made for such purchase.

WORKERS' COMPENSATION

Workers' Compensation is administered on a fiscal year basis to be consistent with insurance coverages, budgeting, and the practice of prior years. Metro has a unique insurance program negotiated with SAIF Corporation providing for greater insurance protection at a reasonable cost. Under this program, Metro retains up to $175,000 per claim, with a maximum of $725,000 for all claims.

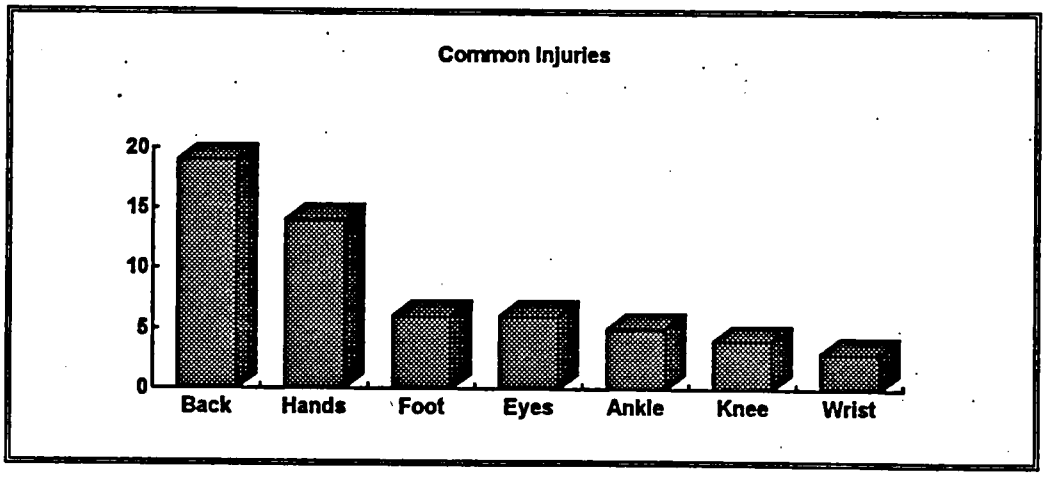
Claims

In FY 1993-94, Metro had 95 workers' compensation claims compared to 123 in 1992-93, 106 in 1991-92, and 101 in FY 1990-91. The following graph demonstrates claims by department.

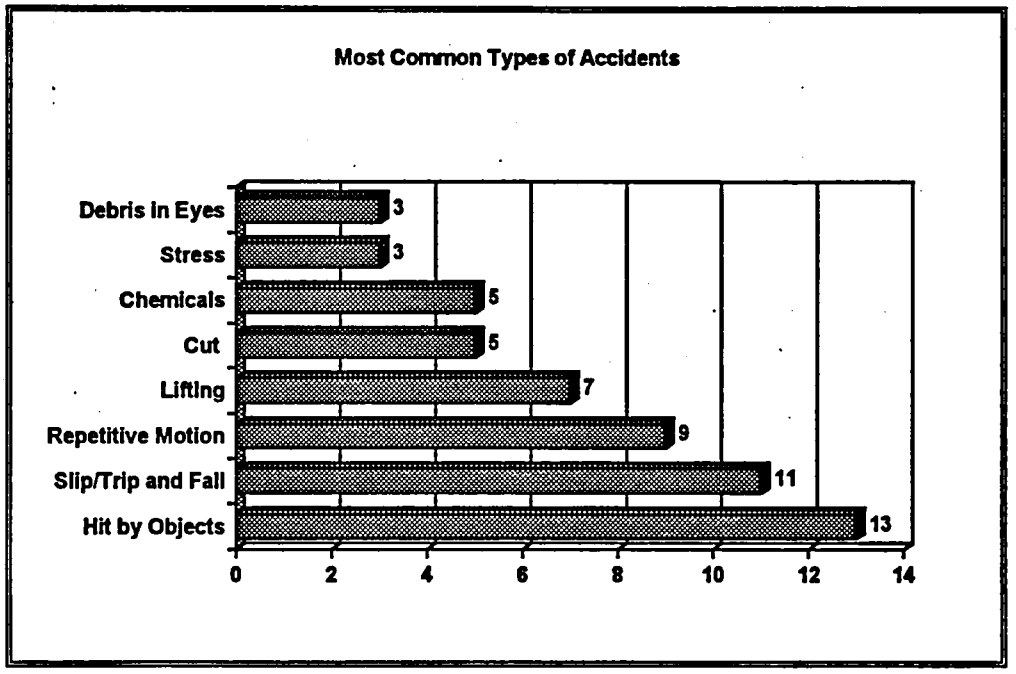


In calendar year 1994, 11 employees were injured seriously enough that the employee missed more than three days of work. A total of 466 days were missed. The Parks Department did not have a time loss claim in 1994. Special recognition was provided to each Parks employee for this accomplishment.

The following chart shows the part of the body injured. Injuries to backs and hands consistently occur most often.



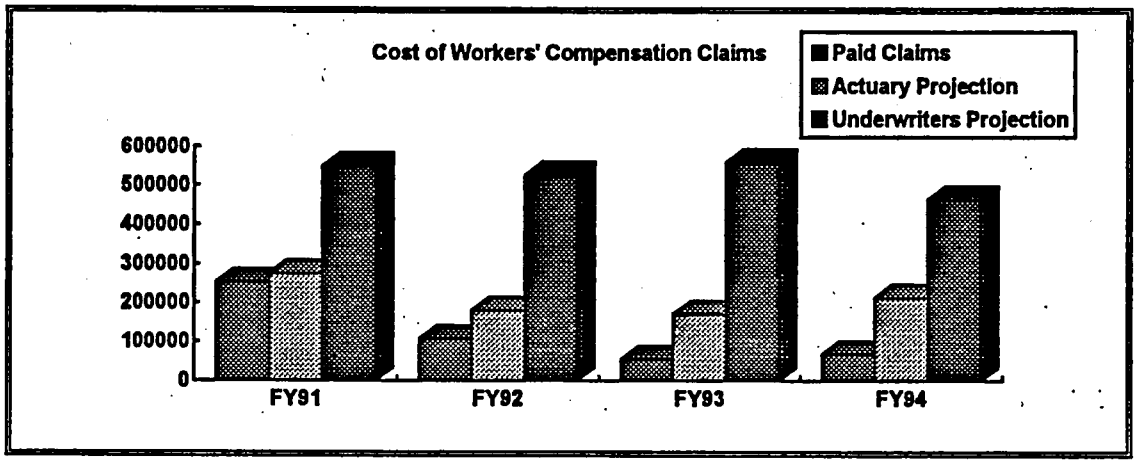
Risk Management reviews the cause of accidents to identify alternatives for avoiding future injuries. The graph below shows how the accidents occurred. Using this information, Risk Management learns where to focus its efforts. An object striking the employee is the most frequent cause of injury.



In 1995, Risk Management will concentrate on back injury prevention and repetitive motion claims. Staff is working with Kaiser and Red Cross to implement a low cost training program on back injury prevention. Furthermore, a ergonomics committee is established to develop policy and procedures to reduce ergonomic claims.

Cost of Claims

The chart below shows the cost of claims for the last four years. Actual paid claims are compared to what both the actuary and insurance underwriter projected Metro's claims would be. Metro is very active in early return-to-work programs, claims management, accident investigation pursuance, supervisor involvement in claims resolution, and working with all injured workers.



The 1993 actuarial report determined the expected cost of claims which have occurred but have not been reported to be $273,887 for all prior years. From the prior actuarial evaluation $421,000 has been set aside in reserves. As approved by the Council in FY 1994-95, this surplus will be returned to departments in the form of lower cost allocation contributions. In addition, the actuary recommended that $66,000 be set aside at the end of FY 1995-96 for unknown and unexpected claims. There is $741,000 currently set aside for this purpose, resulting in a $675,000 reduction to departmental allocation over the next two years.

ENVIRONMENTAL IMPAIRMENT LIABILITY

Metro also self insures for pollution liability exposures. Pollution exposures include the following:

1. St. Johns Landfill closure activities
2. Change of status of St. Johns with DEQ
3. Gas collection systems installation at St. Johns
4. Gas distribution system
5. Household Hazardous Waste Collection
6. Property acquisition
7. Potential breakdown of superfund exemption from liability
8. EPA attempts to require public entities to pay for environmental cleanup
9. Underground storage tank release at Zoo or Parks

No environmental claims were reported in FY 1994-95.

The EIL reserve now stands at approximately $5.5 million. The EIL reserve funded by interest earnings only. No additional contribution by departments have been requested for 1995-96.

SAFETY

Risk Management continues to provide safety services to the organization. The following chart shows the safety services offered by Risk Management.

Safety Inspections	Personal protective equipment
General accident prevention	General safety training
Lockout/Tagout	First Aid Response Plan
First Aid Response Plan	Hazard Communication
Respiratory Protection	Confined Spaces
Industrial Hygiene work as necessary	Medical record keeping for employees needing annual medical exams
Hearing Conservation Program	Bloodborne pathogens
Asbestos Program & Training	Indoor Air Quality

One Risk Management safety campaign titled promoted "No More In '94", focused departmental attention on reducing time loss claims. In 1994, MERC went 140 days without a time loss claim, the Zoo went 142 days, Solid Waste went 178 days, Planning went 240 days, and Parks went the entire year without a claim. The campaign successfully increased awareness among managers, supervisors and employees that work safety is a primary goal of the Metro Executive Officer and Council.

PROPERTY

Metro is insured with Allendale Insurance Company for all risk property insurance with a $100,000 deductible.

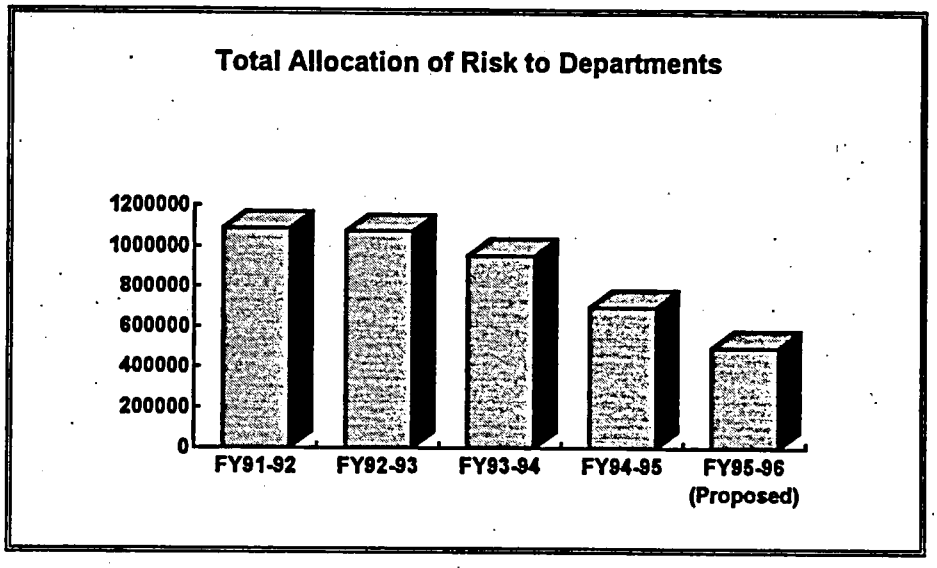
The chart below shows the property insurance currently in force.

Coverage	Limit
Real & Personal Property	238,000,000
Flood	100,000,000
Earth Movement	100,000,000
Newly Acquired Property	1,000,000
Extra Expense	500,000
Errors and Omissions	500,000
Expediting Expense	100,000
Valuable Papers & Records	100,000
Fine Arts	1,000,000
EDP Media	500,000
Mobile Equipment	1,961,000
Nonscheduled Locations	1,000,000
Demolition Cost	Included
Increased Cost of Construction	Included
Personal Property of Employees	Included
Transportation	100,000
Deductible	100,000

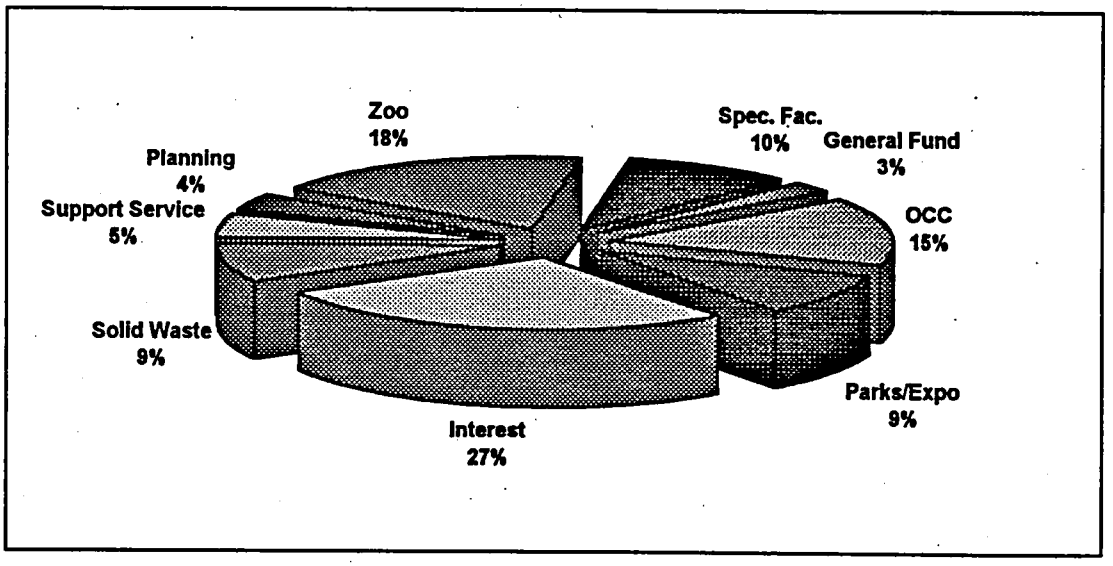
Five minor property claims were reported in 1994. The total cost for property claims was $4,270.

Departmental Allocation

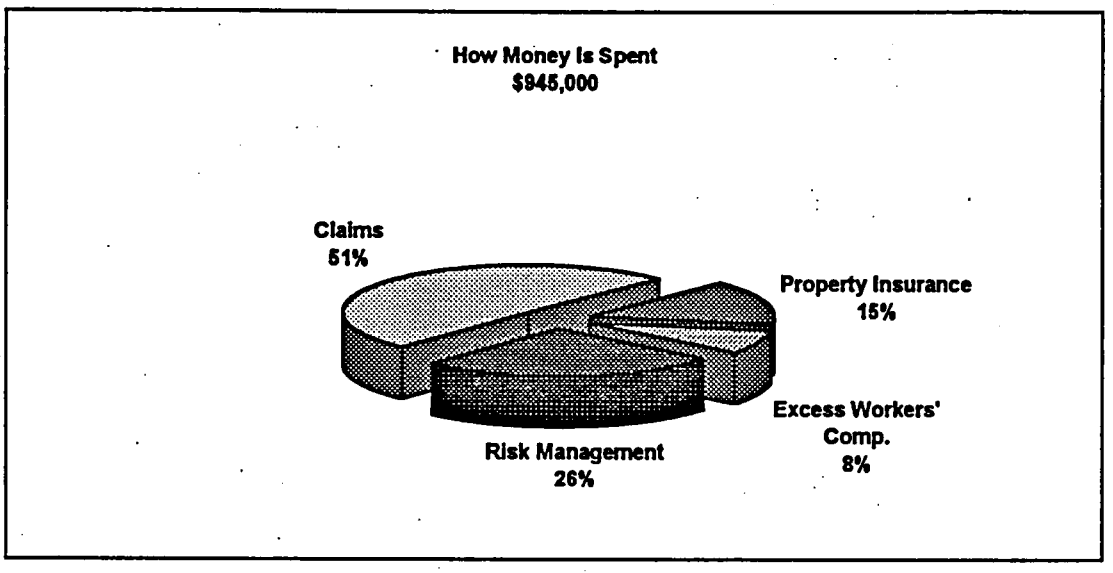
Risk Management is funded through the cost allocation program. As described herein, claims have been lower than expected allowing for a surplus reserves. The reduction of reserves provides for reducing the departmental allocation. The following chart shows the past five years of allocation paid by departments. This does not include funding reserves for pollution related losses.



The following chart shows the breakdown by operating fund of contribution to the risk management fund.



This chart shows how the money is spent from the risk management fund in FY 1994-95.



In FY 1995-96, both the size of the pie and the Risk Management piece of the pie will be shrinking, in as much as the division has been reduced by 1.56 FTE.

EMERGENCY MANAGEMENT

Risk Management is responsible for developing an organization-wide Metro emergency management plan to ensure effective action to reduce injury and damage as a result of major emergencies that impact or have the potential to impact multiple Metro facilities. Risk management staff will also assist facilities in revising site-specific emergency plans to ensure a consistent and predictable method for managing severe emergencies at any facility. Risk Management staff assists the Planning Department in providing significant organization development assistance to the Regional Emergency Management Group (REMG). The REMG is a new intergovernmental agreement agency established in 1994 by Metro and the region's counties, cities, fire districts and the American Red Cross to create a regional emergency management system.

To be effective, the Metro emergency management plan must address disaster mitigation, preparedness, response and recovery and be closely coordinated with the REMG. Regional disasters such as a major earthquake require a comprehensive emergency management system to adequately address the range of challenges presented to local governments. The effectiveness of the regional emergency management system is a critical factor in determing how quickly Metro can recover to perform its mission in service to the people of the region. For this reason, the majority of risk management's staff time in 1994 has been devoted to assisting in the development of REMG's mission and programs.

Internal Emergency Management Program Tasks

- Completed a draft outline of the Metro emergency management organization and crisis management plan. Briefed operations and security staff for Metro facilities. Revised plan accordingly.
- Obtained comment on the organization structure and plan outline from the executive officer, department heads and facility management. Continue to incorporate those comments into revision. Initiated development of the emergency resources manual.
- Surveyed Metro employees for emergency skills for use by facilities when they revise their emergency plans and for use in devloping an employee emergency preparedness training program. Distributed individual and family preparedness literature to all Metro/MERC employees. Provided home and family emergency preparedness training to staff as requested.

Regional Emergency Management

- Analyst was appointed as alternate to the Regional Emergency Management Group (REMG) Technical Assistance Committee by the Executive Officer. Prepared and presented the 1994-95 REMG workplan at its first meeting. Serve as recording secretary and archivist for the technical committee that is developing the regional emergency management plan. Researched, wrote and presented reports on the status of regional emergency management activities to local, state and federal officials in a variety of meetings.

- Facilitated meetings of the task force appointed by the Portland Mayor to develop a city-wide non-structural earthquake hazard mitigation program to be marketed to small businesses. This is a Federal Emergency Management Agency demonstration project that may be expanded region-wide.

- Provided key staffing to the statewide emergency management conference jointly sponsored by Metro, the state Office of Emergency Management (OEM) and the Department of Geology and Mineral Industries. Hosted the conference and chaired a presentation panel.

- Was appointed to the committee working to improve the regional Emergency Broadcast System. The committee is composed of broadcast industry personnel, local emergency managers, state and federal officials to ensure coordination of emergency information dissemination throughout the region.

- Assisted in the initiation of the Regional Hazardous Materials Emergency Planners Committee to coordinate hazmat planning efforts throughout the region.

AGENT OF RECORD

Metro's agent of record is Bob Lilly of Sedgwick James. Sedgwick provides quality services in insurance consultation and loss control services. Through the agent, Metro purchases property insurance, liquor liability, outfitter insurance, auto liability for vehicle used out of state, fidelity bonds, and crime insurance.

The agent of record also provides safety and loss control services such as safety training, inspections, and industrial hygiene.

The agent of record is only compensated by commission from SAIF Corporation.

SUMMARY

The number of claims in 1994 were down slightly from prior years. We are seeing some disturbing trends resulting from employee claims against Metro leading to higher claims costs. Employee claims are often generated from organizational change. The Coliseum transfer is an example. There are several active litigation claims against the Coliseum involving past employees and Metro retains a combined reserve of $146,000 for that purpose. Employee claims are likely to continue as Metro continues to undergo organizational change.

Workers' compensation claims remain low. Clearly the resources Metro has placed in this area continue to benefit both the organization and employees. The low claims costs generated significantly increased reserves, allowing lower departmental allocations in FY 1994-95 and the projected budget for FY 1995-96.

Risk Management continues to provide administrative support to departments in loss control and accident prevention.

The Metro emergency plan is coming together nicely. Emergency plan exercises will take place in the spring of 1995.

Staff will be happy to respond to any questions you may have.

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AGENDA ITEM 4.2
Meeting Date: April 11, 1995

Overview of JPAC Agenda

A G E N D A

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1700 | FAX 503 797 1797

METRO

Meeting: **JOINT POLICY ADVISORY COMMITTEE ON TRANSPORTATION**

Date: APRIL 13, 1995

Day: THURSDAY

Time: 7:15 a.m.

Place: METRO, CONFERENCE ROOM 370

*1. MEETING REPORT OF MARCH 9, 1995 - APPROVAL REQUESTED.

*2. RESOLUTION NO. 95-2123 - ENDORSING THE CITIZENS ADVISORY COMMITTEE FOR THE UPDATE OF THE 1996 REGIONAL TRANSPORTATION PLAN - APPROVAL REQUESTED - Mike Hoglund.

*3. ENDORSEMENT OF LOS ALAMOS PROPOSAL FOR PORTLAND AIR QUALITY MODELING - APPROVAL REQUESTED - Mike Hoglund.

*4. ENDORSEMENT OF MSTIP 3 - APPROVAL REQUESTED - Andy Cotugno.

*5. GRESHAM CIVIC NEIGHBORHOOD REPORT - INFORMATIONAL - Max Talbot, Gresham Community Development Director; Paddy Tillett, ZGF.

*6. FY 96 MTIP/$27 MILLION REGION 2040 RESERVE ALLOCATION - STATUS REPORT - Mike Hoglund/Andy Cotugno.

*7. RTP UPDATE - STATUS REPORT - Mike Hoglund.

*Material enclosed.

AGENDA ITEM 4.3
Meeting Date: April 11, 1995

Update and Briefing on Regional Water Supply Planning Study

STAFF REPORT

INFORMATIONAL BRIEFING ON THE REGIONAL WATER SUPPLY PLANNING STUDY AND ADOPTION OF A WORK PLAN TO ADOPT A REGIONAL WATER SUPPLY PLAN BY DECEMBER 1995

Date: April 4, 1995 Presented By: Rosemary Furfey

FACTUAL BACKGROUND AND ANALYSIS

Background

The Metro Charter mandates that Metro adopt elements of the Regional Framework Plan that address regional water supply and storage, particularly as they relate to land use and growth management. In order to prepare for the eventual adoption of these elements, Metro staff and Councilors have been working with the RWSPS participants, staff and consultants to coordinate the Region 2040 project and the RWSPS. For example, periodic briefings about the RWSPS have been presented at Metro's Water Resources Policy Advisory Committee (WRPAC) meetings and the Metro Council Planning Committee. Planning Director Andy Cotugno is the formal Metro representative on the RWSPS's participant committee, and Metro Councilor Jon Kvistad and Metro Executive Mike Burton are on Commissioner Lindberg's Regional Water Supply Leadership Group.

During 1994, the Metro Council adopted two resolutions specifically related to regional water supply coordination. On May 16, 1994, the Metro Council adopted Resolution No. 94-1962A which authorized transfer of Region 2040 population projections between Metro and the RWSPS. In addition, the Council adopted Resolution No. 94-2010A on July 28, 1994, authorizing Metro to enter into an intergovernmental agreement (IGA) with the RWSPS allowing Metro to be a full voting participant in the study. The IGA identified technical data and GIS mapping services to be provided by Metro as its in-kind contribution to the study. These products have been provided as agreed.

In addition to the IGA and provision of technical data and maps, Metro Council reviewed and provided comments on the RWSPS's draft policy objectives (see Attachment A). As part of the RWSPS's technical analyses, Metro staff participated in the several Environmental Task Force meetings which provided guidance on development of the Environmental Analysis of Future Water Source Options Report. Metro staff provided written comments on the draft report (see Attachment B and Figure 1). In addition, Metro staff have attended the monthly participant committee meetings for briefings on status of project implementation.

Factual Analysis

1. Status Report on the Regional Water Supply Planning Study

As of March 1995, the RWSPS has completed the majority of the technical analyses and reports that were scheduled as part of the consultant work products (see

Attachment C for a list of technical reports). Current consultant work is concentrating on finalizing the Conservation Program Report, finalizing the Integrated Resource Planning model, developing the public involvement plan and beginning development of preliminary source options scenarios. The public information and involvement plan for April through July 1995 is included as Attachment D.

A draft schedule for development of the final products and schedule for adoption of a Regional Water Supply Plan by December 1995 has been distributed to participants by project staff (see Attachment E). Each participant is reviewing the schedule and there is consensus among participants on this adoption schedule.

2. Policy Options for Building a Water Supply Options "Package"

There are several considerations the Metro Council will want to take into account as it decides which issues and policies should guide development of a "package" of water supply options for the draft water supply preliminary plan. Many of these issues and policies are similar to those considered by the Council last October in its comments on the draft Regional Water Supply Plan policy objectives. Key considerations include: water conservation and efficient use of existing supplies, system reliability, drinking water quality, avoidance and minimization of environmental impacts of water supply facility development, and coordination with land use and Metro's growth management policy.

Metro staff will seek Council guidance and recommendations for key issues the Council considers essential to include in the draft preliminary water supply plan.

3. Adoption of Work Plan to Adopt a Regional Water Supply Plan by December 1995

Staff have developed a draft work plan detailing the key decision points and public hearing schedule for adoption of a Regional Water Supply Plan by December 1995 (see Attachment F). This schedule is ambitious, but it is the desire of the participants committee to set an ambitious target and then adjust the schedule as necessary to ensure that the plan will be adopted in a timely manner. Each of the participating water providers and jurisdictions will implement a similar adoption schedule.

The current planning effort does not address several important issues that will need consideration in 1996. These issues include: governance, financing future facilities, future periodic revisions to the plan and how this plan relates to Metro's Regional Framework Plan.

PROPOSED ACTION

The Regional Water Supply Planning Study (RWSPS) has completed numerous technical analyses during the last two years and is entering the important final phase of developing an integrated "package" of preliminary regional water supply options. This will results in development of a draft preliminary Regional Water Supply Plan. Metro and Portland Water Bureau staff will provide an informational update and briefing to the Council on the RWSPS and seek Council direction on what issues need to be examined in building the supply option scenarios. Staff will review the draft work plan and schedule to adopt a

Regional Water Supply Plan by December 1995. Staff will seek Council approval of the work plan.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends adoption of this proposed work plan to adopt a Regional Water Supply Plan by December 1995.

RF/srb
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Attachment A

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1700 | FAX 503 797 1797

METRO

October 20, 1994

Mr. Tim Erwert, Chair
Steering Committee
Regional Water Supply Plan Project
1120 S.W. 5th Avenue, #601
Portland, OR 97204-1926

Dear Mr. Erwert:

Re: ***Metro's Comments on Draft Regional Water Supply Plan Policy Objectives***

On behalf of the Metro Planning Committee, I am pleased to provide you with the Committee's thoughts and comments on the draft Regional Water Supply Plan Policy Objectives. These draft objectives were developed by the steering committee and consultants for the Regional Water Supply Planning Study (RWSPS), which Metro formally joined several months ago.

After discussing these draft policy objectives at a recent Planning Committee meeting, the Committee has decided not to recommend Council adoption at this time. It is our understanding that these policy objectives are being reviewed concurrently by other jurisdictions and water district boards. We assume that many of these jurisdictions and boards will also have comments and suggestions to make on the draft policy and that this draft policy will be amended to reflect these comments. Therefore, it is the Planning Committee's decision to submit Metro's comments at this time and to move to adopt the revised policy at a future date.

We fully support the development of policy objectives for the RWSPS. Metro's comments reflect the Committee's interest in land use planning, growth management and water resource planning as they relate to developing a water supply plan for the region. We hope the enclosed comments are useful as the steering committee finalizes the policy objectives.

Thank you for the opportunity to comment on the draft policy objectives. It has been a useful exercise for the Planning Committee to think about this policy and to be explicit

about Metro's interests. I hope that these comments are useful to you and the Executive Committee as you finalize this policy. Please contact me or our staff member, Rosemary Furfey, if you have any questions about these comments.

Sincerely,

Susan McLain

Susan McLain
Metro Council Planning Committee

SM/RF/srb
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Enclosure

cc: Lorna Stickel, Portland Water Bureau
Jon Kvistad, Metro Council Planning Committee Chair
Charles Ciecko, Parks and Greenspaces Director
Andrew Cotugno, Metro Planning Director
Rosemary Furfey, Metro Planning Department
John Fregonese, Metro Growth Management Manager

Metro's Comments on Draft Regional Water Supply Plan Policy Objectives

Efficient Use of Water

We strongly support the efficient use of water resources with particular emphasis on water conservation and making the best use of existing supplies. We particularly support the current effort to investigate the potential efficiencies gained by the selective reuse of wastewater.

Reliability

The Planning Committee believes the issue of planning for curtailment during drought needs to be addressed in this section. The study should examine the cost of continuing to provide water with high reliability versus curtailment of use during periods of drought. The Planning Committee believes that the public needs to be educated and involved in managing demand during drought and that additional reliability can come from different sources (e.g., conservation).

Water Quality

The Committee strongly supports watershed protection to protect water quality and ensure future water quality. In addition, the Committee wants to stress the need to protect and ensure high water quality standards while ensuring the ability to mix water sources across the region.

Environmental Impacts

The Committee wants to emphasize the need to avoid environmental impacts, not just minimize or mitigate them. These impacts must be evaluated on a watershed-wide basis in order to characterize the cumulative and downstream impacts of water supply facility development and operation. This includes evaluation of impacts on adjacent, as well as watershed-wide land uses and natural resources. Metro will evaluate any supply planning option from an integrated multi-objective viewpoint. This includes consideration of the multiple functions and benefits of fish and wildlife habitat, open space, natural areas and wetlands. Retention of natural systems should be a goal.

Any analysis of environmental impacts should analyze the cumulative impacts of a project. It should also be recognized that not all environmental impacts can be mitigated.

Growth

The Planning Committee is pleased with the current sharing of information and data that is occurring between Metro's Planning Department and the RWSPS. For this policy objective, we want to emphasize the need for continued cooperation between Metro and the region's water providers to determine where future growth should occur. We would like to see this objective stated more actively where the water suppliers take responsibility to work with Metro in growth management decision making.

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REGIONAL WATER SUPPLY PLAN
POLICY OBJECTIVES

June 21, 1994

EFFICIENT USE OF WATER

- Maximize the efficient use of water resources, taking into account the potential for conservation, availability of supplies, practicality, and relative cost-effectiveness of the options.
- Make best use of available supplies before developing new ones.

RELIABILITY

- Minimize the frequency of water shortages of any magnitude and duration.
- Ensure the ability to manage the duration and magnitude of shortages (e.g. through the operation of storage facilities or through access to alternative sources of water).

WATER QUALITY

- Meet or exceed all known federal and state water quality standards.
- Maximize the ability to deal with aesthetic factors, such as taste, color, hardness, and odor.
- Ensure the ability to mix water sources across the region.
- Maximize the ability to protect water quality in the future, including the ability to use watershed-protection based approaches.

IMPACTS OF CATASTROPHIC EVENTS

- Minimize the magnitude, frequency, and duration of service interruptions due to natural or human-caused catastrophes, such as earthquakes, volcanic eruptions, floods, spills, etc.

ENVIRONMENTAL IMPACTS

- Minimize the impact of water resource development on the natural and human environments. For purposes of discussion and analysis, the distinction between the two is described as follows:

  The natural environment includes but is not limited to the following areas:

  - Fisheries
  - Wetlands
  - Threatened & endangered species
  - Wildlife
  - Water quality
  - Geotechnical hazards

  The human environment includes but is not limited to the following areas:

  - Cultural and historic resources
  - Land use compatibility for facility siting
  - Recreation
  - Scenic resources
  - Hazardous waste and waste discharges

NOTE: All of these impacts are those that remain after mitigation efforts. The cost of environmental mitigation will be reflected in the "economic costs" policy area.

GROWTH

- Be consistent with Metro's regional growth strategy and local land use plans.

FLEXIBILITY TO DEAL WITH FUTURE UNCERTAINTY

- Maximize the ability to anticipate and respond to unforeseen future events or changes in forecasted trends.

Attachment B

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1700 | FAX 503 797 1797

METRO

October 12, 1994

Ms. Becky Crockett
Parametrix, Inc.
7820 N.E. Holman Street, Suite B-6
Portland, OR 97218-2859

Dear Becky:

Re: ***Comments on Draft Environmental Analysis of Water Supply Source Options Report***

We want to take this opportunity to comment on Parametrix's draft report for the Regional Water Supply Planning Study (RWSPS) entitled ***Environmental Analysis of Future Water Source Options.*** We commend you and your team of specialists for producing a comprehensive and thoroughly researched draft report. This report serves as an important foundation for future analysis and evaluation of water supply source options.

Our comments bring a unique Metro perspective to the investigation of future water supply sources. We will focus our comments on issues related to growth management, regional parks and greenspaces, water resources, watershed planning and future elements of Metro's Regional Framework Plan. These comments highlight many of the issues raised at the recent Environmental Task Force (ETF) meetings and they are meant to be constructive, yet raise issues we think are of regional concern and relevant to the RWSPS.

Columbia River

We are concerned about disturbances to the Columbia River riparian corridor that will be caused by the construction and management of a water treatment facility. Metro is interested in potential acquisition sites along this corridor and we advocate for minimal disturbance of river front property. We recommend a smaller facility to minimize environmental impacts and allow the riparian corridor to be maintained in as natural a state as possible. In addition, the RWSPS needs to monitor Multnomah County's adoption of its Goal 5 ordinance for aggregate mineral resources. The site discussed in this report is not currently listed as a Goal 5 resource with the County, but this may change in the future.

The consequences to fish migration and survival as a result of construction and operation of a water supply facility at this site raises many questions for both the Columbia River and the Sandy River. For example, scientists and resource managers do not know enough about the life cycles and necessary navigation aids for such species as salmonids, lamprey and smelt. These questions need to be further investigated on how this facility will affect not only downstream, but

upstream, navigation. We need to understand the relationship between different species and undertake an ecosystem approach to the interrelationships between species.

Larval stages of smelt, sturgeon and lamprey will require special consideration in the design of water intake facilities. We believe it is imperative that the amounts of Sandy River water likely to be removed by the intake facility be determined and the impacts on fish resources be analyzed.

With regard to non-point source impacts, we want to emphasize the need to consider the cumulative impacts of both non-point and point sources within the entire lower Columbia River watershed. We recommend extending the investigation of potential impacts beyond the three mile radius used for this study.

Willamette River

Similar to the Columbia River, the issue of maintaining the Willamette River Greenway is important, since nearby Coffee Lake is a potential Greenspaces acquisition site. The issue of downstream impact is also important at this site. How will withdrawal of water affect riparian wetlands? Will it dewater important wetlands downstream from the site, e.g., Oaks Bottom? Will there be temperature changes due to lowered water levels and does this propose a potential for disease problems for migrating salmonids or sturgeon? This needs more investigation to fully understand the broader watershed implications of this facility. An Instream Flow Incremental Method (IFIM) should be conducted to help answer these questions. Design and operation of the facility must avoid impacts (due to dewatering) to riparian wetlands.

The issue of minimum flows in the Willamette River was discussed at the ETF committee meetings. This is a broader issue that needs further investigation with the Corps of Engineers in order to understand the relationship between storage release from upstream dams and natural flow. Utilization of stored water is clearly preferred over use of natural flows.

Clackamas River

The Parks and Greenspaces Program is interested in the North Clackamas River trail and greenway and is concerned about the potential impact of a facility in the greenway. The issue of downstream impacts and dewatering of riparian wetlands due to water withdrawals is also an issue on the Clackamas River. These impacts are not necessarily considered in 404 permitting, yet may have significant impacts on fish and wildlife habitat downstream. We recommend an IFIM study be conducted to better understand the impacts of this option.

The issue of future growth impacts and the consequences for regional water supply options is particularly significant in this watershed. Depending on the growth policy that is adopted by the Metro Council, the RWSPS must consider the impact of both non-point source and point source impacts to downstream drinking water supply sources. In addition, compliance with DEQ's three-basin rule must be monitored. Water suppliers participating in the Region 2040 water descriptive indicators analysis expressed concern that future changes in land use may increase the incidence

of off-site hazardous waste spills or contamination in the future. We recommend further investigation.

Regarding fisheries, there needs to be further investigation on the impacts of a water intake facility on fish spawning in the river. Not enough is known at this time to fully evaluate the potential consequences of such a facility.

Bull Run and Lusted Hill

Similar to the other options, the Bull Run option poses potential downstream impacts which need to be better understood. Additional diversion of Bull Run water will further reduce flows in the Sandy River, a National Wild and Scenic River. Impact areas associated with flow reduction include water quality, aquatic habitat diversity, fish, wildlife and recreation.

The data utilized to estimate water availability are outdated. Conclusions based on this data are not supported by contemporary flow records. Despite these concerns, we recognize the potential benefits to be derived from flow augmentation during the summer and fall months.

Although the treatment plant identified for the Lusted Hill site apparently did not raise significant environmental issues, we are not comfortable with the concept of locating "urban service facilities" outside of the urban growth boundary when land is available inside.

The report does not address issues related to the construction of new pipelines. Crossing the Sandy River Gorge below Dodge Park should be avoided. We look forward to more discussion on this component of the Bull Run option.

Uncertainty regarding the full implications of the Clinton Plan makes a critical evaluation of the Bull Run water supply option difficult. We do know, however, that the Clinton Plan places of heavy emphasis on traditionally overlooked species such as invertebrates. It would be useful for this report to also give emphasis to information about these species.

Cooper/Bull Mountain ASR

The issue of aquifer storage and recovery (ASR) raised the most uncertainty and questions. This is primarily due to the lack of knowledge and understanding about the hydrologic connections between surface water and groundwater at the two ASR areas. Specifically, we are concerned about the cumulative effects of ASR withdrawals together with nearby nursery withdrawals on surface water and wetlands. We recommend further study to understand the full implications of the introduction of chlorinated water into aquifers. The pilot ASR study being implemented in Salem should be monitored and analyzed prior to undertaking pilot projects in the metropolitan area.

Future land use changes in the Cooper/Bull Mountain area may increase the potential for hazardous spills or other consequences of inappropriate land uses near wellheads. This also

applies to increased numbers of nursery operations in the ASR area. A wellhead protection program would be essential if this source option were pursued.

Powell Valley ASR

This ASR site raises questions similar to those identified at the Cooper/Bull Mountain site regarding potential groundwater contamination due to future land use changes and changes in hydrologic regimes. In addition, the geology of this area indicates that water may be more transmissive and therefore making it difficult to predict how successful ASR will be at this location. Metro has been involved in development of the Johnson Creek Management Plan. ASR may have implications for flood control and fish re-establishment in Johnson Creek. We recommend coordination with the Johnson Creek Corridor Committee to investigate the implications of ASR in the Johnson Creek watershed.

We hope that these ideas and comments will be useful to you and your team as you revise this draft report. Please contact us if you have any questions about these comments or if we can provide any additional information that may be useful to you.

Sincerely,

Andrew C. Cotugno
Planning Director

Charles Ciecko, Director
Regional Parks and Greenspaces
Department

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cc: Jon Kvistad, Metro Council District 2
Susan McLain, Metro Council District 1
John Fregonese, Metro
Rosemary Furfey, Metro

REGIONAL WATER SUPPLY PLAN

Portland Metropolitan Area

PARTICIPATING WATER PROVIDERS

City of Beaverton
Canby Utilities Board
Clackamas Water District
City of Gladstone
Clairmont Water District
Damascus Water District
City of Fairview
City of Gresham
City of Hillsboro, Utilities Commission
City of Forest Grove
City of Lake Oswego
City of Milwaukie
Mt. Scott Water District
Oak Lodge Water District
City of Portland
Raleigh Water District
Rockwood Water
City of Sandy
City of Sherwood
South Fork Water Board,
(City of Oregon City
City of West Linn)
Tigard Water Dist.
City of Troutdale
City of Tualatin
Tualatin Valley Water District
West Slope Water District
City of Wilsonville
City of Wood Village
Metro

PHASE 2 of the REGIONAL WATER SUPPLY PLAN

TECHNICAL REPORTS

The following is an annotated listing of all of the products that have been generated by the Phase 2 project consultants to date. If you are interested in knowing more about these reports or wish to obtain copies of them, please contact the project office at 823-7528. (There may be a reproduction charge for some documents.)

PUBLIC INFORMATION AND INVOLVEMENT

1) Regional Public Information and Involvement Plan, Barney & Worth, Inc.

   Multi-faceted strategy for public information and involvement to the Phase 2 Regional Water Supply Plan project.

2) Stakeholder Interview Report, Barney & Worth, Inc.

   Synopsis of eighty-four interviews with community leaders, elected officials, agency staff and stakeholders from throughout Oregon on issues pertinent to the Phase 2 project.

3) Public Opinion Research, McArthur & Associates

   Summary of results from a region-wide, random survey of public attitudes on water supply sources, conservation, and related issues of interest and concern.

4) The Value of Water Supply Reliability: Results of a Contingent Valuation Survey, Barakat & Chamberlin, Inc.

   Assessment of relative importance and willingness-to-pay for water system reliability.

DEMAND SIDE MANAGEMENT & CONSERVATION

5) Water Conservation Universe of Measures and Qualitative Screen, Barakat & Chamberlin, Inc.

List of more than one hundred potential conservation measures, a summary of the qualitative screening criteria, and results of the qualitative screen process.

6) Conservation Measure Technology Profiles, Barakat & Chamberlin, Inc.

Comprehensive description of individual conservation measures which both passed and did not pass the qualitative screen. Includes measure attributes such as water savings, technological availability and maturity, costs, etc.

7) Results of Economic Screening of Conservation Measures, Barakat & Chamberlin, Inc.

Preliminary program concepts; explanation of economic screening methodology and preliminary results of screening process; preliminary program concept development (draft work in progress).

SOURCE OPTIONS

8) Review of Existing Information and Assumptions, Task 1, Source Options Analysis Element, Montgomery Watson

Recap of major findings from Phase 1 and general context/assumptions going 1into the Phase 2 regional water supply planning effort.

9) Summary of Sub-Regional Supply Sources, Task 2, Source Options Analysis Element, Montgomery Watson

Review of regionally significant supply options and status of development.

10) Definition/Analysis of Existing Infrastructure, Task 1 Regional System Efficiency and Transmission Element, Murray, Smith & Associates, Inc.

Description of existing water supply and transmission facilities in the region including planned improvements.

11) Evaluation of Water Rights and Water Use Permitting Requirements, Technical Memorandum for Subtask 3.1, Murray, Smith & Associates, Inc.

Compilation of water rights information and permitting issues for supply sources under consideration.

SOURCE OPTIONS - (cont.)

12) Bull Run Dam No. 3 Preliminary Site Selection Evaluation, Subtask 4.2, Squier Associates, Inc. and Montgomery Watson

Assessment of six potential dam/reservoir sites based on geotechnical and desktop analysis of existing environmental information. Representative site recommended.

13) Screening of Potential Aquifer Storage & Recovery Areas, Subtask 4.3 Squier Associates, Inc. and Montgomery Watson

Preliminary assessment of potential aquifer storage and recovery sites in the region based on hydrogeology and other factors. Representative sites recommended.

14) Aquifer Storage and Recovery Detailed Analysis Report, Montgomery Watson

Assessment of potential effectiveness of ASR potential site "short list" and preliminary siting concept. Representative sites recommendation revised.

15) Water Quality Analysis, Task 6, Source Options Analysis Element, Montgomery Watson

Synopsis of existing water quality conditions and related influences for supply sources under consideration.

16) Surface Water Availability, Montgomery Watson

Evaluation of water available from sources under consideration in light of existing water uses, undeveloped water rights, and other constraints.

17) Water Treatment Analysis, Task 7, Source Options Analysis Element, Montgomery Watson

Evaluation of treatment requirements for supply sources under consideration and preliminary evaluation of sites for river intakes and treatment plants. Representative sites recommended.

18) Environmental Analysis of Future Water Source Options, Task 5, Source Options Analysis Element, Parametrix, Inc.

Charterizes, at a planning level, the key environmental issues, potential impacts, and possible mitigation opportunitites which need to be considered for each of the potential future water source options. The report also contains recommendations for additional study.

PUBLIC INFORMATION AND INVOLVEMENT ACTIVITIES

Through July

1. Audiences:

Obviously, certain activities will reach all of our audiences, while others will focus exclusively on only one. As always, these audiences will have different needs, and far different levels of interest.

a. The General Public

This audience is likely to know very little about their current water systems, let alone about the Regional Water Supply Plan. Accordingly, as a part of the phase leading up to the Preliminary Plan it will be helpful to provide some background on where their water currently comes from, how it gets to them, and what could happen through increasing growth and demand. As an example, this could include reminding the public how the Bull Run system works, how it is not dependent on winter snowpack, and why shortages and curtailment could occur if the Spring and Fall rains are inadequate. (Many still have a hard time believing that the shortages several years ago were genuine.)

It will also be important to let the public know about the work being done, what the possible choices are, what factors will be considered as part of the evaluation, and when the preferred strategies will emerge for their further review. Once the Preliminary Plan is completed it will be easier for the general public to react to specific choices when they have a better understanding of precisely which source of water they will receive, how much it will cost them directly, what will have to be done to get it, and how conservation fits in. We will need to be sure to make a special effort to let the public know about the future schedule for review and comment on the Preliminary Plan.

The focus groups will also provide a useful mechanism for refining our understanding of public opinion and preferences. These will be scheduled near the final scenario building tasks.

b. Interested Persons and Organizations

This group includes specifically interested citizens, organizations and local activists. The 2,000 person mailing list captures most of them, and could be increased to add other interested persons. As they are in fact interested in water, growth, and regional issues, their desire to learn about the Plan and offer input

will be more reliable. In addition to letting them know about the work completed to date and the upcoming schedule for the Preliminary Plan, we must provide them with specific opportunities to understand the components going into the evaluation process, as well as learning just how that process will work.

c. Participating Agencies/Elected Officials

While they are aware of the Plan, they will need updates on the details and schedule. The suggestion to conduct a workshop for the participants, as an example, is a good means of achieving basic understanding of the data and integration process. Additionally, the WSLG will meet during this period.

2. Objectives:

The primary objectives of this phase of public information and involvement include:

- Inform the general public and interested persons that the Regional Water Supply Plan is ongoing, and that preliminary choices--reflecting the assimilation of technical data, public opinion and values, and the comparisons of the integration process--will be officially presented in July.
- Provide opportunities for the public and interested persons to learn more about the work completed to date and the process for narrowing the region's choices.
- To obtain specific public input regarding opinions and values, and use such input to further shape and refine the evaluation of options as the preferred strategies are developed.
- Continue to inform, and get feedback from, the participating agencies and elected officials regarding the work completed to date, and the process and schedule for developing and presenting the Preliminary Plan.

Additional objectives, as identified during the course of the PII Committee meeting:

a. Strive to provide information to all audiences.

b. Be clear in presenting cost/resource limitations (in project).

c. Test PII tools and messages with focus groups (or similar mechanism).

d. Share information with all participants--especially if one participating agency produces a PII product for its own purposes, see if it can be altered so as to be generically applicable throughout the region.

e. Be clear on how input will be addressed and used, paying particular attention to a balance of perspectives and the audience providing the input. This would mean, for example, that detailed, informed technical input may require direct feedback.

f. Activities, as well as themes and messages, should be identified that have region-wide applicability plus those which are appropriate for individual participants. This thrust would enable specific participants to address the unique needs and interests of their own constituencies, while providing balanced, uniform perspectives on the regional plan.

3. Activities:

- Newsletter (late April)

Produced by the consultants. Preceding the Public Forum. Designed to provide an update on the project, notice of the Public Forum, and offering an opportunity for clip and mail input on critical values, tradeoffs, and process.

- Current Source Fact Sheets (March)

Portland Water Bureau will update project fact sheet, place it on project letterhead, and make available one copy to each of the participating agencies. The participants will then be able to distribute the Fact Sheet to interested persons and organizations, or use portions of it in their own newsletters, bill inserts, or for presentations at meetings.

- Bill Inserts and Other Newsletters (March)

The bill insert prepared by the Portland Water Bureau will be revised and made available in a generic, regional format courtesy of the Oak Lodge Water District.

- Public Forum (May)

A weekday in May will be identified for the purpose of conducting a Public Forum. It should run from the late afternoon (e.g., 3:00 p.m.) through the evening to accommodate employees of agencies and organizations (who may prefer to attend during the normal course of their employment) and the general public (who may only be able to attend after their workday is completed). Interested persons will be specifically notified (through both the Newsletter and

direct invitations), and the general public will also be expressly invited to attend (through notices, media advertisement, announcements, and related mechanisms). As this is prior to the release of the detailed Preliminary Plan, emphasis will be placed on informing and listening to key interested persons and organizations. The consultants and participants will both participate in the Public Forum.

- Targeted Interested Person/Organization Sessions (May-July)

A number of stakeholders and interested persons/organizations have participated in the regional plan at length. These should be targeted for detailed, in-depth sessions to provide information on the project, answers to any questions, and to provide an opportunity for their input. The project management staff and participants will provide this function.

- Focus Groups (May)

One set of two focus groups would be conducted late in May to learn of specific general public preferences and opinions on the scenarios being developed. Feedback on comparisons of sources, values and choices will be used by the consultants and participants in finalizing the preferred strategies which will appear in the Preliminary Plan. PII tools and messages will also be tested.

- Cable Television (May-July)

A consensus of the PII Committee suggested that in lieu of a specific Regional Water Supply Plan-hosted Cable Television show, that opportunities to be guests on existing television shows should be explored. It was suggested that unless the time and resources to do our own show were available, and unless it was well produced, the quality would not be high enough to capture broad public attention. Existing shows, with appearances by participants, would serve to get the pre-Preliminary Plan message out. It was suggested that once the Preliminary Plan is prepared, that the matter may be appropriate again after July. Other materials may also be available at that time. The consultants will work with PII Committee members to identify a list and schedule of existing television programs where appearances may be appropriate.

- Ongoing Media (March-July)

Opportunities for the project management or individual participating agencies would be pursued over the course of this portion of the Project. It was the consensus of the PII Committee that a feature on the project would likely have to await the Preliminary Plan. The consultants, with the assistance of the PII Committee, will flesh out a media strategy which would identify themes, messages, process, and players for dealing collectively with the media.

- Individual Participants Activities (March-July)

  Ongoing opportunities would be identified for individual participating agencies to address groups within their service territory, or citizen committees affiliated with their governmental bodies.

- Displays and Festival Booths (March-July)

  A list of festivals and display opportunities would be assembled by the consultants and project management staff, for distributing information about this Phase of the Plan. Individual participating agencies would be responsible for staffing or providing information to events and opportunities within their counties.

- Slide Show (March-July)

  Update and use in conjunction with the activities to be conducted during this period.

- Speakers Bureau (March-July)

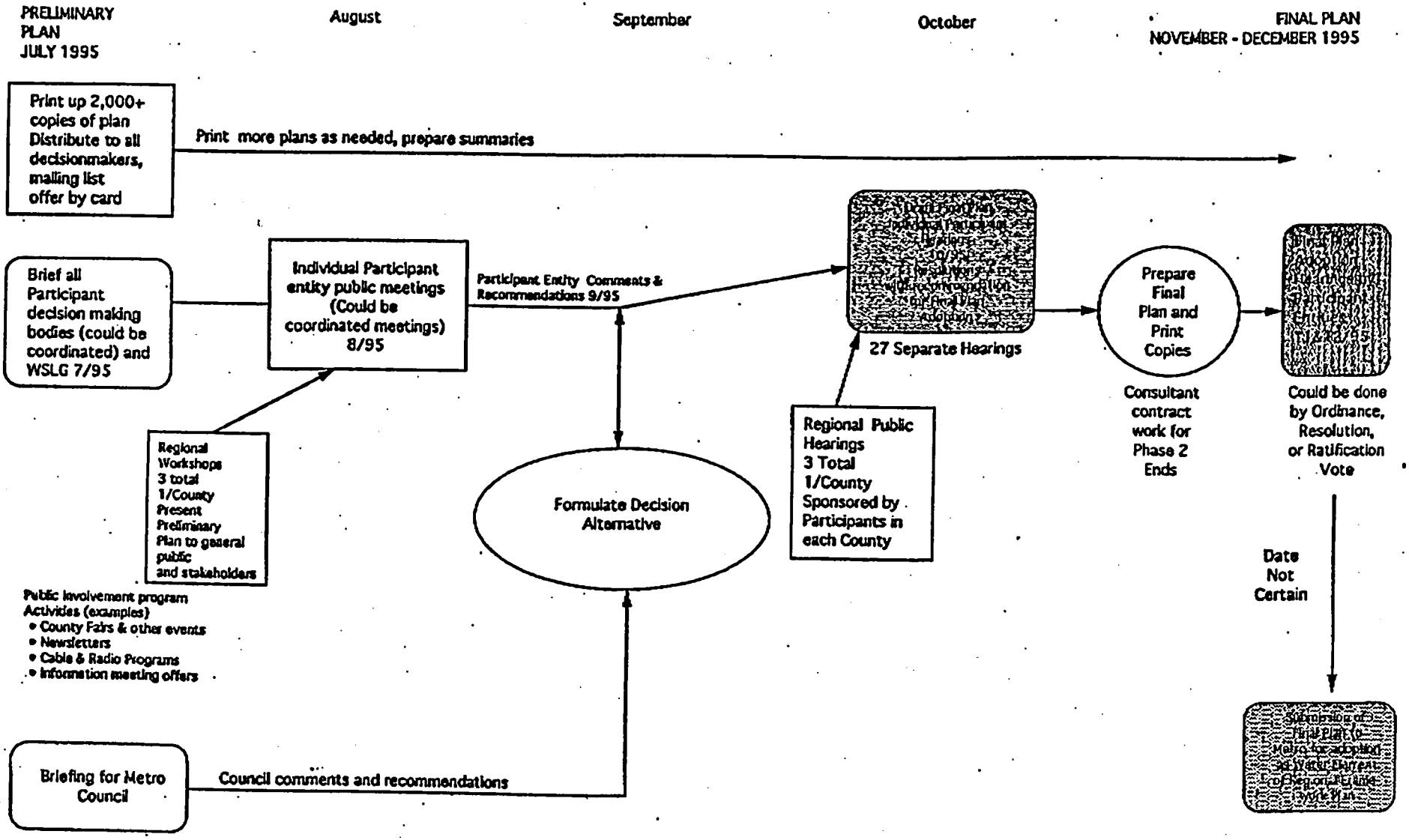
  The consultants will identify a list of speakers who can be available to respond to invitations for speaking engagements. The materials identified above would be available for their use.

SCHEDULE

	Mar.	April	May	June	July
Fact Sheets	X				
Bill Inserts	X				
Newsletter		X			
Focus Groups			X		
Public Forum			X		

Attachment E

503-823-6133 BUREAU OF WATER ATTACHMENT



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cc: Rosemary

DRAFT

Potential Criteria and Desired Outcomes for the Preliminary Regional Water Supply Plan July 1995

The preliminary Regional Water Supply Plan should be a document or set of documents that allow providers to reach different audiences. Documents may include summaries, sections with more details, or appendices as needed) The preliminary plan should engage various stakeholder groups and decision makers in a productive dialogue about how to meet the water supply needs of this region in the near and long term.

The preliminary RWSOP should:

A. Be a discussion document for use with various stakeholder groups and decision makers which presents:

1. summary information about the work done to date,

2. the evaluation methodology and results which can be understood without having to read through all of the interim reports,

3. what we have heard from stakeholders through the public involvement program,

4. outlines of 6-8 scenarios or water supply futures for consideration. These scenarios will provide information across the board (or common to all) about the benefits, impacts, risks, and tradeoffs of each scenario, allowing them to be compared against each other on the basis of common policy objectives and evaluation criteria,

5. recommendations for serious regional consideration of 1-3 scenarios based on expert opinion of the consultant team and the Steering/Participants Committees. The recommendations should be linked clearly to the policy objectives and screening criteria which clearly present the reasons for the recommendations.

6. information on all the scenarios which would contain basic resource options (combinations of sources, conservation, transmission, or reuse) on a 1995-2050 timeline that contains uncertainties and contingencies. Strategies for implementation will be included for each scenario, which have more detail for the near term strategies and less for the ones in further out years (this is because the plan should be updated on a periodic basis allowing the strategies to be refined as they become necessary for implementation).

B. Further an open and frank discussion of how the region should meet its future water supply needs. Subregional differences may be presented within the various options to consider.

C. Lay out major assumptions as clearly as possible about such things as demand forecasts, reliability, risks, current system capacities (including any assumptions about near term additions to the system such as Barney and any Clackamas expansions), costs (including some mitigation estimates) and institutional barriers (if any).

D. Present clear policy choices between different scenarios by formulating

DRAFT

Potential Criteria and Desired Outcomes for the Final Regional Water Supply Plan
November 1995

The establishment of a Regional Water Supply Plan will occur through adoption by all of the Participant decision making bodies (except possibly Metro) in a timely manner to allow the documentation of the decision in a Regional Water Supply Plan document by the end of 1995.

The Final Regional Water Supply Plan should:

A. Contain the basic summary information from the preliminary plan and summary information about the public involvement program outcomes in a user friendly manner with understandable graphics.

B. Provide a single direction (one scenario) and set of action strategies (which are phased and contain contingency or default strategies to deal with uncertainties) for the region to pursue (or continue pursuing) to ensure that the water supply needs of the region are met in a timely manner.

C. Contain documentation of collective decisions to implement a single scenario made up of coordinated regional strategies for action to be taken by individual (or groups of) providers that ensure:

1. Needs are met in a timely manner,
2. Funds to explore alternatives are expended in an efficient and coordinated manner
3. Increments of supply and conservation water savings will be brought on line without costly overbuilding, but sufficient to meet the needs of the region (as a whole or sub regionally) considering needs for emergency/backup supplies
4. Institutional and financing arrangements will be pursued and resolved for efficient implementation of selected strategies.
5. Strategies are outlined to direct research and development, and pilot projects to determine a more definitive role for non-potable water (i.e. direct source untreated water or re-use of treated wastewater effluent).

D. Document primary assumptions about future demands, system reliability, redundancy and emergency supplies.

E. Contain a mechanism(s) to ensure timely updates and continued regional coordination.

F. Meet the needs of the Metro charter, sufficient for the RWSP to become the water supply element of the Regional Framework Plan.

G. Meet as much as possible any other objectives outlined by the 1995 Legislature review process required by statute.

possible that some objectives could be partially met by all of the scenarios presented (such as some element of conservation in all of them, or all of them should represent a reasonable range of costs or all of them would meet water quality objectives after treatment) while others should emphasize certain objectives over others to display tradeoffs.

E. Outline a process for achieving a stated desired outcome so that stakeholders and the public are aware of how they may be engaged in the discussion leading to a final Regional Water Supply Plan.

Attachment F

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Adoption of a Regional Water Supply Plan
Proposed Work Plan
March 1995

I. Work Plan Goal and Objectives

The goal of this work plan is to have the Metro Council adopt a Regional Water Supply Plan by December 1995 in coordination with the region's water providers based on the results of the Regional Water Supply Planning Study.

The objectives of this work plan are to:

- identify the activities and key decisions the Metro Council and staff need to carry out in the next nine months in order to adopt a Regional Water Supply Plan by December 1995;
- describe the schedule and timeline for adopting the plan in the next nine months; and
- describe the basic components of the plan and the outstanding issues and decisions that will need to be addressed in 1996 as part of Metro's Regional Framework Plan.

II. Tasks

A. Conduct an informational briefing for the Metro Council during a Council work session to provide the following information:

- background and update on the Regional Water Supply Planning Study (RWSPS) and Metro's involvement and participation
- summary of key findings and results of RWSPS to date
- summary of work plan for next nine months to adopt the Regional Water Supply Plan
- seek Council approval for work plan based on their comments and questions

This briefing will be conducted by Metro staff and RWSPS consultants.

Product: Council fully informed about RWSPS and progress to date.
Council approval of nine month work plan.

B. Staff work with participants in RWSPS and consultant teams to produce six to eight water supply options as as part of a preliminary plan in June 1995.

Product: Preliminary Regional Water Supply Plan available for Metro Council and for public review.

C. Brief Metro Council on content of preliminary plan and confirm schedule for listening posts and or public hearings.

Product: Council briefed on preliminary plan and listening posts and or public hearings scheduled.

D. Brief Metro's Water Resources Policy Advisory Committee (WRPAC) on preliminary plan and seek WRPAC recommendations and comments on preliminary plan.

Product: WRPAC comments and recommendations on preliminary plan prepared for Council.

E. Conduct listening posts and or public hearings on preliminary plan.

Product: One or more listening posts and or public hearings conducted.

F. Prepare comments responding to preliminary plan based on staff review and public comments.

Product: Formal Metro response to preliminary plan to RWSPS steering committee and consultants.

G. Write Draft Final Regional Water Supply Plan based on comments from participants and public.

Product: Draft Final Regional Water Supply Plan written by RWSPS consultants.

H. Conduct final round of listening posts and/or public hearings on Draft Final Regional Water Supply Plan. Solicit comments from WRPAC.

Product: Public comments received on Draft Final Regional Water Supply Plan. WRPAC comments submitted to Council.

I. Write final plan based on comments from all participants and public.

Product: Final version of Regional Water Supply Plan written by consultants.

J. Conduct public hearings on Final Regional Water Supply Plan.

Product: Metro Council hears final public comments on Regional Water Supply Plan.

K. Adopt Regional Water Supply Plan by resolution or ordinance.

Product: Regional Water Supply Plan adopted by Metro Council.

III. Timeline of Activities

Tasks	Timeline for Adoption of Regional Water Supply Plan								
	A	M	J	J	A	S	O	N	D
A. Metro Council Briefing	–								
B. Prepare Preliminary Plan	———	———	———	———					
C. Brief Council on Preliminary Plan				–					
D. WRPAC Reviews Plan				–					
E. Conduct Public Hearings					———	———			
F. Prepare Response to Preliminary Plan						–			
G. Write Draft Final Plan							–		
H. Conduct Final Public Hearings							—		
I. Write Final plan								—	
J. Conduct Final Public Hearings									—
K. Adopt Regional Water Supply Plan									–

IV. Product and Future Decisions

Please refer to the attached handout entitled Potential Criteria and Desired Outcomes for the Final Regional Water Supply Plan, November 1995 (Attachment 2). This handout was prepared by the steering committee of the RWSPS. The Metro Council can discuss these ideas for the desired outcome during staff briefing of this work plan.

The final product of this work plan is the adoption of a Regional Water Supply Plan by the Metro Council by resolution or ordinance in December 1995. This adoption will be coordinated with all participants in the Regional Water Supply Planning Study and will involve a series of public hearings or listening posts for the Council to seek public input before final adoption.

Future decisions that will need to be addressed in 1996 include:

- what elements of the Regional Water Supply Plan will be included in Metro's Regional Framework Plan?
- how will the Regional Water Supply Plan be periodically updated and revised?
- what future institutional and financial arrangements will be needed to implement the Plan?
- who has "ownership" of the plan?

R L I S

Regional Land
Information System

Figure 1. Representative Project Sites

Figure 1

- ASR Sites / Bull Run
- Rivers
- Rivers
- Streets
- City Boundaries
- State Boundaries
- UGB

① Columbia River
② Willamette River
③ Lusted Hill
④ Clackamas Water District Consolidated Site
⑤ Oak Lodge Intake and Treatment Facility
⑥ South Fork Intake
⑦ South Fork Treatment Facility
⑧ Lake Oswego Intake
⑨ Lake Oswego Treatment Facility
⑩ Powell Valley ASR
⑪ Cooper/Bull Mountain ASR
⑫ Bull Run Dam No. 3

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METRO

Draft 1995

Interim Federal Regional Transportation Plan

April 1995

METRO

PREFACE

1995 Interim Federal Regional Transportation Plan (RTP)

This document represents the April Public Review Draft of the 1995 Interim Federal Regional Transportation Plan (RTP). The document is referred herein as the "federal RTP." This federal RTP is an interim document intended to meet the requirements of the federal 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. Federal consistency is required to ensure the region's ability to use federal transportation funds.

Completion of this interim federal RTP represents the approximate halfway point in a process to develop a final updated RTP. The process began with the analysis of growth concepts as part of Metro's Region 2040 Study. The adoption of the Region 2040 Growth Concept in December, 1994, completed the first phase of planning for the RTP. This current planning phase will satisfy federal transportion planning requirements. Under federal rules, the RTP list of projects must be constrained to a reasonable forecast of anticipated revenue and must not result in worsening of air quality over the 20-year life of the plan.

This Public Review Draft of the RTP lays out the choices for developing the "financially constrained" system. Metro is asking the public, local jurisdictions, transportation and air quality agencies, and decision-makers (through the Metro Council and the Joint Policy Advisory Committee on Transportation) to help us make those difficult choices. Once the interim system decisions have been made, an air quality conformity determination will be made in June.

Completion of this phase also marks the start of the next phase of the RTP update. That work will proceed through 1996 and is designed to develop and adopt an RTP which continues to meet the federal planning requirements, but also integrates state Transportation Planning Rule (12) and Metro Charter transportation planning requirements as well.

It is understood that over the next 12 to 18 months, significant analysis, public involvement and policy discussion will be required to finalize an integrated document. For transportation, that effort will result in two products: 1) a new "final" financially constrained system; and 2) a preferred system necessary to serve the final regional growth concept as refined through the Regional Framework Plan process (i.e., the next phase of Region 2040). Consequently, a number of issues have been deferred to the next phase of the RTP and will be subject to significant analysis, review, and decision-making (see Chapter 8, Outstanding Issues).

Metro invites your comments. For more information on the 1995 Interim Federal RTP, call Metro at 797-1757.

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**Editor's Note: Revisions to the federal RTP are shown with underscored text, and deletions are shown as ~~strikethru~~ text.*

Introduction

Introduction

A. The Context of the Plan

The adopted federal 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 that 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 federal 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 represents:

- 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 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; ~~and~~

- recognition that substantial work will be conducted through 1996 to define regional land use policy, future urban areas, and create a regional set of adopted population and employment forecasts developed through regional consensus and reflecting the final regional land use policy.

B. Why a Federal Regional Transportation Plan?

The daily movement of people and commerce on the region's transportation system crosses city and county boundaries, producing transportation problems that 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 ~~are~~ is 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's mode of travel.

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 federal 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 assured by adoption of the federal RTP ~~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 that 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 regional policy, 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 that ~~which~~ 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 federal RTP provides a framework from which local plans can meet federal requirements. The amendments contained in the 199~~1~~2 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~~ 1.04 million to ~~1.74~~ 1.41 million by the year 2015 ~~year 2005~~. 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 that ~~which~~ maximize efficiency of the sizable transportation investments that ~~which~~ 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 were ~~was~~ generally met by the 1993 and 1995 ~~1987~~ deadlines (primarily due to improved auto emission technology), continued rapid growth in automobile travel threatens to exceed the region's standards for vehicle emissions. ~~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 alternate ~~alternative~~ 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 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 (MPO) 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 federal RTP, the decision-making structure used by Metro to 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.

Federal Planning Requirements

FHWA and FTA have jointly required that each urbanized area, as a condition for 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~~ adopt 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 federal 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 federal 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 federal 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 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 federal 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 federal RTP conforms to the Clean Air Act Amendments and EPA's conformity regulations. Although the federal 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 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. The Council 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 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 will be the update of the 1992 ~~is the~~ RTP. Metro is working with ODOT to ensure consistency between the OTP and the 1992 RTP (see also Chapter 8, Section E).

The Unified Planning Work Program (UWP)

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 Work Program (UWP). The UWP 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, with both agencies providing 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 chart below), which approves the Oregon portion of the UWP. The UWP of the Metro (Oregon) portion is published as a joint document with the UWP of Southwest Washington Regional Transportation Council (SWRTC). The development and approval of the FY 1995-96 UWP meets the conditions and satisfies the requirements of 23 CFR 420, 23 CFR 450.310 (e), and 23 CFR 450.314.

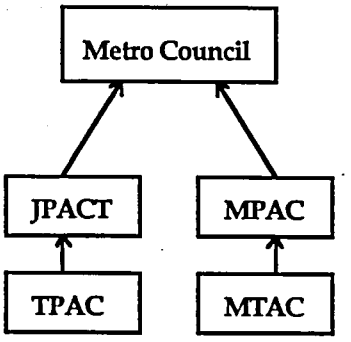
Regional Transportation Decision-Making Process

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 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 integrates federal, state, regional and local governments and stakeholders into the transportation and land use decision making 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, 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 Transportation (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 Transportation Policy Alternatives Committee (TPAC) and Metro Technical Advisory Committee (MTAC), respectively (see chart).



~~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~~ Southwest 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 development of the charter-required Regional Framework Plan (which includes a transportation element), land-use issues, and other Metro policy issues that affect the region's transportation. MPAC is composed of local elected officials (including representatives from Clark County, Washington 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 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.

Public Involvement

The planning process leading to development of the RTP and TIP must also include a proactive public involvement process that 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 federal 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~~ by which the Plan ~~was~~ is 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 regional policies 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 federal 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 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 federal 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.

~~highway corridors (Sunset Highway widening, freeway ramp metering, McLoughlin Boulevard improvements, Barbur and I-5 improvements, I-5 North improvements); 2) increased transit capacity (Banfield LRT, Westside LRT, Milwaukie LRT, Vancouver LRT, Mall LRT, transit mall extension); and 3) demand management programs will provide the needed balance of capacity to allow the downtown to develop to forecast levels — reducing the number of peak-hour vehicles into and out of the CBD by 24 percent over committed system levels — and not choke the core area with automobile congestion (Table 6-8).~~

- transit improvements such as trunk routes along I-5 South and Highway 217/Kruse Way and transit centers in Tigard and Lake Oswego will provide increased service levels and connectivity to commercial/office developments in Tigard, Tualatin, Kruse Way and Lake Oswego; and

- the Tualatin-Hillsboro Corridor improvements resulting from the Western Bypass Study, will provide increased access between rapidly growing portions of Washington County.

Western Sector

Significant economic development opportunities can be realized in the Western Sector as a result of the recommended transportation investments:

- the provision of an urban highway infrastructure in Central Washington County will allow the development contained in the comprehensive plan to occur in an orderly and timely manner;

- improvements to the Beaverton-Hillsdale Highway, Farmington Road and Highway 217 will ease congestion throughout downtown Beaverton, allowing improved access to core area developments;

- improvements to the Tualatin Valley Highway and Cornell Road will provide increased access to the region's second largest airport (Hillsboro);

- major LRT investments in the corridor and transit stations in the Peterkort, Beaverton and Tanasbourne (the Tanasbourne Transit Center will be relocated to 185th and Baseline upon completion of the Westside LRT to 185th Avenue) areas will provide increased transit access to concentrated suburban employment/commercial activities, and, in conjunction with highway projects on the Sunset Highway and the Beaverton-Hillsdale Highway, provide increased radial access between Portland and Washington County; and

- the improvements in the Tualatin-Hillsboro corridor resulting from the Western Bypass Study will provide greater north/south mobility connecting developing areas in the Southwestern and Western sectors.

Northwestern Sector

The extension of the Transit Mall will provide increased access to development north of Burnside and the completion of arterial improvements will provide increased access to the base of existing jobs and other employment developments planned for the area.

Downtown Portland Sector

With no constraints on development due to inadequate transportation capacity, employment in the downtown Portland sector is expected to grow by 56 percent (+46,000 jobs) by the year 2005 (Chapter 2). The recommended transportation investments in: 1) the radial

~~Significant economic developments will benefit from access improvements provided by the recommended highway and transit investments in the Eastern Sector. Included among these are:~~

- ~~the Central Eastside/Produce Row developments, representing over 10,000 jobs, which will have improved access resulting from the Water Avenue ramp connection to I-5 and other I-5 improvements;~~

- ~~the Union/Grand Eastside core area, which will experience reduced congestion through the McLoughlin Boulevard ramp connections to I-5 and improved transit service;~~

- ~~increased access from transit service improvements and the Banfield LRT, as well as the I-5 improvements, which will enhance developments in the Oregon Convention Center/ Coliseum/Lloyd Center area;~~

- ~~the construction of Airport Way, which will significantly improve access to the Columbia South Shore industrial area; and~~

- ~~improvements to I-84 and Mt. Hood Parkway in Gresham, which are essential to provide adequate access to several major developments in the area.~~

~~Southern Sector~~

~~Economic development opportunities in the Southern Sector that will directly benefit from the recommended transportation improvements are:~~

- ~~Clackamas Town Center (CTC) area, which will experience improved access as a result of major transit service improvements (McLoughlin LRT, I-205 LRT, and a transit center and park-and-ride lot at the CTC), highway investments on McLoughlin Boulevard, 82nd Avenue, Sunnyside Road and two new I-205 interchanges; and~~

- ~~increased access to the Clackamas industrial area through improvements to the Sunrise Corridor, the construction of an industrial access road south of the development, and improvements to 82nd Drive and Evelyn Street connecting the area to the Gladstone/I-205 interchange.~~

~~Southwestern Sector~~

~~Several recommended transportation investments directly affect economic developments in the Southwestern Sector:~~

- ~~improvements to I-5 South, Boones Ferry Road and Nyberg Road will increase access to 700 industrial acres and two major industrial parks in Tualatin, as well as relieve congestion in the downtown core and improve freeway access to jobs in the Tigard industrial area;~~

~~The size of the retail market available to the major regional retail centers by the year 2005 (Table 6-6) will be significantly increased by the adopted Plan investments when compared to the committed system. Substantial market size improvements are expected to occur over current levels for all the centers, with a 60 percent increase for Tanasbourne, a 52 percent increase for Tualatin, and at least a 40 percent increase for the Oregon City, Washington Square, Beaverton and Gresham centers over today's markets.~~

~~Labor Force Accessibility~~

~~All regional employment centers can be expected to have improved labor force accessibility in 2005 with the RTP system compared to the committed system (Table 6-7).~~

~~Significant benefits occur for employees in Tualatin (+55 percent), Central Beaverton (+48 percent), Wilsonville (+47 percent), Northwest Portland (+35 percent), Hillsboro (+34 percent) and the Portland CBD (+34 percent).~~

~~Economic Development Benefits~~

~~Continued economic development in the region is expected to progress at a substantial rate in the long term (Chapter 2). Clearly, the ability of the region to fully realize the economic opportunities potentially available will depend, in large part, on the degree and convenience of access provided to these sites by the transportation system. The capacity constraints associated with the committed system (Chapter 3) could seriously limit the degree to which economic opportunities included in local comprehensive plans will develop by the year 2005. However, with the implementation of the improvements recommended in the Plan (Chapter 5), it is expected that adequate transportation capacity can be provided to allow the expanded development called for in local comprehensive plans to the year 2005, as well as maintain the attractiveness of the region for continued investment, residential location, and general "quality of life."~~

~~The remainder of this section examines the economic development benefits associated with specific transportation improvements on a sector by sector basis.~~

~~Northern Sector~~

~~Implementation of the transportation improvements recommended in the Plan will improve access and transit service to major industrial developments in the Northern Sector. The I-5 improvements will facilitate access to the Port of Portland's Swan Island industrial complex, the Mock's Bottom development and the Oregon Convention Center. In addition, highway investments to improve arterial facilities in the Northern Sector will supply sufficient transportation services to enhance full development of over 1,400 acres in the Rivergate industrial district.~~

~~Eastern Sector~~

~~Year 2005 p.m. peak-hour vehicle hours of delay on the regional highway system are reduced by 35 percent (to 7,150) from the committed system (11,000) with the improvements called for in the RTP (Table 6-2). The most significant reduction is expected to occur on the major arterial system as increased capacity on the freeway and principal arterials will absorb some of the longer distance through trips back onto those facilities. In addition, the addition of significant transit capacity in the radial corridors with the Sunset and McLoughlin LRT will remove vehicle trips from corridor facilities.~~

~~Average Peak Hour Speed~~

~~The improvements called for in the RTP provide a 17 percent increase in peak hour speed on the regional highway system when compared to the year 2005 committed system (Table 6-3). This 34 mph average speed represents only a 6 percent decrease from 1987. The greatest degree of improvement provided by the RTP will occur on the freeway system which will be speeded up by 21 percent to an average of 40 mph during the peak hour. The principal and major arterial flows will improve by 10 percent and 12 percent, respectively, with the RTP improvements.~~
~~Air Quality and Energy~~

~~The improvements to the transportation system recommended in the Plan will be consistent with the adopted ozone and carbon monoxide State Implementation Plans and reduce hydrocarbon and carbon monoxide emissions over levels associated with the committed system. In addition, p.m. peak hour energy consumption on the regional system will be reduced by 6 percent from committed levels (Table 6-4), although this still represents an increase over 1987 levels.~~

~~C. Impact of the Adopted Plan on Expected Year 2005 Growth~~

~~Job Accessibility~~

~~The transportation system recommended in the Plan provides significantly greater job accessibility to the residents of the region than the committed system (Table 6-5). Substantial improvements in the number of jobs accessible within 30 minutes during the peak hour by the fastest mode are found in the Gresham (+65 percent), Gladstone (+73 percent), Hillsboro (+55 percent), Tualatin (+97 percent) and Rock Creek areas (+74 percent). In fact, with the exception of the Oregon City area (which experiences a 36 percent reduction), all the residential areas evaluated are expected to have greater job accessibility in the year 2005 than they have today, despite the enormous growth in travel demand on the transportation system.~~

~~The adopted Plan improvements provide a greater number of jobs accessible by transit to zones with high concentrations of low income households than either the committed system or current service levels.~~

~~Retail Market Accessibility~~

~~Level of Service of the Regional Transportation System~~

~~Highway System~~

~~The year 2005 p.m. peak hour level of service of the regional highway system (principal and major arterials) would be significantly improved over conditions associated with the committed system through the investments recommended in the Plan (Figure 6-3). Instances of unacceptable levels of service are anticipated for sections of the Sunset Highway, the Banfield Freeway, McLoughlin Boulevard, Ross Island Bridge, Powell Boulevard, Barbur Boulevard, Central Beaverton, along High way 99W through Tigard, Tualatin Valley Highway west of Hillsboro, Highway 213, the Oregon City Bypass and Highway 99E south of Oregon City.~~

~~Transit System~~

~~Significant improvement in p.m. peak hour regional transit trunk route travel times from the committed system is achieved with the transit service and facility improvements recommended in the Plan (Figure 6-4). In addition to the Banfield LRT, the I-205 LRT (to the Clackamas Town Center), McLoughlin Boulevard LRT (to Milwaukie), Sunset LRT to Beaverton and Beaverton to Hillsboro trunk route would meet the established performance criteria of equal to or less than one and one half times the off peak highway travel time. Additional transit improvements beyond those identified in the Plan will be required to achieve the performance standard in the Southern (south of Milwaukie) and Southwestern (Barbur/99W) sectors.~~

~~Travel Times on the Regional Highway System~~

~~The investments recommended in the Plan will reduce year 2005 p.m. peak hour highway travel times in all major regional corridors from those associated with the committed system (Figure 6-5). The greatest improvement will occur in the Southwestern circumferential corridor, where travel times from Tualatin to Hillsboro will be reduced by upwards of 30 percent. Other travel time reductions of around 25 percent from the committed system occur in the Beaverton-Hillsboro (-27 percent), Beaverton-Tualatin (-26 percent), Eastern I-84 (-25 percent), and the Eastern Sunrise (-23 percent) corridors.~~

~~Travel time improvements over 1987 levels can be expected in the Eastern circumferential (Gresham Parkway) and Sunrise (Clackamas Expressway) Corridors.~~

~~Lane Miles of Congestion~~

~~The improvements called for in the RTP will reduce the number of congested lane miles on the year 2005 regional highway system by nearly 40 percent when compared to the committed system (Table 6-1). The largest improvement can be expected on the region's freeways, with a two-thirds reduction in the number of congested lane miles over committed levels.~~

~~Vehicle Hours of Delay~~

In sum, the statewide and local planning processes have ensured that the recommendations made in this federal RTP will maintain and improve the overall quality of the air, water and land resources of the state (Goal 6), and will conserve open space and protect natural and scenic resources (Goal 5).

Social & Economic Effects of the Plan

This section will be written as part of the above analysis of performance.

~~B. Year 2005 Performance of the Adopted Plan~~

~~Modal Shares~~

~~As with the committed system, total daily person trips on the transportation system recommended in the Plan are expected to grow from slightly over 3.5 million trips in 1985 to nearly five million trips by the year 2005. (This travel includes auto, transit, motorcycle, walking and bicycle person trips produced in the Oregon portion of the metropolitan area. Excluded are commercial travel and trips with an origin outside the Oregon portion of the region.) Compared to the modal shares predicted for the committed system, the additional investments recommended in the Plan for increased transit service and demand management programs will produce a significant shift in travel to these modes, with transit's share of the peak hour travel market increasing from 6 percent in 1985 to 9 percent by the year 2005.~~

~~Transit ridership increases are most significant for work trips and, therefore, have the greatest impact on peak period travel. Transit ridership for work trips is expected to increase from the current 11 percent to nearly 18 percent of peak hour work trips. For peak hour work trips to the Portland CBD, the transit share is expected to be nearly two thirds by 2005 with the RTP. This is a 45 percent increase in market share over current levels.~~

~~Travel Volumes~~

~~Highway System~~

~~Illustrated in Figure 6-1 are year 2005 volumes on principal and major arterials for the highway system recommended in the Plan. Shown are p.m. peak hour volumes by travel direction. As can be seen, the highway volumes associated with the adopted Plan are lower than committed system volumes (Figure 6-2). This decrease in highway volumes reflects a system wide 5 percent decrease in p.m. peak hour vehicle work trips attributable to a significant increase in peak hour work trip transit ridership (over 140 percent) produced by transit capacity investments and demand management strategies. Even with these investments, however, increased travel demand resulting from growth will produce highway volumes higher than current levels. These increased vehicle volumes are generally accommodated by the increased highway capacity provided through the highway improvements recommended in the Plan.~~

following finalization of the financially constrained system. EPA and USDOT will review the final determination.

Energy Effects

The federal RTP will also be reviewed for energy consumption relative to the base year and to a no-build. The following are other qualitative energy-related findings.

The federal RTP contains policies intended to increase the use of transit, ridesharing, bicycle and pedestrian travel in an effort to reduce fuel consumption. In addition, efficiency improvements, such as freeway ramp metering and improved arterial signalization, will help smooth traffic flow and improve fuel efficiency.

The federal RTP is consistent with energy policies identified in the *Fifth Biennial Oregon Energy Plan*. State policy regarding transportation-related energy consumption is aimed at achieving several goals, including:

(1) reducing single occupant vehicle (SOV) travel and shifting to alternative modes of travel;

(2) improving the fuel efficiency of cars and light trucks; and

(3) substituting alternative fuels for gasoline where practical and economical.

The State Energy Plan also calls for possible fuel pricing that fully reflects the environmental and social costs of driving, in part to reduce fuel consumption. Due to the overlap between vehicle fuel use and emissions, these and other measures are also being addressed in Oregon through air quality and transportation planning at the all government levels.

Effects on Environmental Resources

In addition to air quality impacts, the improvements recommended in the federal RTP may affect other environmental resources, such as wetlands, riparian corridors and other natural features of local significance. As part of meeting Goals 5 (Open Space & Natural Areas) and 6 (Air, Water and Land Resources Quality) of the statewide planning process, local governments in Oregon demonstrate in their adopted comprehensive plans that proposed activities (including land use and transportation) will meet these goals.

Because the local comprehensive plans include the transportation improvements recommended in the federal RTP, the projects have been reviewed at the local level with consideration given to environmental impacts. Changes to local plans, including transportation improvements, that affect identified resources must be made in compliance with statewide planning goals, and are reviewed by the state Department of Land Conservation and Development (DLCD) for consistency with state law.

Some environmental resources, such as federally protected wetlands and sensitive groundwater aquifers, require additional review by state and federal agencies when transportation projects are proposed. The DEQ also has jurisdiction over noise issues resulting from major transportation projects.

commodities. Metro is the lead agency with ODOT and the Port of Portland for the IMS in the Portland area. Implementation of the full IMS will begin in October, 1995.

Other Managment Systems. ISTEA also required safety, pavement, and bridge management systems. ODOT is lead agency on those systems. As the systems are completed, relevant measures may be incorporated into future RTPs.

Modeling. Metro is the lead agency for the regional travel forecasting model. Historically, the model has primarily been used to evaluate the roadway and transit networks. Metro is working with ODOT and other Oregon metropolitan areas with similar models to improve bicycle, pedestrian, freight, and demand management analysis tools.

Cost/Benefit. One of the most difficult to determine, yet most often requested measure, is cost/benefit. The difficulty lies in that different projects have different intentions and/or serve different modes. Further difficulty lies in putting a value on those varied benefits. Similarly, while determining aproject cost is fairly straight-forward, there are major philosophical differences as to the true cost of transportation projects, particularly when environmental costs are included. Metro will be looking at developing a cost/benefit method over the next year. It may only be applicable to the Transportation Improvement Program.

Multi-modal accessibility. Metro hopes to develop an accessibility measure to evaluate the quality of accessibility from place to place within the region by various modes. The measure would be a useful comparative analysis tool to locate public investment.

All the improvements in modeling and the development of new measures require extensive research and substantial amounts of new data.

Air Quality

Pursuant to section 176 (c) of the Clean Air Act, as amended [42 U.S.C. 7401 et. seq. (1990)] and Oregon Administrative Rule 340-20-710 through 340-20-1080, the financially constrained system of the federal RTP must include an air quality conformity determination. A conformity determination is required to receive federal transportation funds. A determination of conformity requires:

- Interagency coordination between Metro, ODOT, the Department of Environmental Quality (DEQ) and local jurisdicitons to determine projects having a significant regional air quality impact.

- An analysis of the effect of those projects on carbon monoxide, as well as the precursors to ozone: hydrocarbons and nitrogen oxides.

- Opportunity for public access to information used to determine conformity.

- An actual determination of conformity. The determination must be made by JPACT and the Metro Council.

Essentially, the conformity analysis must conclude that the effect of all the projects within the RTP will not worsen air quality over the life of the plan. Conformity will be conducted in June

Roadway Network Data

PM 1-hour Average Speed (mph)

PM 1-hour Average Travel Time (minutes)

Lane Miles (arterials, freeways)

Congested Roadway Miles
as a % of total

Vehicle Hours of Delay

Accessibility

Total number of jobs accessible in peak hour by fastest mode within 30 minutes from selected residential areas

Retail market (population) within 15 minutes by fastest mode in the off-peak from major retail centers or mixed-use areas

Labor force (population) accessible within 30 minutes by fastest mode in the a.m. peak hour from regional employment centers

Bicycle System

% of regional system completed

Freight System

PM truck travel times through region on selected freight mainline routes

Off-Peak truck travel times through region on selected freight mainline routes

Future Measures

A number of planning activities are underway to enhance the ability to evaluate the transportation system. More and more, these measures are oriented toward the transportation system user. In other words, translating information into how it will effect a driver, transit rider, bicyclist, walker, or trucker. These activities include:

Congestion Management System (CMS). Required by ISTEA, the CMS requires better information and measures prior to increasing roadway capacity for single-occupant drivers. Alternative modes of travel must be considered within congested corridors. Metro is working with ODOT and local jurisdictions to develop the CMS. New measures will examine people movement through a corridor, as opposed to vehicles. Capacity will thus be determined based on reasonable expectations of people, not vehicles. The CMS will being implemented beginning October, 1995.

Intermodal Management System (IMS)/Freight System. Similar to the CMS, the IMS and freight system will include performance measures related to the movement of

evaluate the multi-modal performance of the selected projects, programs, and strategies identified in the financially constrained RTP. Consequently, the measures respond not only to traditional objectives such as congestion relief, they also reflect goals to reduce single-occupant vehicle (SOV) travel, encourage transit, bicycle, and pedestrian modes, improve air quality, and reduce energy.

The measures and information also reflect current technology and availability of data. The end of this section describes some of the measures being developed or considered for future analyses of the RTP.

Measures and information proposed for evaluation of the federal RTP include:

Trip Data

Total Person Trips
- Walk/Bike Number of Total Trips
- Walk/Bike as % of Total Trips

Person Trips per Household

Person Tips per capita

Home Based Work Occupancy rate

Transit Date

Transit Riders
- as % of Total Person Trips

Home-Based Work Transit Riders
- as % of Total Home-Based Work Person Trips

% households covered by transit (primary and secondary service)

% employment covered by transit (primary and secondary service)

Trip Length Data

Average Weekday (AWD) Vehicle Miles of Travel (VMT)
- with commercial and external (outside Metro area)
- without commercial and external

AWD VMT per Capita
- with commercial and external
- without commercial and external

AWD Average Trip Length (miles)
- with commercial and external
- without commercial and external

CHAPTER 6

Evaluation of the Performance of the Adopted Plan

A. Introduction

This chapter of the ~~plan~~ federal RTP will eventually evaluate~~s~~ the year 201~~5~~0~~5~~ performance of the regional financially constrained transportation system ~~recommended in the plan~~ based upon the policy and accessibility ~~mobility~~ objectives established in Chapter 1 and other performance objectives as described below. The recommended ~~plan~~ improvements contained in the RTP include ~~consists of~~ the transportation systems and strategies described in Chapter 4 ~~plus~~ and the capital investments presented in Chapter 5. The projects listed in the RTP were developed through a public process that included citizens and affected public and private agencies (see Introduction, Section D).

As noted in the preface, this federal RTP is an interim document consistent with ISTEA and the Clean Air Act Amendments. It also provides the basis for planning work through 1996 designed to develop and adopt an integrated state and federal RTP which meets all relevant planning requirements. It is understood that over the next 12 to 18 months, significant analysis, public involvement and policy discussion will be required to finalize that integrated document.

For this federal RTP, a general analysis of performance will be conducted following agency and public comment. That comment, including comments received at the *Priorities '95* public work shops, will be used to prioritize project funding within the financially constrained system. Therefore, while the federal RTP's goals, objectives, systems, and 20-year constrained project priorities are scheduled for adoption May 25, 1995, the analysis of the effectiveness of the constrained network will not be complete until June, 1995.

The analysis itself will generally compare base-year (1995) conditions to year 2015 conditions, and include those transportation projects, programs, and strategies identified in the financially constrained RTP (i.e., the system we can afford). The exception is the air quality conformity determination. That analysis is subject to specific federal and state guidance which respond to the Clean Air Act Amendments of 1991.

B. Evaluation Measures

The analysis of the federal RTP will rely on a number of existing measures or information. The measures and information either respond to the accessibility and policy objectives identified in Chapter 1, to federal and state planning objectives, or both. The intent of the analysis is to

Chapter 6

Evaluation of the Performance of the Adopted Plan

~~10-20 Year Project~~

- ~~into the north Macadam area (201) as warranted by development,~~

- ~~transit service in downtown should maximize electric vehicles to minimize environmental impact, and~~

- ~~various TSM improvements in downtown Portland to increase transit operating capacity, maintain existing traffic volumes, provide increased transit connectivity and reduce conflicts between transit vehicles, automobiles and pedestrians. (Specific projects will be determined as part of the Westside transitway decision process.).~~

- implementing the improvements identified in the I-405 reconnaissance (106),

- minimize conflicts between pedestrians, automobiles and transit vehicles by providing for preferential transit and pedestrian treatment, and

- modify Fourth, Fifth and/or Sixth Avenues for light rail to accommodate the Banfield (and other) LRT line capacity requirements beyond that provided by the cross-mall alignment.

10 Year Priority

- constructing LRT on the Mall, and

- extend the Fifth and Sixth Avenues Transit Mall both for increased bus and/or LRT transit operations.

10 Year Priority

- North Mall Extension.

10 20 Year Project

- South Mall Extension,

- reroute some bus routes off the transit mall as the mall reaches its transit capacity and designate additional transit streets in compliance with the downtown plan and functional street classification, and

- reduce the number of single occupant automobile trips into the CBD through the carpool meter permits, the RX Parking Program and the Downtown Portland Parking and Circulation Policy.

Improve traffic flow by updating signalization management and increase access:

Committed Project

- into the South Waterfront development area (65).

10 Year Priority Projects

- into the northwest Triangle area (197),

- by initiating TSM improvements on S.W. Front Avenue (198), and

- by North Downtown Circulation Improvements.

10-Year Priority Project

- completing the programmed analysis in the Cornell/ Burnside vicinity and developing recommendations for improvements.

Improve circulation and increase access to employment centers in the area by completing the Fremont Bridge connection to U.S. 30 and by:

Committed Project

- improving U.S. 30 (30) and other streets in the area (63, 64).

Improve safety in the area by:

Committed Project

- reconstructing several bridges on N.W. Cornell Road.

I. Downtown Portland Sector

The adopted plan improvements for the downtown Portland sector (Figure 5-10) are to:

Maintain access to downtown Portland by providing increased radial transit service to absorb additional travel associated with future development; and by

10-Year Priority Projects

- completing phase I of electrical, mechanical and structural repairs to the Hawthorne, Burnside, Broadway, Morrison and Sellwood Bridges over the Willamette River (245).

10-20 Year Priority Project

- completing phase II of the Willamette River bridge projects (245).

Maintain freeway efficiency through:

Committed Project

- improving the I-405/S.W. Sixth Avenue ramp (13).

10-Year Priority

- performing a reconnaissance to determine the extent and feasibility of improvements to I-405, the CBD ramps and the U.S. 26 and Highway 43 connections (106).

10-20 Year Project

10-Year Priority Project

- upgrading Vermont (331) and Dosch (332) Roads to urban standards,

- proceed with construction on the region's next priority LRT corridor — the Westside LRT (Figure 5-3) — to provide the major transit trunk service connecting downtown Portland with central Washington County, Beaverton and Hillsboro,

- provide transit service in the Westside Corridor by trunk routes on Beaverton-Hillsdale Highway/Tualatin Valley Highway, Cornell Road and Highway 217 (Figure 4-4) and an expanded timed transfer system consisting of major transit stations at Beaverton, Washington Square, Tanasbourne/185th, Sunset/217, Hillsboro, and Burlingame (Figure 5-3),

- phase in the planned transit service with development in the sector and implement the service in such a manner as to be compatible with the potential implementation of the Sunset LRT,

- improve access to the transit system by providing park-and-ride facilities in Hillsboro, west of Beaverton, at Sunset/Highway 217, Murray Boulevard, 170th and 185th (Figure 5-3), and

Improve bicycle/pedestrian facilities:

- construct the programmed regional bicycle facilities in the sector (Figure 4-7).

H. Northwest Sector

The investment strategy for the Northwest Sector (Figure 5-9) is composed of highway and transit improvements to:

Reduce congestion in the radial corridor by:

Committed Project

- providing direct connections from U.S. 30/Yeon Avenue to the Fremont Bridge (17).

Remove through traffic from the northwest residential areas by diverting these trips along Yeon Avenue/ St. Helens Road and by:

Committed Project

- improving the N.W. 23rd and Burnside intersection and other northwest neighborhood streets (59).

- constructing the first phase of a 216th/219th widening from the Sunset to Tualatin Valley Highway (125).

10-20 Year Projects

- constructing a 112th arterial (166)

- initiating TSM improvements on Murray Boulevard from Tualatin Valley Highway to Allen (172) and improving the intersection with Farmington Road (171),

- widening Murray Boulevard to five lanes from Allen to Scholls Ferry Road (170) and from the Sunset Highway to Cornell (175),

- improving Murray Boulevard over the BNRR overpass (174),

- upgrading Brookwood from Evergreen to Tualatin Valley Highway (176),

- widening Cornell Road from Sunset to the Barnes Road extension (184),

- upgrading Barnes Road from Leahy to the Multnomah County line (177) and from Highway 217 to Cedar Hills Boulevard (178) and constructing the Barnes Road extension from Cedar Hills Boulevard to Cornell Road (179),

- widening Cornelius Pass Road from Wagon Way to the Sunset Highway (181), providing short term safety and restoration improvements north of West Union and at Skyline (230), and assessing its function in the regional system to determine the long term need associated with the facility,

- upgrading facilities in the Hillsboro area such as 229th/231st from Baseline Evergreen (190, 192), and

- widening Cornelius Pass Road from Wagon Way to West Union (181).

10-20 Year Projects

- upgrading Highway 47 to suburban standards (317) north and south of Forest Grove,

- widening Cornell Road to three lanes from the Barnes extension to Skyline (326),

- widening 158th to five lanes from Walker to Jenkins (327),

- upgrading 170th from Farmington to Merlo (328), and

- realigning Walker Road from 185th to Cornell (329).

Improve safety in the area by:

- completing the widening of Tualatin Valley Highway from 21st to Oak (135),

- initiating TSM improvements on Tualatin Valley Highway from Highway 217 to 21st (136) and conducting a detailed reconnaissance or Preliminary Engineering study to determine the full extent of improvements required in this section,

- constructing the East West Arterial from Murray Blvd. to S.W. 110th as a bypass to Tualatin Valley Highway in the central Beaverton area (137) with the construction timed to accommodate and facilitate the construction of the Westside LRT,

- improving the intersection of Beaverton Hillsdale Highway/Scholls Ferry Road/Oleson Road (141),

- widening Farmington Road from Murray to 209th (143, 144),

- initiating TSM improvements on Beaverton Hillsdale Highway from Scholls Ferry Road to Highway 217 (154) and improving the Bertha/Capitol/Beaverton Hillsdale Highway intersection (153),

- widening Cornell Road from 158th to Cornelius Pass Road (167, 168) and improving the Cornell/Brookwood intersection, and

- widening Baseline/Jenkins from Cedar Hills Boulevard to Main Street in Hillsboro (185, 186, 187).

10-20 Year Project

- widening Farmington Road from 209th to the bypass (319).

Increase access into the existing and planned residential, commercial and industrial developments in the sector by:

Committed Projects

- widening Murray Boulevard from the Sunset Highway to Jenkins Road (35),

- widening Hall Boulevard from Allen to Greenway (54),

- widening 185th from Rock Creek to Tualatin Valley Highway (72), and

- widening E Street in Forest Grove (74).

10 Year Priority Project

- ~~reconstructing the interchanges of the Sunset Highway with Murray Boulevard (28) and Cornelius Pass Road (29),~~

- ~~ramp metering the Sunset Highway from Jefferson Street to Cornelius Pass Road (23), and~~

- ~~improving the interchange of the Sunset with Helvetia Road (27).~~

~~10 Year Priority Projects~~

- ~~completing construction of the westbound climbing lane (from the Zoo exit to Sylvan) on the Sunset Highway (26),~~

- ~~widening the Sunset Highway to six lanes from Sylvan to Cornell/158th (112, 113), and~~

- ~~reconstructing the interchanges of the Sunset Highway with Sylvan Road (112), 158th/Cornell (115), and 185th Avenue (114).~~

~~10 20 Year Project~~

- ~~improving the interchanges of the Sunset Highway with Jackson Road (307).~~

~~Reduce congestion in the circumferential corridors by:~~

~~10 Year Priority Projects~~

- ~~constructing the first phase of a Highway 217 widening to include auxiliary lanes from the Sunset to the Hall Boulevard overcrossing (117, 119),~~

- ~~ramp metering Highway 217 from the Sunset to Scholls Ferry Road (116), and~~

- ~~consider constructing facility improvements in the Tualatin Hillsboro corridor from Highway 99W to Tualatin Valley Highway and from Tualatin Valley Highway to Sunset Highway, or other highway, transit or land use alternatives as identified in ODOT's Western Bypass Study.~~

~~Improve east/west arterial capacity by:~~

~~Committed Projects~~

- ~~improving the Tualatin Valley Highway/Murray Boulevard intersection (35),~~

- ~~improving the Scholls Ferry/Old Scholls/135th intersection (39), and~~

- ~~widening Cornell Road to five lanes from Cornelius Pass Road to Ray Circle (52).~~

~~10 Year Priority Projects~~

~~Improve major arterial access from I-5 to Lake Oswego by:~~

~~10-Year Priority Project~~

- ~~completing the widening of Boones Ferry Road from Jean to Madrona (207).~~

~~Improve street access and safety in the vicinity of the Oregon Health Sciences Complex by:~~

~~10-Year Priority Project~~

- ~~initiating circulation and TSM improvements to local streets (199),~~
- ~~improve transit service in the corridor by providing a new trunk from the Portland CBD to Tualatin via I-5, extending service into the South Waterfront and North Macadam areas as warranted by transit service extension criteria, as well as maintaining the Barbur Boulevard and Macadam/Highway 43 trunk routes (Figure 4-4),~~
- ~~protect options for bus priority treatment on Barbur Boulevard from Beaverton Hillsdale to the Tigard Transfer Station,~~
- ~~improve transit opportunities by providing transit centers at Tualatin, Tigard, Washington Square, Lake Oswego and Burlingame. The existing Barbur Boulevard Bus Transfer Station will be maintained as an integral part of the system (Figure 5-3),~~
- ~~improve access to the transit system by providing park-and-ride facilities in Lake Oswego, Tualatin and Tigard (Figure 5-3), and~~

~~Improve bicycle/pedestrian facilities:~~

- ~~construct the programmed regional bicycle facilities in the sector (Figure 4-7).~~

~~G. Western Sector~~

~~The adopted plan for the Western Sector (Figure 5-8) combines significant levels of highway and transit investment to:~~

~~Reduce congestion in the major radial corridor by:~~

~~Committed Projects~~

- ~~modifying the ramp terminal at the existing Zoo interchange (phase I) with the Sunset (24),~~
- ~~adding a westbound on-ramp at the Sunset/Zoo interchange (25),~~

- extending Murray Boulevard from Scholls Ferry to 135th (53).

10 Year Priority Projects

- initiating TSM improvements on Durham Road from Hall Boulevard to Highway 99W (183),

- upgrading Nyberg/S.W. 65th east of I-5 (180),

- initiating TSM improvements on Boones Ferry Road from Country Club Road to the Multnomah County line (221), and

- extending Murray Boulevard from 135th to Highway 99W via Gaarde (173) after the Highway 217 and Beef Bend Road extension improvements.

10-20 Year Projects

- widening Scholls Ferry Road from Beef Bend to the bypass facility (318), and

- initiating TSM improvements on Kerr Road from the Portland city limits to Boones Ferry Road (336).

Remove through traffic from local streets and improve freeway access by:

Committed Projects

- reconstructing I-5/Terwilliger interchange (89),

- improving the ramp connections at the I-5/Nyberg Road interchange (1), and

- improving interchange at I-5/Stafford Road (10).

10 Year Priority Projects

- improving the interchanges of I-5 with Lower Boones Ferry Road (101) and Wilsonville Road (102), and

- constructing an interchange at I-5/I-205 and the proposed bypass facility (103). (The proposed bypass is contingent upon the recommendations of ODOT's Western Bypass Study. If a decision is made to not build the bypass facility then the need for this improvement will be re-evaluated).

10-20 Year Project

- improving the interchange of I-5 at Charbonneau (303).

- consider constructing facility improvements in the Tualatin-Hillsboro corridor from Highway 99W to Tualatin Valley Highway and from Tualatin Valley Highway to Sunset Highway, or other highway, transit or land use alternatives as identified in ODOT's Western Bypass Study.

Provide improved arterial connectivity and access by:

Committed Projects

- improving the intersection of Scholls Ferry Road at Hall and widening Scholls Ferry to the Highway 217 on-ramp (40), and

- improving the Scholls Ferry/Old Scholls/135th intersection (39).

10 Year Priority Projects

- widening Boones Ferry Road from Lower Boones Ferry/I-5 to the bypass facility (138, 139, 140),

- initiating the first phase TSM improvements to Hall Boulevard from Scholls Ferry Road to Durham Road (145),

- widening Durham Road to three lanes from Hall Boulevard to 72nd Avenue (145),

- widening Scholls Ferry Road from Highway 217 to the Beef Bend extension (142, 146),

- widening the Greenburg Road structure over Highway 217 (118),

- widening Tualatin-Sherwood/Edy Road (182), and

- extending Beef Bend Road from Scholls Ferry Road to Highway 99W (188, 189).

10-20 Year Project

- widening Hall Boulevard to three lanes from Scholls Ferry Road to Durham Road (145).

Improve local circulation and arterial operations by:

Committed Projects

- upgrading Bertha Boulevard (61) and Terwilliger Boulevard (60) in the vicinity of the reconstructed I-5 interchange,

- upgrading S.W. 49th (58), and

- implementing TSM improvements on Highway 43 south to Laurel Street (158) and improving the Highway 43/Terwilliger extension intersection (159),

- improving the intersection of Macadam Avenue with Taylors Ferry Road (151),

- consider constructing a limited access facility in the Tualatin-Hillsboro corridor from I-5 to Highway 99W or other alternatives as identified in the ODOT Western Bypass Study,

- addressing the Ross Island Bridge/I-5/U.S. 26/ Highway 43/I-405 access and traffic flow issues through a project development reconnaissance effort (106), and

- widening Highway 99W to six lanes from I-5 to Main Street (121).

10-20 Year Projects

- widening Boones Ferry Road to five lanes between the proposed bypass facility and I-5/Stafford (122). (The proposed bypass is contingent upon the recommendations of ODOT's Western Bypass Study. If a decision is made to not build the bypass facility then the need for this improvement will be re-evaluated),

- adding a southbound climbing lane on I-5 from Hood Avenue to Terwilliger (304),

- constructing interchanges on the proposed bypass facility at Highway 99W and Tualatin-Sherwood/Edy Roads. (The proposed bypass is contingent upon the recommendations of ODOT's Western Bypass Study. If a decision is made to not build the bypass facility, then the need for these improvements will be re-evaluated),

- adding an additional southbound lane on Barbur Boulevard over Front Avenue (325),

- improving operations and traffic flow on Macadam Avenue south of Bancroft (320),

- improving the I-205/Highway 43 interchange (302), and

- constructing the preferred alternative for the Ross Island Bridge/I-5/U.S. 26/Highway 43 area (106).

Reduce congestion and improve accessibility in the circumferential corridors by:

10-Year Priority Projects

- constructing the first phase of a widening of Highway 217 to include auxiliary lanes from the Hall Boulevard Overcrossing to the Sunset Highway (117, 119) and six lanes from the Hall Boulevard Overcrossing to I-5 (120),

- improving the Highway 217 interchanges with I-5 (100), 72nd Avenue (120), and Highway 99W (121), and

- elsewhere in the Southern Corridor, protect options for a transitway from Portland to Oregon City via the McLoughlin Corridor and Highway 224/I-205 Corridor,

- improve access to transit by providing park-and-ride facilities at Clackamas Town Center, Milwaukie, Oregon City, and Foster Road at I-205 (Figure 5-3), and

Improve bicycle/pedestrian facilities:

- construct the programmed regional bicycle facilities in the sector (Figure 4-7).

F. Southwestern Sector

The improvement strategy for the Southwestern Sector (Figure 5-7) combines highway and transit investments to:

Reduce congestion in the two radial corridors by:

Committed Projects

- adding auxiliary lanes on I-5 between Carman Drive and I-205 (1, 2) and modifying the northbound I-205 to I-5 ramp (3),

- widening State Street in Lake Oswego (46),

- improving the intersections of Highway 99W with Hall Boulevard (37) and Bull Mountain/Canterbury Lane (36) and implementing TSM improvements on Highway 99W from Greenburg to the Tualatin River (38), and

- reconstructing the Highway 99W/Six Corners intersection (34).

10-Year Priority Projects

- improving the northbound weave and curve condition on I-5 from Multnomah to Terwilliger Boulevards (105),

- adding a southbound climbing lane on Barbur Boulevard from Hamilton to Capitol Highway (148),

- improving the I-5/Capitol/Taylors Ferry/49th interchange (107),

- implementing TSM improvements on Barbur from S.W. Third to S.W. 49th (149),

- improving the Barbur/Hamilton intersection (147),

- improving Beavercreek Road from OR 213 to Mollala Avenue (208),

- improving Agnes Street (224),

- constructing a continuous east/west route over I-205 north of the CTC using Monterey Road (229), and

- upgrading 92nd Avenue south of the Multnomah County line or constructing another alternative such as a frontage road from Lester to Sunnyside on the east side of I-205 (335).

10-20 Year Projects

- extending Beavercreek Road into the Red Soils area or improving Warner Milne Road (209),

- upgrading 82nd Avenue from Crystal Springs to Schiller (322), and

- improving the Warner Milne/Linn/Warner Parrot alignment (333).

Develop street access to regional activity centers by:

10-20 Year Project

- improving local streets in the vicinity of the new OMSI site at Station L and the surrounding area west of S.E. 11th Avenue as warranted by development (205).

Support transit dependent high density development nodes and improve transit service through implementation of a timed transfer system and by:

10 Year Priority Projects

- pursuing the implementation of LRT in the I-205 Corridor (Figure 5-3) from the Clackamas Town Center to Portland International Airport. The decision to proceed to construction, however, is subject to: 1) a final assessment of impacts associated with the facility and a selection of a preferred alternative and alignment; and 2) the development of a funding strategy for the project,

- providing transit trunk routes from Oregon City to Milwaukie on McLoughlin Boulevard; Oregon City to Clackamas Town Center on 82nd Drive and Clackamas Town Center to Milwaukie on Railroad/Harmony (Figure 4-4),

- improve transit transfer opportunities within the next 10 years by providing transit centers at Oregon City, Milwaukie and Clackamas Town Center (Figure 5-3),

- improve transit service for the Milwaukie-Clackamas Town Center trunk route through committed improvements to Railroad/Harmony (73),

- constructing connecting arterials in the area north of Highway 212/224 such as 122nd from Sunnyside to Hubbard (218), Industrial Avenue/ Clackamas/102nd (222), Mather/122nd (226) and Mather/97th (227), and

- constructing the Jennifer extension from Evelyn Street to 135th (220).

Improve the Highway 212 portion of the Sunrise Corridor from Rock Creek Junction to U.S. 26 by:

10-Year Priority Projects

- widening and realigning Highway 212 from Rock Creek Junction through Damascus and Boring to the interchange at Highway 26; or construct an expressway on a new alignment between Rock Creek Junction and Highway 26 at the existing Highway 212 interchange.

Improve regional access into developing areas in Clackamas County by:

Committed Project

- widening Sunnyside Road from 172nd to Damascus (66, 67).

10-Year Priority Project

- widening Sunnyside Road from 122nd to 172nd (214).

10-20 Year Projects

- widening Sunnyside Road from Stevens to 122nd (213), and

- constructing an interchange at Beavercreek Road and the Oregon City Bypass (323).

Improve supportive arterial access and safety by:

Committed Project

- constructing a climbing lane on OR 213 from Spangler Hill to Mulino (47).

10-Year Priority Projects

- improving the Harrison/King/Monroe/43rd intersections (228),

- improving the Highway 224 at Springwater intersection (157),

- widening OR 213 south of Clackamas Community College to Leland (161),

~~10-Year Priority Projects~~

- ~~improving the arterial connections to I-205/Lester Road by extending Lester/Idleman east of 92nd (217),~~

- ~~constructing a split diamond interchange at I-205/ Sunnybrook (108) and constructing an arterial to 92nd,~~

- ~~improving Sunnyside Road to Stevens (211, 212),~~

- ~~improving the I-205/Highway 212/82nd Drive intersection east and west of I-205 (156) and widening 82nd Drive (219), and~~

- ~~constructing a Sunnybrook Road arterial from 92nd to 108th at Sunnyside Road (108).~~

~~10-20 Year Project~~

- ~~improving the I-205/Gladstone interchange as warranted by development (306).~~

~~Improve the flow of traffic on the Milwaukie Expressway (Highway 224) portion of the Sunrise Corridor from McLoughlin Boulevard to I-205 by:~~

~~10-Year Priority Projects~~

- ~~widening the facility to six lanes from McLoughlin to 37th/Edison (126), and from Webster to Johnson (128),~~

- ~~reconstructing 37th/Edison and constructing a signal intertie from Harrison to Johnson (127), and~~

- ~~reconstructing the I-205/Highway 224 interchange (109).~~

~~10-20 Year Project~~

- ~~widening Highway 224 to six lanes from 37th/Edison to Webster (127).~~

~~Improve through movement capacity and industrial access, and reduce congestion in the Highway 212/224 portion of the Sunrise Corridor from I-205 to Rock Creek junction by:~~

~~Committed Project~~

- ~~constructing the Evelyn Street railroad overpass (68).~~

~~10-Year Priority Projects~~

- ~~constructing a new limited access facility from I-205 to Highway 212 at approximately 135th (129),~~

10-20 Year Projects

- completing additional phases of McLoughlin widening north of Milwaukie:

  Phase IIIB: widening of McLoughlin to six lanes, plus a reversible mixed vehicle lane from the Ross Island Bridge to Harold Street (314),

  Phase IV: widening of McLoughlin to six lanes from Harold to Tacoma Street (315), and

  Phases IIIB and IV are deferred into the latter half of the 20 year program due to the planned development of LRT in the corridor.

Improve the operating efficiency of I-205 by:

10-20 Year Project

- ramp metering from Airport Way to Sunnyside Road (305).

Remove through traffic from local streets by:

Committed Project

- taking actions in the Sellwood area to divert through traffic.

10-Year Priority Project

- implementing improvements identified in the Southeast Corridor Transportation Improvement Plan for resolving east/west traffic problems east of McLoughlin.

Increase east/west access in the sector by:

10-20 Year Project

- improving Jennings Road/Roots Road (334) between McLoughlin and I-205.

Increase access to major developments along I-205 by:

Committed Projects

- improving the I-205 interchange at Sunnyside Road (22),

- constructing a new interchange at Lester Road (18), and

- widening Johnson Creek Boulevard from 82nd to I-205 (216).

~~— Improve access to transit within the next 10 years by providing park-and-ride facilities at Sandy/Columbia, Gateway, Lents, 122nd, 162nd, 181st, Gresham City Hall and the Banfield line terminus (Figure 5-3).~~

~~— Reduce the number of single occupant automobile trips in the corridor through the Lloyd Center Carpool Program and special carpool lanes on the metered freeway ramps.~~

~~Improve bicycle/pedestrian facilities:~~

~~— Construct the programmed regional bicycle facilities in the sector (Figure 4-7).~~

~~E. Southern Sector~~

~~— The improvements recommended in the Southern Sector (Figure 5-6) combine highway, transit and demand management investments to:~~

~~Reduce congestion in the major radial corridor by:~~

~~Committed Projects~~

- ~~a phased widening of McLoughlin Boulevard from Milwaukie north which consists of:~~

  ~~Phase I: construction of an overpass at Tacoma Street and signal intertie, including a realignment of the McLoughlin/River Road/Harrison Street intersection (31),~~

  ~~Phase II: widening of McLoughlin to six lanes from Tacoma to Highway 224 (32), and~~

  ~~Phase IIIA: widening of McLoughlin to six lanes from the Union/Grand Viaduct to the proposed I-5 Marquam Bridge ramps (33).~~

- ~~constructing new ramp connections from McLoughlin Boulevard to I-5 (6), and~~

  ~~Phases I, II and IIIA are recommended to proceed to construction (with Phase II subject to the completion of Metro's Southeast Corridor Study — see Outstanding Issues, Chapter 8).~~

~~10-Year Priority Projects~~

- ~~considering the implementation of LRT and other HCT alternatives in the Milwaukie Corridor from downtown Portland to Milwaukie (Figure 5-3). The decision to proceed to construction, however, is subject to the results of the I-205/Milwaukie Preliminary Alternatives Analysis which will recommend one of the two corridors to proceed to full alternatives analysis and will develop an action plan for the other corridor,~~

- ~~improving McLoughlin through Milwaukie (Harrison RR Crossing) (155), and~~

- ~~improving the McLoughlin/Arlington Road intersection (160).~~

- widening Stark Street from 257th to Troutdale Road (244),
- completing a TSM improvement on Powell Boulevard from I-205 to 181st (163), and widening Powell from Birdsdale to Eastman (164),
- widening Glisan from 201st to 223rd (242), and
- widening Foster Road from 122nd to Jenne (194).

10-20 Year Projects

- further improvements to Powell Boulevard from I-205 to 181st (to be determined) (163),
- completing a TSM improvement to Burnside from 233rd to U.S. 26 (338),
- widening Glisan from 223rd to 242nd (339),
- widening Halsey from 190th to Columbia Highway (337),
- upgrading 82nd Avenue from Killingsworth to Division (321), and
- upgrading Jenne Road from Foster to Powell Road (330).

Facilitate traffic flows and circulation by:

Committed Projects

- improving the connectivity of 182nd/190th (71), and
- improving the U.S. 26/Palmquist/Orient Road intersection (50).

10-Year Priority Projects

- realigning the 12th/Sandy/Burnside intersection (150),
- improving circulation in the 11th/12th/SPRR area north of Powell (206),
- widening Orient Drive from U.S. 26 to 267th (236),
- improving circulation on Division/Clinton/Harrison, and
- widening Powell Valley Road from Burnside to 257th (243).

Improve transit transfer opportunities within the next 10 years by providing transit centers at Lents, Gateway, Gresham, Hollywood, Coliseum area and Sandy/Columbia (Figure 5-3).

- widening 257th from Division to Palmquist (238), and
- widening 257th from Stark to Cochran (237).

Increase access to the major retail and industrial activity centers in the corridor by:

Committed Projects

- improving the I-84/181st interchange (20),
- constructing Airport Way from 122nd to Sandy (55) and widening 181st from Sandy to I-84 (56),
- constructing the Water Avenue ramp connection from I-5 to the Central Eastside industrial district (5),
- improving Sandy Boulevard from 99th to 122nd (45), and
- widening the Graham Road Structure (165).

10 Year Priorities

- widening Sandy Boulevard from 181st to 244th (162).

10-20 Year Project

- widening Sandy Boulevard from 122nd to 181st (324), and
- improving arterials serving the Columbia South Shore area as warranted by development (195).

Increase supportive arterial function by:

Committed Projects

- widening Powell Boulevard at 190th (48),
- upgrading 82nd Avenue from Division to Schiller (44),
- improving the intersection of Foster Road and Jenne Road (57), and
- widening Stark Street from 221st to 242nd (70).

10 Year Priority Projects

~~The adopted plan for the Eastern Sector (Figure 5-5) combines significant levels of highway, transit and demand management investments to:~~

~~Improve connectivity and access in East County by:~~

~~Committed Project~~

- ~~widening I-84 to six lanes from I-205 to 223rd, including a new interchange in the vicinity of 207th (19, 21).~~

~~10-Year Priority Projects~~

- ~~widening I-84 to six lanes from 181st to at least 257th, including upgrading and/or constructing interchange and connecting arterials as required at 238th/244th (110),~~
- ~~constructing all or part of the Mt. Hood Parkway, a new principal arterial connection between I-84 and U.S. 26 (134), and~~
- ~~constructing all or part of a new NE 207th Avenue arterial between Sandy Boulevard and Glisan.~~

~~10-20 Year Project~~

- ~~widening I-84 from the east end of the Troutdale Interchange to the Jordan Road Interchange (111).~~

~~Improve operating efficiency in the major circumferential interstate corridor by:~~

~~10-20 Year Project~~

- ~~ramp metering I-205 (305).~~

~~Remove through traffic from local streets and increase north/south grid connectivity by:~~

~~Committed Project~~

- ~~widening 257th from the Columbia Scenic Highway to Stark (69).~~

~~10-Year Priorities~~

- ~~widening 162nd from Burnside to I-84 (232),~~
- ~~widening 223rd from I-84 to Marine Drive, from Sandy to Halsey, and from Glisan to Stark (233, 234, 239),~~
- ~~widening 242nd from I-84 to Powell (241),~~

Provide adequate street access in developing areas by:

10-Year Priority Project

- improving access and circulation in the vicinity of the convention center (200), and

- performing a privately funded preliminary engineering study and conducting an environmental impact statement process to assess the need, feasibility, impact on traffic operations (freeway and surface streets), and consistency with the Oregon Transportation Commission's interchange policy as it relates to a possible new off-ramp connection between I-5 North and N. Kerby Avenue.

10-20-Year Project

- constructing a bridge to West Hayden Island (202) as warranted by development.

Improve transit service in the sector by:

10-Year Priority Projects

- providing high-quality transit trunk service in the I-5 Corridor (Figure 4-4), and

- considering the implementation of LRT and other HCT alternatives in the I-205 Corridor from Portland International Airport (PIA) to Clackamas Town Center (CTC) via Gateway (Figure 5-3). The decision to proceed to construction of LRT, however, is subject to the results of the I-205/Milwaukie Preliminary Alternatives Analysis which will recommend one of the two corridors to proceed to full alternatives analysis and will develop an action plan for the other corridor.

Improve transit transfer opportunities by:

10-Year Priority Project

- providing transit stations near the Coliseum, on N. Interstate Avenue, and Sandy/Columbia Boulevards (Figure 5-3), as well as in downtown Vancouver and at Vancouver Mall in Clark County,

- provide park-and-ride opportunities at Jantzen Beach, and

Improve bicycle/pedestrian facilities:

- complete the programmed regional bicycle facilities in the sector (Figure 4-7).

D. Eastern Sector

- constructing the third and fourth phases of the I-5 project between the N. Banfield and Greeley ramps to braid southbound ramps and construct a southbound frontage road (300, 301).

Reduce congestion in the major circumferential interstate corridor by:

10-20 Year Project

- improving the operating efficiency of I-205 through ramp metering (305).

Increase access to the major industrial centers in the sector by:

Committed Projects

- widening U.S. 30B from 60th to I-205 (41, 42),
- widening Marine Drive west of I-5 (43),
- improving the northbound to westbound Sandy Boulevard/I-205 connection (16), and
- constructing the first phase of a connection to Columbia Boulevard via 13th/Gertz (62).

10-Year Priority Projects

- widening Lombard/Burgaard from the St. Johns Bridge to Rivergate (203),
- widening Columbia Boulevard west of I-5 (193),
- reconstructing the connection of Columbia Boulevard and Lombard at N.E. 60th (152), and
- improving access in the Terminal 4 area (204) as warranted by development.

10-20 Year Project

- completing the connection from N. Vancouver Way to Columbia Boulevard via Gertz/13th as warranted by actual development (196).

Improve access from the I-205 Freeway to the Portland Airport and Columbia South Shore area by:

Committed Projects

- improving the I-205/Airport Way interchange (14), and
- constructing a southbound auxiliary lane on I-205 from Airport Way to N. Columbia Boulevard (15).

- City of Portland Bicycle and Pedestrian Program: A program to increase the percentage of persons bicycling and walking in the City of Portland. It targets as a goal 5 percent of all Portland work trips on bicycle by 1995.

The traffic operations improvements contained in the TIP, transit system improvements, High Occupancy Vehicle (HOV) lanes at metered freeway ramps, bicycle and pedestrian system improvements and programs, and the demand management programs and strategies contained and encouraged in this Plan constitute the overall transportation systems management element of the RTP.

B. Regional Overview

The transportation capital improvements called for in the RTP are depicted on a regionwide basis in three figures: 1) Regional Highway Corridor Improvements (Figure 5-1); 2) Regional Arterial System Highway Improvements (Figure 5-2); and 3) Regional Transit System Capital Improvements (Figure 5-3). The remaining sections of this chapter present these capital improvements on a sector basis, grouped into Committed, 10 Year Priority and 10-20 Year Need categories.

C. Northern Sector

The investment strategy for the Northern Sector (Figure 5-4) combines several highway, transit and demand management improvements designed to:

Reduce congestion in the major radial interstate corridor by:

Committed Projects

- completing the widening of I-5 in the vicinity of the Delta Park/Jantzen Beach interchange (12),

- widening I-5 to six lanes from Portland Boulevard to Columbia Boulevard (4), and

- constructing the first phase of a widening and ramp modification improvement to I-5 in the vicinity of the Memorial Coliseum/Oregon Convention Center (11).

10 Year Priority Project

- constructing the second phase of a widening, ramp modification and local street access improvement to I-5 in the vicinity of the Coliseum/Convention Center (104).

10-20 Year Project

- they must be of appropriate scope to adequately serve the local travel demands expected from the level of development associated with Metro's year 2005 population and employment forecasts, so as not to overburden the regional system with local traffic; and

- they must be consistent with the comprehensive plan of any adjacent or affected jurisdiction or agency.

Improvements to local streets and improvements on the local minor/collector systems that do not affect capacity of the regional system are not addressed by the RTP and are subject to local comprehensive plan provisions of the affected jurisdiction(s). A detailed list of the capital improvements included in the RTP is available under separate cover.

This chapter of the RTP details the first category of investments which are defined as included in the RTP, although both types of improvements are eligible for federal funding if they are located on the federal aid system.

In addition to the highway, transit and demand management investments specifically related to each sector, the following regionwide demand management programs are currently in existence and are recommended to continue:

- Areawide Carpool Matching Program: A free service which matches potential carpoolers with other carpoolers.

- Employer Contact Program: A program which responds to inquiries from employers and offers assistance in establishing rideshare programs.

Other current demand management programs in force at the city level recommended to continue are:

- City of Portland Downtown Carpool Parking Program: A cooperative program between Tri-Met and the City of Portland whereby carpools of three or more can purchase monthly parking permits and receive parking at long-term meters in downtown Portland. The City of Portland has also designated approximately 200 parking meters in Portland as "carpool only" before 9:00 a.m. on weekdays.

- Downtown Portland Parking and Circulation Policy: This plan is designed to reduce downtown traffic congestion and improve downtown air quality and encourages trips to and within downtown Portland in shared vehicles, on transit, on bicycles and by walking. This is primarily accomplished by managing parking. There is a limit on the total number of allowable parking spaces in the downtown, and there are also management measures to encourage short term parking and to allocate parking by sector, using maximum parking space ratios that vary according to transit accessibility.

- Carpool Parking Incentives: Ninety spaces in two downtown Portland garages are available to carpool vehicles at reduced rates, and the Lloyd Center and the Inner Southeast areas have 150 on-street spaces reserved for carpool vehicles.

				Roadway Lanes		Modal Elements						Project Cost
Jurdisdiction	No.	Project Name	Project Location	Existing	Proposed	Transit	Bicycle	Ped	Freight	TDM	TSM	(1995 Dollars)
ODOT	58	82nd Bike Lanes	Hwy 224 to Airport Way	5	5		◆					$20,000,000
ODOT	59	Lombard Bike Lanes	MLK to St. Johns Bridge	5	5		◆					$10,000,000
ODOT	60	Willamette Bridges Bike	various	n/a	n/a		◆					$1,000,000
ODOT	61	Interstate 5	CEIC Access to I-5	n/a	n/a				◆			$19,000,000
ODOT	62	Interstate 5	Interstate Bridge to Columbia	n/a	n/a				◆			$3,211,000
ODOT	63	Interstate 5	Columbia Boulevard to I-405	n/a	n/a				◆			$21,000,000
ODOT	64	Hwy 217	US-26 to TV Hwy						◆			$24,150,000
ODOT	65	Hwy 217	TV Hwy to 72nd Ave Interchange						◆			$48,900,000
ODOT	66	Hwy 217	Scholls Hwy Interchange						◆			$341,000
ODOT	67	Interstate-205	Columbia Blvd Interchange Phase I				◆		◆			$3,500,000
ODOT	68	Intermodal Rail	East Portland to Clackamas			◆			◆			$3,950,000
ODOT	69	Intermodal Rail	PTRR Signal System Upgrade			◆			◆			$3,384,000
ODOT	70	Intermodal Rail	BNRR E. St. Johns/T6/Vancouver			◆			◆			$2,737,000
ODOT	71	Intermodal Rail	E. St. Johns to N. of Union Station			◆			◆			$6,470,000
ODOT	72	Intermodal Rail	E. Ptld. to N. of Union Station			◆			◆			$1,500,000
ODOT	73	Interstate-5	Climbing lane south of Downtown						◆			$50,000,000
ODOT	74	Interstate-5	E. Marquam Interchange/King/Grand						◆			$53,856,000
ODOT	75	ATMS Program	Throughout the region			□			◆		◆	$46,000,000
ODOT	76	Sunrise Corridor	Interstate-205 to US 26									$222,000,000
ODOT	77	Mt. Hood Parkway	Interstate-84 to US 26									$190,000,000
ODOT	78	I-5/99W Connector	Interstate-5 to 99W									$167,000,000
ODOT/Portland	79	60th Avenue	Columbia to Lombard connector				□		◆			$6,000,000
ODOT/Portland	81	Interstate 5	Columbia Blvd Interchange				□		◆			$20,000,000
ODOT/Port	82	Interstate-205	Airport Way Interchange redesign				◆		◆			$30,000,000
ODOT/Portland	83	Interstate-205	Columbia Blvd. Interchange						◆			$10,000,000
ODOT Total												**$1,441,810,500**

REGIONAL TOTAL (W/ STATE FACILITIES)	**$3,135,779,135**

◆ = *Element of Primary Regional Significance*
□ = *Element of Secondary Regional Significance*

				Roadway Lanes		Modal Elements						Project Cost
Jurdisdiction	No.	Project Name	Project Location	Existing	Proposed	Transit	Bicycle	Ped	Freight	TDM	TSM	(1995 Dollars)
ODOT	19	Highway 43	Terwilliger Intersection	n/a	n/a		◆	◆			◆	$1,100,000
ODOT	20	Highway 43	A' Avenue Intersection	n/a	n/a		◆	◆			◆	$580,000
ODOT	21	Highway 43	McVey/Green Street Intersection	n/a	n/a		◆	◆			◆	$1,282,500
ODOT	22	Highway 43	West 'A' Street Realignment	n/a	n/a		◆	◆			◆	$1,220,000
ODOT	23	Highway 43	Willamette Falls Drive	n/a	n/a		◆	◆			◆	$165,000
ODOT	24	Highway 43	Failing Street	n/a	n/a		◆	◆			◆	$200,000
ODOT	25	Highway 43	Pimlico Street	n/a	n/a		◆	◆			◆	$150,000
ODOT	26	Highway 43	Jolie Point Traffic Signal	n/a	n/a		◆	◆			◆	$120,000
ODOT	27	TV Highway	209th to 172nd Avenue		4			◆				$10,808,000
ODOT	28	Highway 213	82nd to Chrystal to Shiller	n/a	n/a		◆	◆			◆	$5,500,000
ODOT	29	TV Highway	209th/219th	n/a	n/a		◆	◆			◆	$2,500,000
ODOT	30	US 26	Palmquist/Orient Intersection	n/a	n/a		◆				◆	$1,100,000
ODOT	31	BH Highway	BH/Scholls Ferry/Oleson	n/a	n/a		◆	◆			◆	$12,000,000
ODOT	32	Highway 213	Beavercreek Road	n/a	n/a		◆				◆	$10,000,000
ODOT	33	US 26	Birdsdale to Eastman	3	5		◆	◆				$3,600,000
ODOT	34	BH Highway	SW 65th St. to Scholls Ferry Road	n/a	n/a		◆	◆			◆	$575,000
ODOT	35	BH Highway	Scholls Ferry Rd. to Hwy 217	n/a	n/a		◆				◆	$5,500,000
ODOT	36	Highway 99W	Terwilliger Blvd. to Multnomah Blvd.	n/a	n/a		◆	◆			◆	$3,300,000
ODOT	37	Highway 99W	SW Hamilton St. to SW Front St.	n/a	n/a		◆	◆			◆	$1,800,000
ODOT	38	Hall Boulevard	Oak St. to Pacific Hwy	n/a	n/a		◆	◆			◆	$1,000,000
ODOT	39	Interstate-205	I-205 Trail (several crossings)	n/a	n/a		◆	◆			◆	$245,000
ODOT	40	Canyon Road	SW 110th to SW Canyon Dr.	n/a	n/a		◆	◆			◆	$413,000
ODOT	41	Highway 99E	Harrison to O.C. Shopping Center	n/a	n/a		◆	◆			◆	$3,000,000
ODOT	42	MLK/Grand Bike Lanes	Columbia Blvd.to Broadway	4	4		◆					$4,000,000
ODOT	43	MLK/Grand Bike Lanes	Broadway to Grant St.	8	8		◆					$100,000
ODOT	44	McLoughlin Bike Lanes	Grant to Tacoma	varies	varies		◆					$3,300,000
ODOT	45	OR99E Bike Lanes	I-205 to UGB	4	4		◆					$4,500,000
ODOT	46	BH Hwy. Bike Lanes	Scholls Ferry Rd. to Hwy. 217.	4	4		◆					$5,500,000
ODOT	47	TV Hwy Bike Lanes	117th St. to Murray Blvd.	4	4		◆					$3,400,000
ODOT	48	Hwy 99 Bike Lanes	Hall Blvd. to Greenburg St.	4	4		◆					$3,300,000
ODOT	49	Barbur Blvd. Bike Lanes	Multnomah St. to Terwilliger Blvd.	4	4		◆					$1,400,000
ODOT	50	Macadam/Hwy 43 Bikeway	Sellwood Bridge to Terwilliger Blvd.	4	4		◆					$6,500,000
ODOT	51	State St/Hwy 43 Bikeway	Terwilliger Blvd to Burnham Rd.	4	4		◆					$5,000,000
ODOT	52	TV Hwy. Bikeway Corridor	10th Ave to 1st Ave/OR219	4	4		◆					$1,000,000
ODOT	53	Old Scholls Fy Bike Lanes	Murray Blvd. to Reuser Rd.	n/a	n/a		◆					$1,000,000
ODOT	54	Canyon Road Bike Lanes	Sunset Hwy/US 26 to OR217	n/a	n/a		◆					$6,500,000
ODOT	55	Barbur/99W Bike Lanes	Front Ave. to Hamilton Street	4	4		◆					$2,700,000
ODOT	56	Powell Blvd. Bike Lanes	I-205 to 74th St.	4	4		◆					$2,000,000
ODOT	57	Sandy/US 30 Bikeway	122nd Ave. to Marine Dr.	2	2		◆					$7,000,000

◆ = *Element of Primary Regional Significance*
□ = *Element of Secondary Regional Significance*

				Roadway Lanes		Modal Elements						Project Cost
Jurdisdiction	No.	Project Name	Project Location	Existing	Proposed	Transit	Bicycle	Ped	Freight	TDM	TSM	(1995 Dollars)
Port	16	International Pkwy	International Parkway to Alderwood	0	3				◆			$1,000,000
Port	17	Rivergate rail	Phase 1, A & B Rail Yard						◆			$1,300,000
Port	18	Rivergate rail	T-6 Rail Yard expansion						◆			$4,200,000
Port	19	Rivergate rail	North Rivergate Wye						◆			$4,000,000
Port	20	Rivergate rail	Slough Rail Bridge						◆			$7,200,000
Port	21	Rivergate rail	South Rivergate/T-5 trackage						◆			$4,400,000
Port	22	Rivergate rail	Ramsey Rail Yard						◆			$525,000
Port	23	Rivergate rail	South Rivergate Rail Yard Development						◆			$1,750,000
Port	24	Rivergate rail	Phase 2, A & B Rail Yard						◆			$4,500,000
Port	25	Hayden Island rail	Hayden Island Rail						◆			$20,000,000
Port	26	Columbia River Channel	Portland to Pacific Ocean Study						◆			$1,500,000
Port	27	Airport Way Westbound	PDX to I-205 Phase 2	2	3				◆			$3,970,000
Port	28	Industrial area TMAs	Swan Island	n/a	n/a	□				◆		$250,000
Port Total												**$197,849,000**

TOTAL FOR NON-STATE FACILITIES	**$1,693,968,635**

TOTAL NON-STATE W/O TRANSIT	**$1,440,473,978**

ODOT	1	US 26	Beaverton/Tigard to Camelot	4	6							$8,747,000
ODOT	2	US 26	Camelot to Sylvan	6	6							$29,600,000
ODOT	3	Highway 217	Sunset to TV Hwy. northbound	4	6							$24,150,000
ODOT	4	Interstate-5	Highway 217/ Unit 2	n/a	n/a						◆	$11,200,000
ODOT	5	Interstate-5	Greely to N. Banfield	4	6							$36,000,000
ODOT	6	Interstate-205	Clackamas (Sunrise) Interchange	n/a	n/a		◆				◆	$114,000,000
ODOT	7	US 26	Murray to Hwy 217	4	6							$10,200,000
ODOT	8	US 30	NE 60th Avenue	n/a	n/a						◆	$5,000,000
ODOT	9	Highway 217	TV Hwy to 72nd Avenue	4	6							$96,000,000
ODOT	10	US 30	Killingsworth at Columbia	n/a	n/a						◆	$9,820,000
ODOT	11	Interstate-84	Troutdale to Jordan Interchange	n/a	n/a						◆	$7,000,000
ODOT	12	Interstate-5	Northbound I-205 Exit	1	2							$2,000,000
ODOT	13	US 26	Cornell to Bethany	n/a	n/a			◆			◆	$25,000
ODOT	14	Highway 8	209th to Brookwood	n/a	n/a		◆	◆			◆	$300,000
ODOT	15	Highway 43	Cedar Oak to Hidden Spring	n/a	n/a		◆				◆	$20,000
ODOT	16	Highway 217	Allen Interchange	n/a	n/a						◆	$25,000
ODOT	17	Highway 217	Greenburg Interchange	n/a	n/a						◆	$25,000
ODOT	18	Highway 217	Hwy 217 northbound off-ramp	n/a	n/a						◆	$341,000

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				Roadway Lanes		Modal Elements						Project Cost
Jurdisdiction	No.	Project Name	Project Location	Existing	Proposed	Transit	Bicycle	Ped	Freight	TDM	TSM	(1995 Dollars)
Multnomah	22	Cornelius Pass Road	Mile Post 2 to 3550' N of Skyline	2	2		□	□				$4,000,000
Multnomah	23	190th Ave	Butler Rd to Highland Drive	3	5		□	□				$1,875,000
Multnomah	24	NE Halsey St	223rd Ave to 238th Dr	2	5		◆	◆				$1,870,000
Multnomah	25	NE Halsey St	238th Dr to Columbia River Hwy	2	5		◆	◆				$3,240,000
Multnomah	26	Division Drive	268th Ave to Troutdale Road	2	3		□	□				$770,000
Multnomah	27	242nd Ave Connector	Glisan St to Sandy Blvd	0	5		□	◆				$2,000,000
Multnomah	28	162nd Ave	Halsey St to I - 84	5	5		□	□				$725,000
Multnomah	29	Division St	257th Ave to 268th Ave	5	3		□	◆				$2,420,000
Multnomah	30	Cornelius Pass Rd	Mile Post 2 to Highway 30	2	2		□	□				$5,500,000
Multnomah	31	Cornelius Pass Rd	County Line to Skyline Blvd	2	2		□	□				$2,750,000
Multnomah	32	Division Street	198th Avenue to Wallula Avenue	5	5		□	◆				$210,000
Multnomah	33	Division Street Bike Lanes	182nd Ave. to Kane Road	5	5		◆					$100,000
Multnomah	34	Burnside Street Bike Lanes	181st Ave. to 196th Ave.	4	4		◆					$344,000
Multnomah	35	223rd Ave.Bike Lanes	Halsey St. to Marine Dr.	2	3		◆					$162,300
Multnomah	36	185th Ave. Bike Lanes	Sandy Blvd. to Marine Dr.	2	2		◆					$14,400
Multnomah	37	Willamette River Bridges Acc	Unfunded Projects	n/a	n/a		◆					$5,600,000
Multnomah	38	Civic N'hd Central Collector	Burnside to Division	0	2	□	□	□		□		$2,049,000
Multnomah	39	Civic N'hd Station Plaza	Near Gresham City Hall LRT Station	n/a	n/a	□	□	□		□		$1,200,000
Multnomah	40	Civic N'hd MAX Station	Near Gresham City Hall LRT Station	n/a	n/a	□	□	□		□		$2,721,000
Multnomah	41	Sellwood Bridge	Sellwood to Highway 43	n/a	n/a	◆	◆	◆	□			$44,794,000
Multnomah	42	MultCo Bridges - Seismic	Central City	n/a	n/a	◆	◆	◆	◆			$37,115,000
Multnomah	43	MultCo Bridge Program	Central City	n/a	n/a	◆	◆	◆	◆			$20,696,000
MultCo Total												**$201,000,700**
Port	1	North Marine Dr	North Rivergate Section	3	5		◆	□	◆			$2,400,000
Port	2	South Rivergate	Columbia/Lombard Intersection				◆	□	◆			$950,000
Port	3	North Marine Drive	T-6 Entrance				◆	□	◆			$500,000
Port	4	Going Street	Going Street Rail Crossing	4	5		□	□	◆			$2,600,000
Port	5	Airport Way eastbound	PDX to I-205 Phase I	2	3		◆	◆	◆			$1,348,000
Port	6	Alderwood Street	Alderwood Street to Clark Road	0	3		□		◆			$2,100,000
Port	7	International Parkway	International Parkway to Cascades	0	3		□		◆			$1,100,000
Port	8	Cornfoot Road	47th Avenue to Airtrans Road	2	3		□		◆			$344,000
Port	9	Cornfoot Road	NE 47th Ave/Cornfoot Intersection				□		◆			$682,000
Port	10	Hayden Is Bridge	Rivergate to Hayden Island	0	4		□		◆			$20,000,000
Port	11	Airport Way	Cascade/Airport Way overcrossing	0	4		◆		◆			$15,600,000
Port	12	NE 33rd Avenue	33rd/Marine Drive Intersection				◆		◆			$130,000
Port	13	NE 92nd Avenue	NE 92nd/Columbia Blvd/Alderwood	2	5		□		◆			$75,000,000
Port	14	82nd Ave	82nd Avenue/Airport Way				◆		◆			$18,900,000
Port	15	International Pkwy	International Pkwy/Alderwood conn.	0	3				◆			$1,600,000

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				Roadway Lanes		Modal Elements						Project Cost
Jurdisdiction	No.	Project Name	Project Location	Existing	Proposed	Transit	Bicycle	Ped	Freight	TDM	TSM	(1995 Dollars)
Washington	87	Evergreen Road Bike Lanes	Shute Rd. to 1st Avenue	2	2		◆					$704,000
Washington	88	Cornelius Pass Rd. Bike Lanes	West Union Rd. to Sunset Hwy.	2	2		◆					$344,200
Washington	89	Baseline Rd. Bike Lanes	174th Ave. to 231st Ave.	2	?		◆					$1,296,980
Washington	90	185th Ave. Bike Lanes	TV Hwy. to Farmington Rd.	2	3		◆					$4,037,350
Washington	91	Tualatin Rd.Bike Lanes	Hwy 99 to Boones Ferry Rd.	n/a	n/a		◆					$1,000,000
Washington	92	Oleson Rd.Bike Lanes	Vermont St. to Hall St.	n/a	n/a		◆					$359,680
Washington	93	Garden Home Rd.Bike Lanes	Schools Ferry Rd. to Mult. Co. Line	2	3		◆					$881,000
Washington	94	Barnes Rd.Bike Lanes	Miller Rd. to U.S. 26	n/a	n/a		◆					$198,520
Washington	95	158th Ave. Bike Lanes	U.S. 26 to West Union Rd.	n/a	n/a		◆					$511,000
Washington	96	Cornell Rd.Bike Lanes	158th Ave. to 185th Ave.	n/a	n/a		◆					$436,880
Washington	97	Farmington Rd.. Bike Lanes	OR217 to Murray Blvd.	n/a	n/a		◆					$2,845,000
Washington	98	Ground Level Retail space	Criminal Justice Facility in Hillsboro	n/a	n/a					□		$1,000,000
Washington	99	Beaverton Creek TOD	SW 153rd, Murray to Jenkins	n/a	n/a					□		$2,220,544
Washington	100	Scholls Fy. Interconnect	Nimbus to Highway 217	n/a	n/a				◆			$35,000
Washington	101	99W Intersection Improve.	99W/124th/Tualatin Rd. Intersection	n/a	n/a				◆			$5,000,000
Washington	102	Tualatin Road	Teton Road to 115th	2	3		□	□	◆			$4,000,000
WashCo Total												**$376,455,278**
Multnomah	1	NE Halsey St	207th Ave to 223rd Ave	2	3-5		◆	◆				$1,350,000
Multnomah	2	Stark St	257th Ave. to Troutdale Rd	2	5		□	◆				$1,430,000
Multnomah	3	207th Ave Connector	Halsey St to Glisan St/223rd Ave	0	5		◆	□				$7,720,000
Multnomah	4	NE Halsey St	190th Ave to 207th Ave	2	5		◆	◆				$2,700,000
Multnomah	5	257th Ave	Bull Run Rd to Division St	2	5		◆	□				$1,245,000
Multnomah	6	223rd Ave	Glisan St to Halsey St	3	5		◆	◆	□			$1,540,000
Multnomah	7	Road Rehab Program	County-wide	n/a	n/a							$16,000,000
Multnomah	8	Signal Rehab Program	County-wide	n/a	n/a						◆	$5,300,000
Multnomah	9	Powell Valley Rd	Burnside rd to Kane Rd.	2	5		□	□				$1,160,000
Multnomah	10	242nd Ave	Powell Blvd to Burnside Rd	2	5		◆	□				$1,255,000
Multnomah	11	Jenne Rd	2050' NE of Foster to 800' S of Powell	2	2		◆	◆				$1,900,000
Multnomah	12	Corbett Hill Rd	1200' S of I-84 to 2200' S of I-84	2	2		□	◆				$520,000
Multnomah	13	Cherry Park Rd	242nd Dr. to 257th Ave	2	5		□	□				$2,420,000
Multnomah	14	162nd Ave	Glisan St to Halsey St	3	5		□	□				$1,780,000
Multnomah	15	257th Avenue	Powell Valley Road to Bull Run Road	2	5		□	□				$1,235,000
Multnomah	16	NE Glisan St	202nd Ave to 207th Ave	2	5		□	□	□			$2,200,000
Multnomah	17	Orient Dr	Kane Rd. to Anderson Rd.	2	5		□	□				$2,345,000
Multnomah	18	Palmquist Rd	242nd Drive to Mt. Hood Hwy	2	5		□	□				$2,060,000
Multnomah	19	NE Glisan St	223rd Ave to 242nd Dr	2	5		□	□	□			$3,250,000
Multnomah	20	257th Ave	Orient Dr to Powell Valley Rd	2	5		□	□				$1,045,000
Multnomah	21	242nd Ave	Palmquist Rd to Powell Blvd	2	5		□	□				$2,390,000

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Jurdisdiction	No.	Project Name	Project Location	Roadway Lanes		Modal Elements						Project Cost
				Existing	Proposed	Transit	Bicycle	Ped	Freight	TDM	TSM	(1995 Dollars)
Washington	48	E/W Arterial	117th to 110th	0	5		□	◆				$14,202,000
Washington	49	Allen	Lombard to King	3	5		□	◆				$4,775,636
Washington	50	E/W Arterial	Hall to 117th	0	5		□	◆				$2,483,331
Washington	51	Greenburg	217 to Hall	3	5		□	◆				$1,270,000
Washington	52	E/W Arterial	Hocken to Murray	0	5		◆	◆				$1,678,000
Washington	53	N. Arterial Connector	Hwy 47 to Gales Creek Rd.	0	3		◆	□				$4,376,000
Washington	54	Hall	Scholls Ferry to Greenburg	3	5		◆	◆				$361,400
Washington	55	Cedar Hills	Tv Hwy. to Hall	3	5		◆	◆				$1,249,410
Washington	56	110th	E/W Arterial to Canyon	2	3		◆	□				$100,000
Washington	57	125th	Brockman to Scholls Ferry	2	5		◆	□				$5,590,000
Washington	58	119th	Barnes to Cornell	2	5		◆	□				$2,415,000
Washington	59	Hall/99w Intersection		n/a	n/a		◆	◆	◆			$715,000
Washington	60	E/W Arterial	Cedar Hills to Watson/Hall	0	5		◆	◆				$2,483,331
Washington	61	Boones Ferry	Tualatin River Bridge to Sagert	2	3		◆	◆				$1,021,000
Washington	62	E/W Arterial	Millican	0	3		◆	□	□			$2,328,000
Washington	63	Hall	Greenburg to Durham	2	3		◆	□				$10,000,000
Washington	64	Boones Ferry	Sagert to Tualatin-Sherwood	2	3		◆	□				$4,490,000
Washington	65	Durham	Hall to Boones Ferry	2	3		◆	□				$668,000
Washington	66	Jenkins	Cedar Hills to Murray	2	3		◆	□	□			$2,813,000
Washington	67	Denney	217 to Scholls Ferry	2	3		□	□				$1,610,800
Washington	68	92nd	Garden Home to Allen	2	3		□	□				$522,000
Washington	69	198th	Kinnaman to T.V. Hwy	2	5		□	□				$1,240,200
Washington	70	209th	Farmington to T.V. Hwy.	2	5		□	□				$8,026,000
Washington	71	Oleson	Hall to B-H Hwy.	2	3		◆	□				$2,396,134
Washington	72	Garden Home	Multnomah Blvd. to 92nd	2	3		◆	◆				$3,306,000
Washington	73	185th	T.V. Hwy. to Farmington	2	3		◆	◆				$3,600,000
Washington	74	Saltzman	Cornell to Laidlaw	2	3		□	□				$6,351,000
Washington	75	170th Avenue	Rigert to Alexander	2	3-5		□	□				$9,851,000
Washington	76	West Union	143rd to Cornelius Pass	2	3		□	□				$12,593,000
Washington	77	Thompson	Mult. Co. Line to 143rd	2	3		□	□				$7,439,000
Washington	78	Martin/Cornelius Scheffiin rea	Martin/Cornelius Scheffiin	2	2		□	□				$3,720,000
Washington	79	Evergreen	25th to Glencoe	2	3		◆	□				$5,140,000
Washington	80	Glencoe	Lincoln to Evergreen	2	3		◆	□				$3,472,000
Washington	81	Old Hwy. 99w	Wilsonville Rd. to Hwy. 99w	2	3		◆	◆				$638,000
Washington	82	Multnomah	Mult. Co. Line to Garden Home	2	3		□	◆				$1,088,000
Washington	83	170th	Alexander to Baseline	2	3		□	□				$5,032,000
Washington	84	Wilsonville/Sunset	Old Hwy. 99w to Murdock	2	3		□	□				$4,742,000
Washington	85	Sunset Drive (Hwy 47)	University to Beal	2	3		□	□				$2,443,000
Washington	86	Forest Grove North Arterial	Hwy 47 to Quince	2	2		□	□				$2,809,100

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				Roadway Lanes		Modal Elements						Project Cost
Jurdisdiction	No.	Project Name	Project Location	Existing	Proposed	Transit	Bicycle	Ped	Freight	TDM	TSM	(1995 Dollars)
Washington	9	Cornelius Pass	Sunset Hwy. to West Union	2	5		◆	□	◆			$3,698,000
Washington	10	Murray	Millikan to Jenkins	2	4		◆	◆	◆			$7,685,000
Washington	11	Cornell	Arrington to Baseline/Main	2	5		◆	◆	◆			$2,539,700
Washington	12	Cornell	185th to Shute	5	7		◆	◆	◆			$787,600
Washington	13	Barnes	Hwy. 217 to 117th	2	5		◆	◆				$5,612,000
Washington	14	Cornell	158th to Barnes	2	3		◆	◆				$3,979,000
Washington	15	Barnes	Miller to Mult. Co. Line	2	5		□	◆				$2,610,000
Washington	16	216th	Baseline to Cornell	2	5		◆	◆				$12,180,000
Washington	17	Barnes	Saltzman (@ Cornell) to Future 119th	0	5		□	◆				$2,184,000
Washington	18	Brookwood	Airport to Baseline	0	5		◆	◆				$5,956,000
Washington	19	Barnes	Miller to Leahy	0	5		◆	◆				$2,755,000
Washington	20	Cornell	Saltzman to Mult. Co. Line	2	3		◆	□				$9,875,000
Washington	21	Jenkins	Murray to 158th	2	5		◆	□	□			$1,682,000
Washington	22	Baseline	Lisa to 231st	2	3		◆	◆				$15,921,000
Washington	23	Baseline	Brookwood to 231st	2	3		◆	◆				$2,869,000
Washington	24	Baseline	185th to 216th	2	5		◆	◆				$2,439,000
Washington	25	Cornell	Hwy. 26 to Saltzman	2	5		◆	◆				$3,358,000
Washington	26	Murray	Science Park Drive to Cornell	3	5		◆	◆				$2,838,000
Washington	27	Road Rehab Program	County-wide	n/a	n/a							$15,200,000
Washington	28	Signal Rehap Program	County-wide	n/a	n/a						◆	$5,000,000
Washington	29	Beef Bend Ext	Scholls Ferry to 99w	2	2		◆	□				$9,062,000
Washington	30	216th/219th	TV Highway to Baseline	2	3		□	◆				$5,381,000
Washington	31	New Bethany	West Union to Kaiser	0	3		◆	◆				$6,409,000
Washington	32	185th	Germantown Rd. to Cornelius Pass	0	2		◆	□				$725,000
Washington	33	Walker	Stucki to 185th	2	5		□	◆				$2,301,000
Washington	34	Bethany	Bronson to W. Union	2	5		◆	◆				$3,147,000
Washington	35	Walker	Murray to 185th	2	5		◆	◆				$10,150,000
Washington	36	Barnes	Leahy to Hwy. 217	2	5		◆	◆				$1,784,000
Washington	37	Cornell	Murray to Saltzman	2	3		◆	□				$2,671,000
Washington	38	158th	Jenkins to Baseline	3	5		◆	□	□			$1,204,000
Washington	39	Nyberg/Sw 65th	I-5 to Borland	2	5		◆	□				$2,045,000
Washington	40	Allen	217 to Western	3	5		□	◆	◆			$275,352
Washington	41	Greenway/Hall	Greenway/Hall Intersection	n/a	n/a		□	◆	◆			$81,000
Washington	42	East Main	10th to Brookwood	2	3		□	◆				$5,769,000
Washington	43	Cedar Hills	Huntington to Butner	3	5		□	◆				$959,000
Washington	44	Cedar Hills	Walker to Huntington	3	5		◆	◆				$181,000
Washington	45	Allen/Western	Allen/Western Intersection	3	5		◆	◆	◆			$40,000
Washington	46	Allen	Murray to Main	3	5		□	◆				$3,067,000
Washington	47	Allen	Allen at Menlo	3	5		□	◆				$150,000

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				Roadway Lanes		Modal Elements						Project Cost
Jurdisdiction	No.	Project Name	Project Location	Existing	Proposed	Transit	Bicycle	Ped	Freight	TDM	TSM	(1995 Dollars)
Clackamas	26	Carman Drive	I-5 to Quarry	2	3		□	□				$2,520,000
Clackamas	27	Sunnybrook Road	82nd to 93rd Avenue	2	5		□	◆				$1,550,000
Clackamas	28	Roots Road	I-205 to Webster	0	3		◆	□				$3,510,000
Clackamas	29	82nd Drive	Highway 212 to Lawnfield	3	5		◆	□				$4,390,000
Clackamas	30	Monterey	82nd to I-205	2	5		□	◆	□			$1,000,000
Clackamas	31	Parker Road	Rosemont to Sunset	2	3		□	□				$2,920,000
Clackamas	32	Clackamas Road	Webster to Johnson	2	3		□	□				$1,330,000
Clackamas	33	Otty Road	82nd to 92nd Avenue	2	3		□	□				$1,330,000
Clackamas	34	Concord Road	River Road to Oatfield	2	3		◆	□				$2,440,000
Clackamas	35	Johnson Road	Lake Road to Roots	2	3		□	□				$5,440,000
Clackamas	36	Abernethy Road	Hwy 213 to Main Street	2	5		□	□				$2,800,000
Clackamas	37	242nd Avenue	Highway 212 to Multnomah Co.line	2	3		□	□				$3,430,000
Clackamas	38	Idleman Road	Johnson Creek ext. to Mt. Scott Blvd.	2	2		□	□				$3,220,000
Clackamas	39	122nd/129th Avenue	Sunnyside to King Road	2	3		◆	□				$2,530,000
Clackamas	40	Johnson creek extension	92nd to Idleman	0	3		◆	□	□			$2,930,000
Clackamas	41	142nd Avenue	Sunnyside to Highway 212	2	3		□	□				$2,500,000
Clackamas	42	Summer Lane extension	122nd to 152nd Avenue	0	3		□	□				$3,830,000
Clackamas	43	Mather Road	97th to122nd Avenue	2	3		□	□				$2,670,000
Clackamas	44	Monterey	82nd to Price Fuller	0	2		□	◆				$920,000
Clackamas	45	152nd Avenue	Sunnyside Road to Highway 212	2	3		□	□				$2,510,000
Clackamas	46	98th Avenue	Lawnfield to Mather	0	3		□	□				$1,480,000
Clackamas	47	Mt.Scott/King Avenue	Idleman to 132nd Avenue	2	3		□	□				$1,740,000
Clackamas	48	Warner Milne Bike Lanes	Central Point Rd. to OR213	n/a	n/a		◆					$350,000
Clackamas	49	Boones Ferry Bike Lanes	Kruse Way to County Line	n/a	n/a		◆					$1,000,000
Clackamas	50	Linwood Ave. Bike Lanes	King Road to County Line	n/a	n/a		◆					$260,000
Clackamas	51	Concord Road Bike Lanes	River Road to Oatfield Road	n/a	n/a		◆					$160,000
Clackamas	52	Railroad Ave. Bike Lanes	Harrison to Harmony	n/a	n/a		◆					$1,000,000
Clackamas	53	CTC Connector	Clack. Reg. Park to Mather Road	n/a	n/a		◆	◆				$1,014,000
Clackamas	54	Lake Rd.Bike Lanes	SE 21st to Oatfield Rd.	n/a	n/a		◆					$780,000
ClackCo Total												**$169,754,000**
Washington	1	Evergreen Pky Ext.	Cornelius Pass to Shute Road	0	5		◆	◆	□			$7,428,848
Washington	2	Lombard	Canyon to Center Street	0	3		□	◆				$849,002
Washington	3	112th	Cedar Hills Interchange	2	3		◆	◆	◆			$7,500,000
Washington	4	143rd	West Union to Kaiser	0	3		□	□				$1,400,000
Washington	5	124th	99w to Tualatin-Sherwood	2	3		□	◆	◆			$9,542,000
Washington	6	125th	Brockman to Hall	0	3		□	□				$4,130,280
Washington	7	Old Scholls Ferry	Murray to Beef Bend	2	5		◆	□				$4,104,000
Washington	8	Cornell	179th to Bethany	2	5		◆	◆				$3,023,000

◆ = *Element of Primary Regional Significance*
□ = *Element of Secondary Regional Significance*

				Roadway Lanes		Modal Elements						Project Cost
Jurdisdiction	No.	Project Name	Project Location	Existing	Proposed	Transit	Bicycle	Ped	Freight	TDM	TSM	(1995 Dollars)
Portland	62	Holgate Corridor Bikeway	SE 39th Ave. to SE 92nd Ave.	n/a	n/a		◆					$50,000
Portland	63	SE Foster Rd. Bike Lanes	SE 162nd Ave. to Jenne Rd.	2	2		◆					$2,113,000
Portland	64	112th Corridor Bikeway	Springwater Trail to Sandy Blvd	n/a	n/a		◆					$250,000
Portland	65	Halsey Street Bike Lanes	Sandy Blvd. to 148th St.	5	5		◆					$100,000
Portland	66	Columbia/Lombard	47th, 92nd connections	n/a	n/a		◆		◆			$10,000,000
Portland	67	Columbia Blvd	South Rivergate to I-5 intertie	n/a	n/a		□		◆			$250,000
Portland	69	NE 33rd Avenue	Columbia/Lombard Interchange	n/a	n/a				◆			$15,000,000
Portland	70	Cen. City Vanpool (10 Vans)	Major Portland employers	n/a	n/a					□		$132,000
Portland	71	Central City TMA	Central City employment districts	n/a	n/a	□				◆		$330,000
Portland/Port	72	Burgard/Columbia	Intersection	n/a	n/a		□		◆			$886,000
Portland/Port	73	Columbia Blvd	Alderwood Dr Intersetion	n/a	n/a		□		◆			$340,000
Portland/Port	74	Columbia/Lombard	Rail Overcrossing	n/a	n/a				◆			$15,000,000
Portland Total												**$408,008,000**
Clackamas	1	Beavercreek Road	Beavercreek/Molalla intersection	3	5	◆	□	□	◆			$930,000
Clackamas	2	Highway 212	SPRR to135th frontage	5	5	□	◆	□	◆			$1,700,000
Clackamas	3	I-205 Frontage Road	Sunnyside to 92nd east of I-205	0	3		□	◆				$7,500,000
Clackamas	4	Monterey overpass	Over I-205 to frontage road	0	5		◆	□				$5,050,000
Clackamas	5	Johnson Creek Boulevard	Johnson Creek/Linwood Intersection	2	3		◆	□				$750,000
Clackamas	6	Sunnybrook extension	I-205 to Sunnyside at 108th	0	5		◆	◆				$9,950,000
Clackamas	7	Road Rehab Program	County-wide	n/a	n/a							$8,400,000
Clackamas	8	Signal Rehab Program	County-wide	n/a	n/a						◆	$2,800,000
Clackamas	9	92nd Avenue	Idleman to Multnomah Co. line	2	3		◆	□				$1,210,000
Clackamas	10	122nd Avenue	Sunnyside to Hubbard	2	3		□	□				$4,610,000
Clackamas	11	Stafford Road	Stafford/Borland Road Intersection	2	4		□	□				$990,000
Clackamas	12	Johnson Creek Boulevard	45th to 82nd Avenue	2	3		◆	□	◆			$5,210,000
Clackamas	13	Sunnyside Road	172nd to Highway 212	2	3		◆	◆				$2,120,000
Clackamas	14	Sunnyside Road	Stevens to 172nd	3	5		◆	◆				$23,500,000
Clackamas	15	Jennings Road	Oatfield to Roots Road	2	3		□	□				$3,810,000
Clackamas	16	Jennings Road	River Road to Oatfield				□	□				$2,200,000
Clackamas	17	Rosemont Road	Stafford to Parker	2	3		□	□	◆			$2,350,000
Clackamas	18	Childs Road	Stafford to 65th	2	3		□	□				$4,240,000
Clackamas	19	Stafford Road	Stafford/Rosemont Intersection	2	3		◆	□	◆			$520,000
Clackamas	20	Price Fuller Road	Harmony to King	2	3		□	□				$2,620,000
Clackamas	21	Stafford Road	I-205 to Rosemont	2	3		◆	□				$3,180,000
Clackamas	22	Harmony Road	Sunnyside to Highway 224	3	5		□	□				$4,170,000
Clackamas	23	Beavercreek Road	Highway 213 to Molalla Avenue	2	5		□	□	□			$3,200,000
Clackamas	24	Molalla Avenue	Beavercreek to C.C.C.	2	5		□	□				$3,210,000
Clackamas	25	Beavercreek Road	Highway 213 to Henrici	2	5		□	□				$3,980,000

◆ = *Element of Primary Regional Significance*
□ = *Element of Secondary Regional Significance*

				Roadway Lanes		Modal Elements						Project Cost
Jurdisdiction	No.	Project Name	Project Location	Existing	Proposed	Transit	Bicycle	Ped	Freight	TDM	TSM	(1995 Dollars)
Portland	23	NE Sandy Bv	NE 39th to 82nd Ave	4	4	◆	◆	◆	□			$5,000,000
Portland	24	NE Sandy B v	NE 12th to 39th Ave	4	4	◆	◆	◆	□			$15,000,000
Portland	25	Broadway/Weidler Corridor	I-5 to NE 28th	varies	varies	◆	◆	◆	□		◆	$7,000,000
Portland	26	Lower Albina RR Xing	Interstate to Russell	0	2		□	□	◆			$4,000,000
Portland	27	River Dist/ Lovejoy Ramp	Broadway Br to NE 14th	4	5	◆	◆	◆	◆			$11,900,000
Portland	28	W Burnside Redevelopment	River to NW 23rd	4	4	◆	◆	◆	□			$4,000,000
Portland	29	SW Front Avenue	Steel Br to I-405	5	5	◆	◆	◆	□			$2,900,000
Portland	30	S. Portland Improvements	SW Front I-405 to Barbur	varies	varies	◆	◆	◆	□			$30,000,000
Portland	31	N Macadam District	SW Macadam,River, Carruthers, South	unknown	unknown	◆	□	◆	□			$15,000,000
Portland	32	Grand Avenue Bridgeheads	SE Grand, Belmon Morrison to Hawthorne	varies	varies	◆	◆	◆	◆			$4,000,000
Portland	33	Water Avenue Extension	SE Divison Place to OMSI	0	2	◆	◆	◆	◆			$3,000,000
Portland	34	SE 11th/12th SP Rail Xing	SE Division to Milwaukie	4	4	◆	◆	◆	◆			$10,000,000
Portland	35	Hillsdale Town Ctr Ped Dist	SW Capital Hwy Bertha to Sunset	5	5	◆	◆	◆	□			$3,500,000
Portland	36	SW Garden Home Rd	SW Multnomah to Capital Hwy	2	2	□	□	□	□			$5,500,000
Portland	37	SW Garden Home Signal	Garden Home at Multnomah	2	3	□	□	□	□			$90,000
Portland	38	Capital Hwy	SW Bertha bv to Barbur	2	2	◆	◆	□	□			$12,000,000
Portland	39	Taylors Ferry Rd	SW Terwilliger to Spr Garden	2	2	□	□	□	□			$2,620,000
Portland	40	Taylors Ferry Rd	SW Spr Garden to SW 35th	2	2	□	□	□	□			$3,000,000
Portland	41	SW Terwilliger	Taylors Ferry to Boones Ferry	2	2	□	◆	◆	□			$2,000,000
Portland	42	SW Boones Ferry Rd	Terwilliger to City Limits	2	2	□	◆	□	□			$2,000,000
Portland	43	17th-Milwaukie Connector	S. McLoughlin/17th-Milwaukie	0	2	◆	◆	◆	□		◆	$400,000
Portland	44	Woodstock Business Dist	SE 39th to SE 50th	varies	varies	◆	□	◆	□		◆	$4,000,000
Portland	45	SE 45th Avenue	SE Harney to Glenwood	2	2	□	□	□	□			$1,000,000
Portland	46	SE Johnson Creek Bv	SE 36th to 45th	2	2	□	◆	◆				$1,048,000
Portland	47	SE Tacoma	SE 28th to 32nd	2	2	□	◆	◆	□			$615,000
Portland	48	SE 82nd	Shiller to Crystal Springs	4	varies	◆	□	□	□			$5,230,000
Portland	49	Powell Butte/Mt Scott Coll.	SE Powell Butte/Mt Scott area	2	2	□	◆	□	□			$25,000,000
Portland	50	Road Rehabilitation Program	City wide	varies	varies	◆□	◆□		□			$30,000,000
Portland	51	Signal Rehabilitation Prog.	City wide	n/a	n/a	◆□	◆□		□		◆	$10,000,000
Portland	52	TMA's Parking Management	Citywide	n/a	n/a					◆		n/a
Portland	53	Burnside Bike Lanes	33rd St. to 74th Ave.	4	4		◆					$300,000
Portland	54	41st-42nd Bicycle Blvd.	Columbia Blvd. to Springwater Trail	2	2		◆					$250,000
Portland	55	148th Ave. Bike Lanes	Powell Blvd. to Marine Dr.	4	4		◆					$2,963,000
Portland	56	Greeley/Interstate Bikeway	Killingsworth to Broadway Bridge	n/a	n/a		◆					$1,100,000
Portland	57	Bertha Blvd. Bike Lanes	Vermont St. to Capital Hwy.	n/a	n/a		◆					$367,500
Portland	58	Cornell Road Bike Lanes	NW 30th Ave to NW 53rd Ave.	n/a	n/a		◆					$295,000
Portland	59	Marine Drive Bike Lanes	NE 33rd Ave to MLK Blvd.	n/a	n/a		◆					$5,000,000
Portland	60	Boones Fy. Bike Lanes	Terwilliger Blvd. to County Line	n/a	n/a		◆					$2,000,000
Portland	61	Division Corridor Bikeway	SE 39th Ave. to SE 92nd Ave.	n/a	n/a		◆					$50,000

◆ = *Element of Primary Regional Significance*
□ = *Element of Secondary Regional Significance*

				Roadway Lanes		Modal Elements						Project Cost
Jurdisdiction	No.	Project Name	Project Location	Existing	Proposed	Transit	Bicycle	Ped	Freight	TDM	TSM	(1995 Dollars)
Tri-Met	23	600 Park&Ride Spaces	I-5 South	n/a	n/a	◆				□		$2,902,500
Tri-Met	24	150 Park&Ride Spaces	Lake Oswego	n/a	n/a	◆				□		$807,325
Tri-Met	25	210 Park&Ride Spaces	Progress/Scholls Ferry Rd.	n/a	n/a	◆				□		$1,128,750
Tri-Met	26	400 Park&Ride Spaces	Barbur Blvd.	n/a	n/a	◆				□		$1,290,000
Tri-Met	27	450 Park&Ride Spaces	99 E	n/a	n/a	◆				□		$1,451,250
Tri-Met	28	1190 Additional Spaces	Not yet determined	n/a	n/a	◆				□		$5,375,000
Tri-Met	29	Regional TSM Projects	Throughout Tri-Met Service area	n/a	n/a	◆						$1,075,000
Tri-Met	30	Gresham Parking Structure	Gresham	n/a	n/a	□						$4,837,500
Tri-Met	31	Equipment Improvements	Throughout Tri-Met Service area	n/a	n/a	◆						$33,737,432
Tri-Met	32	Rideshare/Transit Info	Regional Centers, Employment Centers	n/a	n/a	◆				◆		$322,500
Tri-Met	33	Milikan Way Development	SW Murray Blvd. to SW Hocken Street	2	3	□	□	□		□		$3,332,500
Shared	34	5 Employer Shuttle Vans	Small employers (<50) In region	n/a	n/a					◆		$134,375
Tri-met Total												**$253,494,657**
ODOE	1	RegionalTelecommute Proj.	Employers In region	n/a	n/a					◆		$400,000
ODOE TOTAL												**$400,000**
Portland	1	Marine Dr.	Slough to 2.5 Mi. East	3	5		◆	□	◆			$2,781,000
Portland	2	Hayden Island Br.	Marine Dr to W. Hayden Isl	0	2		◆	□	◆			$20,000,000
Portland	3	S Rivergate RR Overcross	Lombard, Burgard, Columbia	0	2		□	□	◆			$12,000,000
Portland	4	N. Janzen-Hayden Isl. Dr.	W. Hayden Isl to E. of I-5	5	5	◆	□	□	□			$2,000,000
Portland	5	NE 11-13 th Connector	NE 11th to Columbia Bv	0	3	◆	□	□	□			$32,500
Portland	6	NE Lombard	St Johns to Columbia Bv	3	3	□	◆	◆	◆			$10,000,000
Portland	7	St Johns Business District	Burlington to	varies	varies	◆	□	◆	□		◆	$1,500,000
Portland	8	N. Interstate	Columbia to Steel Br.	4	4	◆	◆	◆	□			$1,100,000
Portland	9	NE 47th	Columbia to Cornfoot	n/a	n/a	□	□	□	◆			$1,650,000
Portland	10	NE Cornfoot	47th to Alderwood	n/a	n/a	□	□	□	◆			$3,700,000
Portland	11	NE 92nd Ave	Fremont to Halsey	2	2	◆	□	□	□			$1,250,000
Portland	12	Sandy Boulevard	101st to 122nd	2	4	◆	◆	◆	◆			$4,990,000
Portland	13	NE 122nd	Sandy to Marine Dr	n/a	n/a	◆	□	□	◆			$5,500,000
Portland	14	NE Sandy	122nd to 185th Ave	n/a	n/a	◆	◆	◆	◆			$30,000,000
Portland	15	NE 138th Ave	Marine Dr to Sandy	n/a	n/a		□	□	□			$102,000
Portland	16	NE 148th	Marine Dr to Sandy	n/a	n/a		◆	□	□			$2,963,000
Portland	17	158th	Marine Dr to Sandy	n/a	n/a		□	□	□			$7,300,000
Portland	18	92nd/Columbia RR xing	NE 92nd and Columbia	n/a	n/a		□	□	◆			$9,820,000
Portland	19	SE Jenne Rd	Foster to Powell	2	2		◆	□	□			$3,500,000
Portland	20	SE Foster Bv	136th to City Limits	2	3		◆	◆	□			$5,500,000
Portland	21	SE Lents Business District	90th to 96th, Foster/Woodstock	varies	varies	◆	□	◆	□		◆	$1,400,000
Portland	22	57th/Cully Bv	NE Sandy to Lombard	2	2	◆	□	◆	□			$4,340,000

◆ = *Element of Primary Regional Significance*
□ = *Element of Secondary Regional Significance*

Chapter 5 Project Matrix

Projects Recommended for Preferred Network

Jurdisdiction	No.	Project Name	Project Location	Roadway Lanes		Modal Elements						Project Cost (1995 Dollars)
				Existing	Proposed	Transit	Bicycle	Ped	Freight	TDM	TSM	
Metro	1	Peninsula Crossing Trail	Columbia R. to Willamette R.	n/a	n/a		◆					
Metro	2	BN Rails-to-Trails	Sauvie Isl. to Beaverton/Hillsboro Area	n/a	n/a		◆					$16,300,000
Metro	3	PTC Multi-Use Trail	OMSI to Springwater Corridor	n/a	n/a		◆					
Metro	4	PTC Multi-Use Trail	Milwaukie to Gladstone	n/a	n/a		◆					$570,000
Metro	5	TOD Fund Program	Purchase sites for TOD development	n/a	n/a					◆		$7,000,000
Various	6	Regional Ped Projects	Centers, Corridors & Mainstreets	n/a	n/a			◆				$60,000,000
Shared	7	TDM Education/Promotion	Metro region	n/a	n/a	◆				◆		$200,000
Shared	8	6 Regional TMAs	Central City, Regional & Emp. Centers	n/a	n/a					◆		$1,700,000
Shared	9	Regional Center TMAs	Gresham, Hillsboro, Milwaukie & O.C.	n/a	n/a	□				◆		$1,237,000
Metro Total												**$87,007,000**
Tri-Met	1	5 new buses	Line 71 - 60th-122nd Avenue	n/a	n/a	□				◆		$1,343,750
Tri-Met	2	5 new buses	Line 72 - Killingsworth-82nd Avenue	n/a	n/a	□				◆		$1,343,750
Tri-Met	3	5 new buses	Line 75 - 39th-Lombard	n/a	n/a	□				◆		$1,343,750
Tri-Met	4	5 new buses	Line 78 - Beaverton-Lake Oswego	n/a	n/a	□				◆		$1,343,750
Tri-Met	5	3 buses special service	Special events and employment centers	n/a	n/a	◆				□		$774,000
Tri-Met	6	Transit marketing program	Metro region	n/a	n/a	◆				◆		$967,500
Tri-Met	7	Jitney Service (3 Jitneys)	Regional & Town Centers, Main Streets	n/a	n/a					□		$129,000
Tri-Met	8	Expand Carpool Service	Large employers in Metro region	n/a	n/a					◆		$53,750
Tri-Met	9	Regional Vanpool Program (2	Large employers in Metro region	n/a	n/a					◆		$425,700
Tri-Met	10	Emergency Ride Home	Employment Centers	n/a	n/a	□				□		$1,075
Tri-Met	11	Barbur Fast Link	Downtown Portland to Tigard	n/a	n/a	◆						$15,480,000
Tri-Met	12	Division Fast Link	Downtown Portland to Gresham	n/a	n/a	◆						$22,467,500
Tri-Met	13	BH Hwy. Fast Link	Downtown Portland to Beaverton TC	n/a	n/a	◆						$4,837,500
Tri-Met	14	82nd Fast Link	Clackamas TC to Airport	n/a	n/a	◆						$5,482,500
Tri-Met	15	Killingsworth Fast Link	Gateway to Swan Island	n/a	n/a	◆						$3,440,000
Tri-Met	16	Sunset Fast Link	Sunset TC to Milwaukie TC	n/a	n/a	◆						$8,062,500
Tri-Met	17	T.V. Hwy. Fast Link	Beaverton TC to Hillsboro	n/a	n/a	◆						$4,945,000
Tri-Met	18	Hawthorne/Belmont Fast Lk	Downtown Portland to Gateway	n/a	n/a	◆						$2,956,250
Tri-Met	19	Sandy Fast Link	Downtown Portland to Airport	n/a	n/a	◆						$5,052,500
Tri-Met	20	NW 23rd Fast Link	Downtown to Montgomery Pk	n/a	n/a	◆						$2,203,750
Tri-Met	21	St. Johns Fast Link	St. John's to Downtown	n/a	n/a	◆						$4,515,000
Tri-Met	22	Bus & LRT Service Increase	Throughout Tri-Met Service area	n/a	n/a	◆				□		$109,932,000

◆ = *Element of Primary Regional Significance*
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revised TIP containing a short-term improvement program that is consistent with projects listed in the federal RTP.

B. Recommended Transportation Improvements

The following matrix includes more than 400 separate transportation project and programs. As a whole, they are the region's "preferred" system – transportation needs that exceed expected funding, but are critical to realizing the goals, objectives and policies set forth in this plan. As such, they define an unmet funding need that is discussed in more detail in Chapter 7.

The projects and programs shown in the matrix range from bicycle lane striping projects, to major roadway construction, with project costs ranging from thousands of dollars to tens of millions of dollars. The matrix format of this chapter allows this broad spectrum of projects and programs to be compared as a whole, with the specific modal elements of each item detailed according to existing and proposed motor vehicle lanes, and system enhancements for the region's bicycle, pedestrian, transit and freight networks. Demand management (TDM) and system management (TSM) components are also identified, as well as project or program capital or startup cost. Where these modal elements are marked with a diamond (◆), the project contributes at a regionally significant level. Elements marked with a square (□) have modal elements of local significance.

[Note: the preceding text refers to a project list that has been refined through public review and comment. The matrix shown below will be revised following public events in April 1995, with a final list of project and programs to be completed by late April]

- ~~Modernization Improvements: facility widening that significantly (by 50 percent or more) affects capacity, such as adding travel lanes, new facility construction, etc., major intersection or interchange construction, and/or coordinated Transportation System Management (TSM) projects over one mile in length.~~

- ~~Operations, Maintenance and Safety Improvements: those facility widenings that increases capacity by less than 50 percent, signalization projects not part of a coordinated TSM investment, minor intersection projects, bridge replacements (within existing right-of-way) and general maintenance (restriping, repaving, etc.) and operations (signal controllers, channelization, etc.) activities.~~

~~The RTP includes all planned modernization improvements (regardless of funding source) located on or directly affecting the capacity of the regional highway, transit and bicycle systems identified in Chapter 4 that are consistent with RTP goals and policies. Operations, maintenance and safety improvements, while not itemized in this Plan, are deemed consistent with the policy intent of the RTP if they meet the following criteria:~~

CHAPTER 5

Recommended Transportation Improvements to the Year 2015

A. Overview

The ~~following sections of~~ project matrix in this chapter details, on both a region-wide and ~~sector-by-sector~~ jurisdictional basis, the major transportation improvements and programs included in the federal Regional Transportation Plan (RTP) to achieve the major goals outlined in Chapter 1: to provide adequate mobility on, and access to, the region's transportation system within recognized financial and environmental constraints.

The federal RTP emphasizes transit and other alternative forms of travel as a key strategies to limiting future investments in automobile capacity. This approach is reflected in the projects and programs recommended in this chapter, where transit improvements range from park-and-ride facilities and improved bus service, to new transit centers and major extensions of the light rail network, and every roadway project includes bicycle and pedestrian improvements.

The federal ISTEA limits funds for projects that are primarily oriented toward increased highway capacity for single-occupancy vehicles (SOVs). Because this provision is linked to the required Congestion Management System (CMS), it will be addressed as part of a future update to the plan, when the Final CMS is adopted as part of the RTP. At that time, the project listings contained in the RTP will be amended to identify projects that are primarily SOV oriented. In preparation for the update, Metro has developed an "Interim CMS," which is briefly discussed in Appendix "MS."

The transportation improvements included in the Plan represent a set of investments that have been chosen after vigorous ~~local and regional~~ public review of possible alternatives, and are considered to be the most prudent and cost-effective use of public funds to solve the region's transportation problems. In April 1995, local agencies worked with Metro to develop an initial package of regional transportation project and program needs for public review and comment. The initial list consisted primarily of known transportation needs that had been quantified in the 1992 RTP analysis, and other regional and local transportation studies. These projects were presented at a series of regional "Priorities '95" events, conducted throughout the region. Input from these events not only helped to shape the mix of projects and programs shown in this chapter, but also helped to define the qualitative and quantitative evaluation criteria used in Chapter 7 to define a financially constrained transportation program.

The tool for implementing these improvements is the Transportation Improvement Program (TIP). The TIP is updated annually as part of the region's ongoing planning process, with each

Chapter 5

Recommended Transportation Improvements to the Year 2015

DRAFT

Central City
Proposed Regional Centers
Town Centers
Neighboring Cities

CITY OF PORTLAND
BICYCLE MASTER PLAN
BIKEWAYS YET TO
BE DETERMINED

Proposed Regional Bicycle Network

March, 1995 Version 1.2

- Existing regional system (bike lanes or shoulders)
- Existing local bike lanes
- Programmed or committed bike lanes
- Local system bike boulevards
- Existing multi-use trails
- Proposed multi-use trails
- Proposed bikeways (no funding identified)
- Urban Growth Boundary

600 NE Grand Ave.
Portland, OR 97232-2736
(503) 797-1700.
METRO

Figure 4-5

94397/pltreg.aml, plot date: April 07, 1995

Figure 4-4

Primary Transit Network

Draft 1.0

Legend:

- Urban growth boundary
- County lines
- PTN Preferred Alternative
  - High Speed Network
  - Fastlink I
  - Primary
- Airport
- Bus Station
- Amtrak Station
- Region 2040 Development Types
  - Central City
  - Proposed Regional Centers
  - Town Centers

95138/ptn.aml, plot date: April 08, 1995

Figure 4-3

RTP Freight Element Freight Network Map

Draft 3.0

- Railroads
- Railroad Main Lines
- Urban Growth Boundary
- Main Roadway Routes
- Road Connectors

Freight Intermodal Facilities

- Port Facilities
- Grain Elevators
- Intermodal/TOFC/COFC

Freight Generators

- Industrial Comp Plan Designation

METRO

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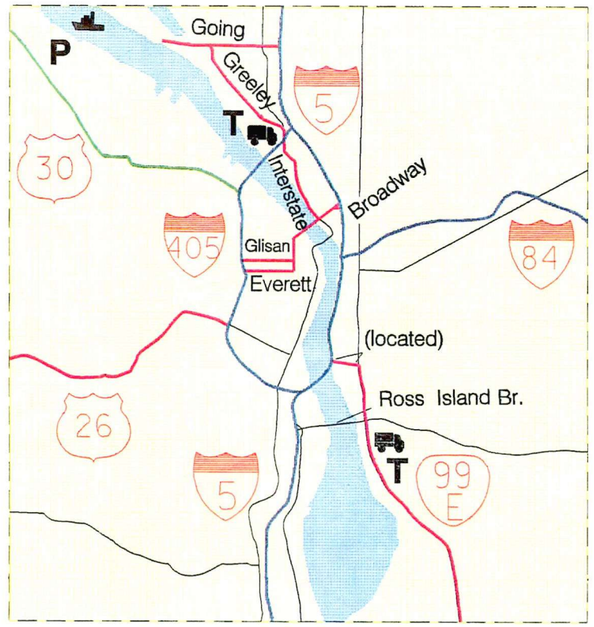
94434/ims3_0.aml, plot date: April 08, 1995

PORTLAND URBANIZED AREA
PROPOSED
NATIONAL HIGHWAY SYSTEM

LEGEND

- INTERSTATE (NHS)
- STRAHNET ROUTES (NHS)
- CONGRESSIONAL HIGH PRIORITY ROUTES (NHS)
- OTHER NHS HIGHWAYS
- ROUTE NUMBERS
- OTHER STATE HIGHWAYS
- A — INTERNATIONAL AIRPORT
- P — OCEAN PORT
- T — TRUCK/RAIL FREIGHT FACILITY
- ADJUSTED CENSUS URBAN BOUNDARY
- REDMOND — URBAN CITY



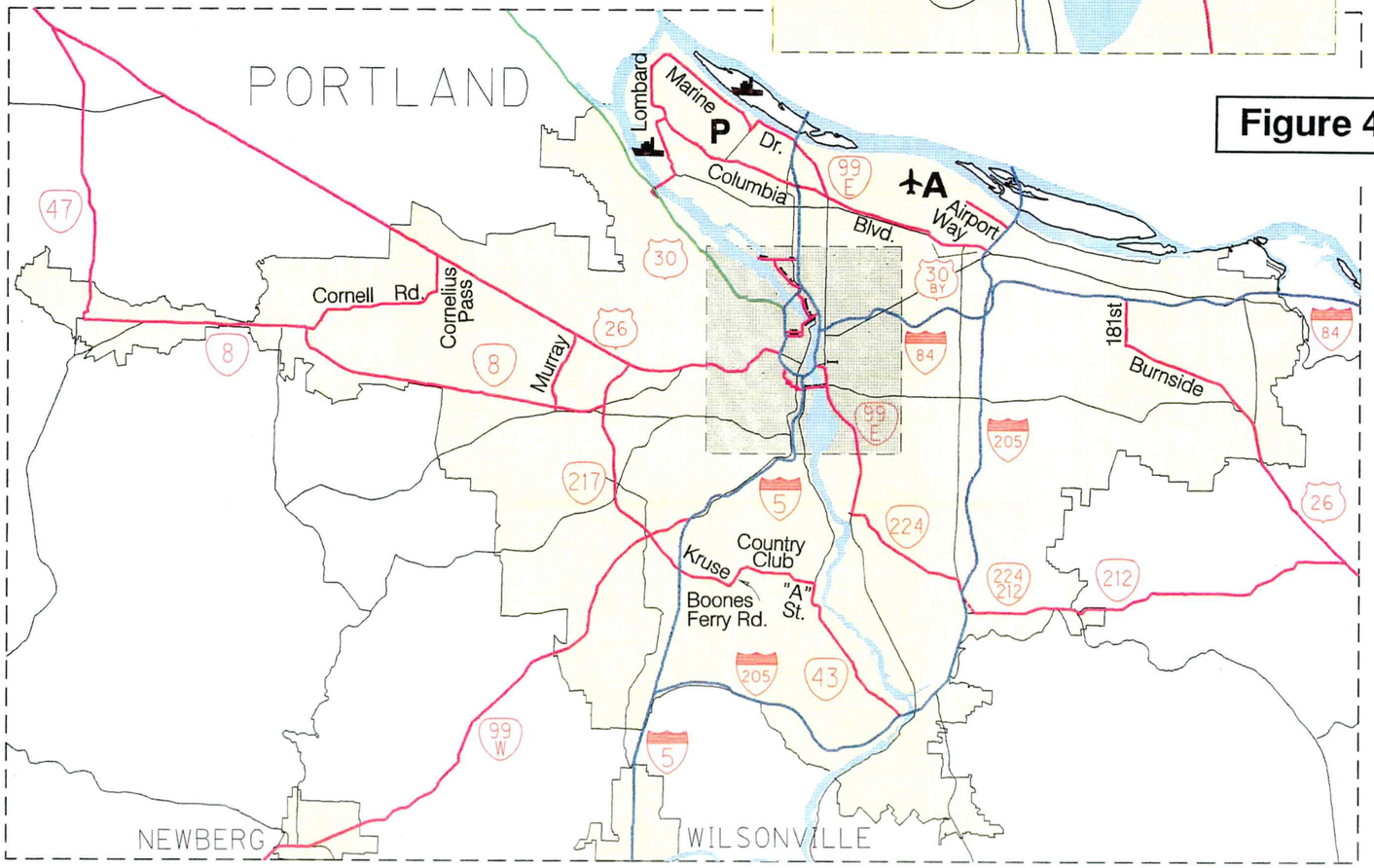
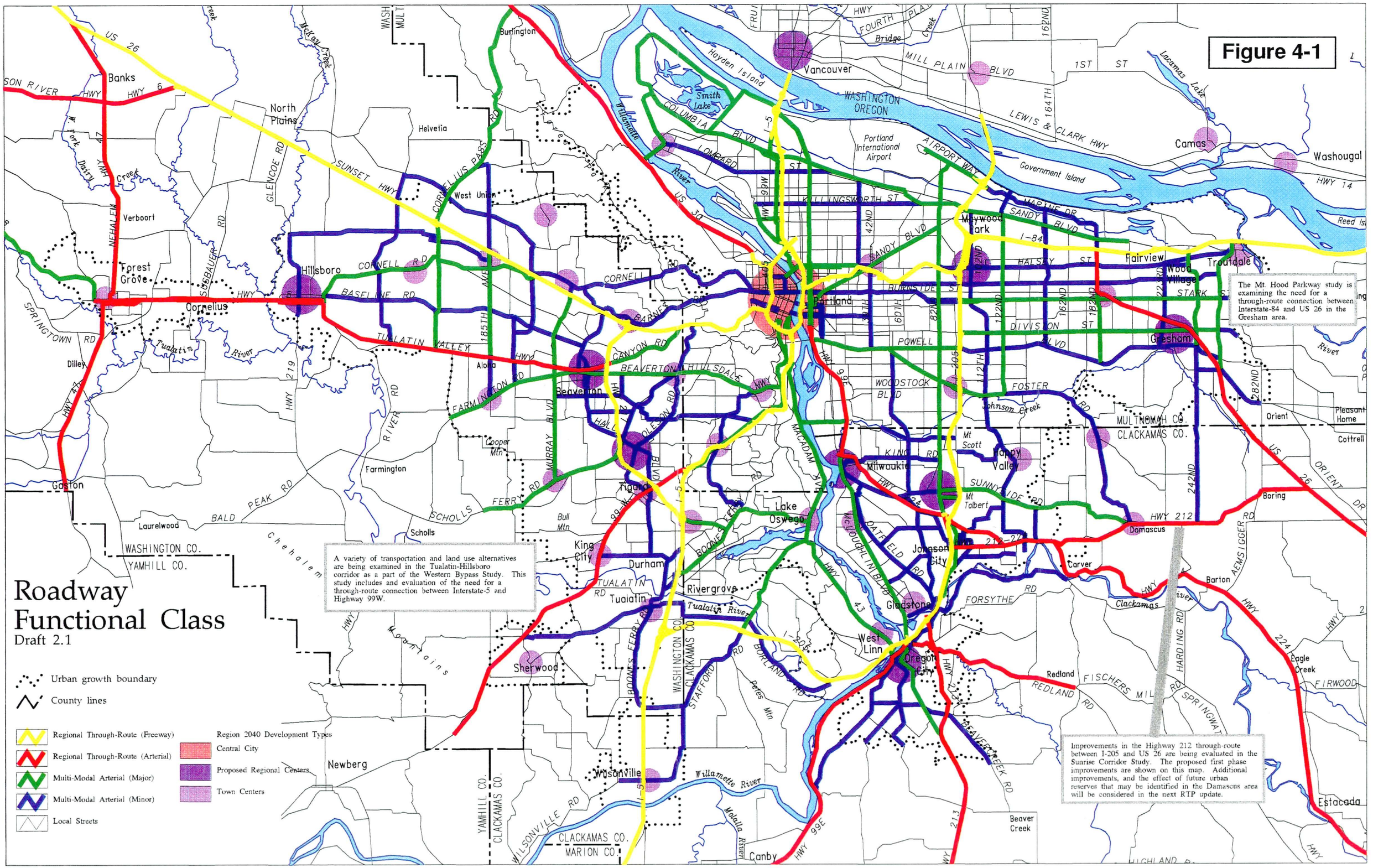


Figure 4-2

DIGITALLY PREPARED

Figure 4-1



95138/class.aml, plot date: April 08, 1995

Regional Pedestrian System

While most walking trips are relatively short and local in nature, an increase in walk trips has regional significance by reducing pressure on the regional roadway system and improving air quality. Many people indicate a willingness to walk, rather than drive, short distances if attractive and comfortable facilities are available. For those unable to own and/or operate an automobile, including the elderly, young, disabled, and low income residents, walking is a primary and economical means of transportation for many trips. Attractive pedestrian connections are also critical to the ability of residents to get to and from the region's transit system.

The regional pedestrian system is composed of those pedestrian connections which serve a regional function, meaning that they serve the region's major activity centers and transit system. The following land use types as having a high potential for pedestrian activity and where improving the pedestrian environment is a regional priority: Central City, Regional and Town Centers, Station Communities, Corridors, and Main Streets. Regional transportation policies, guidance and funding will be focused on creating high-quality pedestrian access within and to these urban land use types. Pedestrian networks and connections that serve other parts of the region are considered to be of local rather than regional interest and are included in local plans.

Creation of attractive pedestrian environments in the region's major activity centers and corridors will require complete networks of safe, accessible and convenient pedestrian walkways as well as other facilities and amenities which make the environment more attractive and pleasant for walkers. Pedestrian facilities that provide dedicated space for walking include the following: sidewalks and separated paths, street crossings, and curb ramps. Facilities which may make walking along a street or waiting for a bus more pleasant include: benches, bus shelters, and improved street lighting.

Metro will work with local jurisdictions to identify and implement stand-alone pedestrian projects which most improve the pedestrian environment in the areas and corridors of regional interest. Through policies identified in the RTP, pedestrian issues will also be considered in planning and programming multi-modal projects on the regional transportation system. The Regional Framework Plan will provide a more detailed description of the regional pedestrian system and its existing conditions and needs. Policies and actions needed to achieve the the region's goals for pedestrian friendly and accessible environements will also be adopted as part of the RFP.

identifies regional bikeways providing connections to the Central City, Regional Centers and Town Centers. The network identifies primary corridors for regional bicycle travel that complement local bicycle systems ~~identifies a series of regional priority bike corridors that~~ and tie together major activity centers across the region. This bicycling network will afford the opportunity for safe and convenient travel by bicycle between jurisdictions and to major trip attractions throughout the region. The regional system is shown in Figure 4-5. Metro will cooperate with local jurisdictions to implement the Regional Bicycle Goals and Objectives referred to in Chapter 1.

The bicycle network identifies bicycle facilities on roadways owned and operated by local jurisdictions. Metro will cooperate with local jurisdictions to complete the regional network. The regional network will provide policy guidance for local implementation of regional bicycle facilities and a framework for regional bicycle planning policy. Projects will be coordinated to assure continuity and consistency throughout the region. Metro wil provide planning guidance to local jursidictions to assure that local bikeway plans are compatible with regional and federal transportation policy.

Bicycle facilities should be incorporated into regional transit and highway investments. Bicycle parking facilities should be provided at major transit facilities such as LRT stations, bus transfer stations and park-and-ride lots. All buses are currently equipped with bicycle racks and bicycles are permitted on LRT vehicles during off-peak hours providing opportunities for trips integrating bicycles and transit. Bicycle facilities should be incorporated into all highway projects in accordance with ORS 356.514.

~~In addition, high security bicycle racks are planned at major transit stations (Hollywood, Gateway, Gresham, Milwaukie, Beaverton, Tigard, Tualatin, Sunset, Clackamas Town Center, Oregon City, Lake Oswego, Burlingame and Vancouver) and major park-and-ride lots (Columbia/Sandy, Lents, Clackamas Town Center, Oregon City, Milwaukie, Tigard, Tualatin, Washington Square, Beaverton, 170th Avenue, 185th Avenue and Hillsboro). The installation of these bicycle racks is subject to funding availability and local jurisdictional approval. Exceptions to this provision must be sought as an amendment to the RTP.~~

The Regional Bicycle Program will work cooperatively with local jurisdictions to implement the following strategies to encourage bicycle travel:

~~Among the actions that should be considered by local jurisdictions are:~~

- ~~provision of~~ provide secure bicycle parking facilities at employment centers, ~~minor~~ transit stations, ~~minor~~ park-and-ride lots, schools, high density residential developments, shopping centers, libraries, etc.;
- ~~establishment of voluntary bicycle marking programs;~~
- ~~development of safety education and awareness materials and programs; and~~ develop public education efforts to promote safe use of roadways by bicyclists and motorists.
- support for consistent enforcement of all rules of the road pertaining to bicyclists.

- ~~develop areawide parking management plans in existing and planned high density areas.~~ 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.

- Local jurisdictions should provide Park-and-pool lots to aid in formation of carpools. (Additional Parking Management implementation strategies will be determined at the conclusion of the Parking Study)

Land Use Decisions

The pattern of development contained in the local comprehensive plans is the major determinant of the travel demands that the RTP is expected to serve. As a result, the travel flows described in the RTP reflect a major expansion in suburban employment, particularly noticeable in the major radial corridors.

In addition, local plans call for specific locations of higher density development and a clear delineation of urban vs. rural development that is reflected in the design of the transit system and expected transit ridership.

Additional land use controls and incentives that jurisdictions should consider include:

- requirements dealing with parking, rideshare programs and curb cuts on arterials;
- greater densities focused around planned regional transit trunk route stops and transit stations and along subregional and local transit routes;
- encouragement of mixed use developments;
- site plans designed to emphasize convenient pedestrian access to transit and local pedestrian and bicycle paths; and
- other land use actions consistent with the Regional Urban Growth Goals and Objectives or resulting from the Region 2040 planning process.

~~Flexible Working Hours~~

~~Flexible working hours can help to shift travel out of the normal peak hours and therefore lessen the need for additional highway and transit investments by spreading demand away from the congested peak usage hours on both highway and transit systems. This reduces the need for more highway capacity and transit equipment and minimizes the transit operating cost associated with a very high, but relatively short duration, peak load.~~

~~Bicycling~~ Regional Bicycle Network

The use of the bicycle ~~as an alternate mode of~~ for transportation to work, shopping, schools and ~~recreational opportunities, as well as to~~ access the transit system, can reduce the number of vehicle trips on the region's highway system and ~~lessen the need for vehicle parking investments.~~ improve regional air quality The ~~adopted~~ Regional Bicycle ~~Plan designates approximately 270 miles of regional bicycle routes within the region (Figure 4-7) and~~ Network

Metro and ODOT should continue to pursue funding to conduct a pre-project study of congestion pricing in the Portland area. Pending the results of the study, a demonstration project should be conducted to determine the operational feasibility of implementing a user-based fee system in the Portland area to relieve congestion.

Local jurisdictions are encouraged to evaluate the use of parking charges as a market tool to reduce SOV travel at work locations.

Non-Work Destination Based Programs

This type of TDM program is oriented toward a retail and/or non-work commercial site. Implementation of TDM for non-work trips is an important consideration because trips for non-work purposes represent 80 percent of all regional trips, and these trips are not currently subject to the proposed ECO rule and/or Parking Ratio Rules. Consequently, the reduction in vehicle trips and ultimately VMT from non-work TDM strategies can be applied directly to achievement of the TPR without the problem of double counting for VMT credit already assumed from implementation of employer- based strategies to satisfy the ECO rule.

Local jurisdictions should work with Tri-Met and selected employers to promote TDM programs at shopping and recreational locations. Such as:
Coordinating with Tri-Met on promoting the use of non-SOV modes by providing special discount passes to shopping and recreational events.

- Coordinating with Tri-Met to provide special subscription/shuttle transit service to major retail /commercial locations.

- Working with large retail and commercial centers to provide priority parking for carpools and vanpools.

Parking ~~Programs~~Management

Parking programs which limit parking around regional transit trunk route stops and transit centers or provide preferential locations and prices for individuals that rideshare can be an important technique to increase ridesharing and maximize transit ridership. Parking management programs should be complementary to strategies aimed at meeting DEQ's Parking Ratio Rule The RTP forecast of travel demand to downtown Portland is consistent with the expected supply of parking in the downtown by the year 2005, as well as the emphasis on shifting the use of parking to short term trips.

~~Among the parking programs that should be considered by local jurisdictions~~The guidelines for implementing parking management programs are:

- ~~provide preferential parking locations and prices for carpools and vanpools at public parking lots, curbside parking areas and in private employee parking lots;~~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.

- ~~establish maximum parking requirements for new development within 1/4 mile of regional transit trunk route stops and transit stations according to the land use type and quality of transit service; and~~ 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 promote, through zoning, the development of employment opportunities in areas served by transit or located along regional transit trunk routes, consistent with the 2040 Growth Concept.

- 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 Growth Concept , the Employee Commute Options Rule, and achievement of the TPR.

- Employer Based Programs

At this level of implementation, the employer becomes the important implementer of the TDM action(s), even though the employer may be responding to a government imposed mandate such as the Employee Commute Options Rule or the Parking Ratio Rule. The key to having a widespread and significant impact on commute trips is to get a large proportion of all employers in the region to implement effective programs. As discussed previously, effective programs include a package of mutually supportive measures for reducing SOV use and increasing non-SOV travel.

Local jurisdictions can assist employers and the business community in implementing effective TDM. Such as:

- Local jurisdictions should continue to promote employer efforts to reduce SOV work trips to large employers or employment centers and in congested traffic corridors;

- Local jurisdictions should encourage ridesharing and the use of other non-SOV modes through education and marketing programs;

- Local jurisdictions should support, at the state and local level, tax incentives for using transit, carpool and vanpool, and for implementing telecommuting programs.

Regional / Corridor Driver Based Programs

Regional/corridor driver-based programs can be applied to either work or non- work trips. Under this approach, the primary focus of the TDM program is to affect travel behavior through market-based approaches/incentives such as road and parking pricing. The concept of pricing is important because transportation activities have "external costs" not included in the prices drivers face. As used here, an external cost is defined as a cost imposed on another person who was not responsible for the added cost initially. Common examples are congestion and pollution external costs imposed on users of transportation facilities. A basic result of microeconomic theory is that economic efficiency is maximized when marginal social benefits equal marginal social costs. Transportation pricing, especially the price facing automobile drivers, fails to meet this criteria, leading to inefficient use of transportation resources in the form of congestion and overcrowded facilities.

Market- based strategies have the most potential for reducing VMT, particularly if they are designed to take external costs into account, and price drivers accordingly (marginal social cost). The major components of marginal social cost of a highway facility include the costs of wear and tear on the facility, the interference costs to other users (delay, increased accident risk, increased insurance and enforcement costs), and costs imposed on others regardless of whether or not they are using the facility (noise, air pollution, etc.) The consideration and implementation of market-based strategies may be required to achieve the 10 percent VMT per capita reduction required by the TPR.

~~Rideshare~~

~~The performance of the year 2005 highway system (see Chapter 6) recommended in the Plan is based upon a forecast of traffic volumes that incorporate a 23 percent regionwide average rideshare rate for auto work trips.~~

~~This overall rideshare rate reflected in the adopted Plan is conservative in that it reflects current levels of ridesharing and is achievable without mandatory controls. Rideshare programs recommended to sustain and increase this level are as follows:~~

~~better carpool matching services for carpoolers can be organized between multiple employers;~~

~~additional priority lanes for carpoolers in selected areas;~~

~~more employee benefits for ridesharing; and~~

~~increased rideshare marketing information and park-and-pool lots in specific corridors.~~

Within the context of a specific program approach (i.e., regional, employer based, 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 (1996 – 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.

TDM Infrastructure/Support Programs

Local jurisdictions should adopt policies consistent with the TPR and to assist Employers comply with 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 the the 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.

Zone, Historic Districts and other downtown destinations are under consideration and are shown in Figure 4-4.. As the mall reaches its transit capacity, bus routes currently using the mall will be rerouted to other streets consistent with the Downtown Plan and the Downtown Parking and Circulation Policy (such as ~~1st~~2nd and ~~2nd~~ 3rd and 10th and 11th Avenues).

Transition

As the long range transitway system is developed on a corridor-by-corridor basis, bus trunk route transit service will be provided in the remaining corridors by providing high grade bus service on existing streets. In addition, the transit stations previously identified would also be compatible with the upgrading of service from a trunk route to a transitway. Although further study is needed in each corridor to determine the most cost-effective location and technology, steps should be taken now to protect rights-of-way from encroachment.

Demand Management Programs

The policy framework for ~~demand management programs calls for continued emphasis on ridesharing programs, parking policies and programs in high density areas to encourage transit and ridesharing, development of land use patterns that are conducive to shorter trips and greater use of transit, flexible working hours, and encouragement of the use of bicycles as an alternative form of transportation. These programs are essential in the heavily traveled corridors and at concentrated employment centers. Outside of these areas, gradual development of higher densities and suburban employment concentrations will occur over time. Parking and rideshare programs will therefore be developed as and where they are needed to alleviate capacity limitations. In addition, the option of flexible working schedules will develop gradually as individuals seek to avoid excessive travel delays during normal peak hours.~~ the region's comprehensive demand management program emphasizes a regional and local commitment to reducing the attractiveness of single occupant vehicle travel and increasing the attractiveness of non-SOV modes of travel. The approach for implementing an effective TDM program will emphasize the provision of education, information and promotion programs, monetary and non- monetary incentive programs, the provision of infrastructure, programs for work and non-work locations, and driver/market-based programs.

Identified in Chapter 5 are specific demand management programs that are ~~in place~~ recommended for continuation or are committed for implementation. These programs, however, do not constitute the full extent of the demand management programs that will be needed by the year ~~2005~~2015 to meet the ~~policy guidelines~~ goals and objectives set out in Chapter 1. Additional programs will be developed to target particular problem areas and will be incorporated into the Plan incrementally. Since the overall intent of the region's demand management program is to minimize the need for costly investments in peak-hour highway capacity, and to help the region achieve the TPR and air quality goals, these ~~programs~~ objectives have been taken into consideration in forecasting travel demand and determining the extent and quality of transportation service provided by the adopted RTP. As such, the extent of ~~highway~~ roadway and transit investments recommended in the Plan takes into consideration some level of capital cost savings due to demand management programs. For example, if the region fails to make adequate progress in achieving the VMT per capita reduction milestones required by the TPR ~~achieve an adequate rate of ridesharing or flextime, for example,~~ additional capital investments beyond those recommended in the Plan could be required in order to reduce reliance on SOV. It is possible that some form of market-based (pricing) approach will be required in order to meet the 10 percent reduction in VMT per capita by 2015. Presented here are the changes in travel demand that have been factored into the evaluation of the transportation plan and the types of programs and policies by program basis that are recommended to be implemented ~~incrementally~~ when and where they are needed.

~~will examine alternative high capacity transit (HCT) alternatives between downtown Portland and Clackamas Town Center (CTC) via Milwaukie and the I-205 Corridor between Portland International Airport (PIA) and CTC. As a result of this study, one corridor will be recommended for advancement to the Alternatives Analysis phase and an action plan and recommendation on the other corridor to be developed.~~

~~The alternatives to be considered in the Milwaukie corridor include a Portland Traction Company (PTC) alignment, McLoughlin alignment and a Johns Landing/Sellwood Bridge alignment. Alternatives in the Highway 224 corridor include a Railroad/Harmony alignment and a Highway 224 alignment. The I-205 alternative includes a major portion of existing reserved ROW although there are alternative access options in the vicinity of both termini.~~

~~In the Northern Corridor, a locally funded Preliminary Alternatives Analysis will examine HCT options connecting Vancouver with the Portland CBD. Alternative alignments that will be analyzed include I-5 and Interstate Avenue. Possible connections across the I-205 bridge into east Clark County will also be examined in this study.~~

- In the South/North Corridor, light rail has been selected as the preferred mode and design concept. The preferred alignment will proceed from the vicinity of the Clackamas Regional Center to the city of Milwaukie and continue via Southeast Portland. It will then continue through downtown, across the Steel Bridge to the Rose Garden Arena and through Northeast and North Portland to its ultimate terminus in Clark County, Washington. A Phase II extension of the South/North Corridor will extend to Oregon City via either McLoughlin Boulevard or I-205. The PTC alignment south of Milwaukie has been removed from further consideration.

Beyond these corridors, the long term (beyond 20~~0~~15) regional transitway system includes:

- In the Southwestern Corridor, an LRT line connecting downtown Portland with Tigard via Barbur Boulevard or ~~I-5~~ Highway 217

- Light rail to the Portland International Airport

- Lake Oswego (via the Jefferson Street Branch) and Tualatin (via Milwaukie extension through Lake Oswego, Barbur extension, or Highway 217 Circumferential extension through Tigard).

Figure 4-~~6~~ 4 illustrates the long range LRT alignments developed for downtown Portland. ~~Initial~~ Service for the Banfield LRT will be provided via the cross-mall alignment on Morrison and Yamhill streets. When the South/North project is constructed, or when capacity on the cross mall alignment is exceeded ~~As capacity on the cross-mall alignment is needed~~, a mall alignment using Fifth and Sixth Avenues will be implemented. This north/south corridor would form the backbone of the downtown transit system, serving as the major mode of access to and through downtown. ~~The secondary LRT streets would provide~~ Alternative LRT alignments that connect to the 5th/6th alignment which provide service ~~connections as additional LRT corridors are implemented and provide regional transit service~~ to the South Waterfront, RX

the east side ~~Eastside~~ of the City of Portland), this service will be provided through a grid system and transit transfer projects. In areas of lower density, timed-transfer opportunities will be provided. This localized network will ensure improved transit connectivity and provide the opportunity for transit travel to a wider variety of destinations throughout the region.

It is estimated that there are currently 50,000 transit ~~handicapped~~ disabled people in the region — 40,000 of whom can use the regular transit system with varying degrees of difficulty. Of the remaining ten thousand, 7,200 need door-to-door service for a variety of reasons.

Special transportation for the elderly and handicapped and community transit services will be included as an integral part of the overall transit system, with the intent to provide parity of transit service between transit handicapped and non-transit handicapped people within realistic costs and federal guidelines. The transit system will include both accessible fixed route service (at least 50 percent of the bus fleet, all LRT vehicles and stops and as many other bus route stops as possible) and door-to-door demand-responsive service.

Transit security will be enhanced through a number of innovative capital and service improvements. A summary of Tri-Met's transit security program is presented in Chapter 8, Section C (#9).

Transitways - The Long Range Transit System

Regional transitways (light rail or exclusive busways) offer an attractive method for providing regional trunk route service on heavily traveled routes. Transitways, with an exclusive right-of-way and larger vehicles, provide greater capacity and higher speed service ~~at a lower operating cost~~ more efficiently to the public than normal bus operations in mixed traffic. In addition, transitways have the additional benefit of promoting transit-supportive economic development around stations.

Figure 4-5 shows existing, planned and potential routes for regional transitways in each of the regional transit trunk route travel corridors. In the Eastern Corridor, the Banfield LRT (MAX) connecting downtown Portland and Gresham is in place.

~~Three~~Two additional LRT corridors have been identified by JPACT as 10-year priorities and are included in this Plan:

- In the Western Corridor, LRT ~~with a long tunnel and a zoo station has been selected as the preferred alternative~~ is under construction to connect downtown Portland and Hillsboro. Between Portland and Beaverton, the LRT will be in a 3 mile tunnel and then be adjacent to Highway 26 and Highway 217 into central Beaverton. The LRT corridor west of Beaverton will follow the Burlington Northern ~~Row~~ Right-of-way and Washington Street. into downtown Hillsboro. ~~to 185th Avenue. The extension to Central Hillsboro will follow the BN ROW into Hillsboro or an alternative alignment identified through the Alternative Analysis process~~. The Westside LRT is the top regional priority for LRT implementation (see Chapter 8).

- ~~***update In the Southeastern Sector, two alternative transitway corridors will be examined in a preliminary alternatives' analysis to be conducted by Metro. The study~~

- transportation and/or land use actions or policies that result in lower speeds or less service on the freight network; and

- noise ordinances.

Action: Work with the private transportation industry, Oregon Economic Development Department, Portland Development Commission, the Port of Portland and others to identify and realize investment opportunities that enhance freight mobility and support the state and regional economy.

Action: Enlist federal, state and other representatives to ensure adequate consideration of freight mobility needs in transportation funding legislation.

The Regional Primary Transit System

The adopted Plan emphasizes improved transit service throughout the region. The transit component of the Plan seeks to optimize use of the existing transit system, to provide more convenient service between more locations and to increase transit capacity. Compared to the existing (1995 ~~1987~~) transit system, this plan recommends a transit system that expands up to 3.6% per year (weekly platform hours of vehicle operation). However, current funding is only expected to provide for a 1.5% per year expansion. ~~this Plan recommends a 60 percent increase in peak hour service (weekly platform hours of vehicle operation (Figure 4-3) and would result in a 171 percent increase in peak hour transit ridership by the year 2005 (see Chapter 6). This service expansion will, however, require additional sources of transit revenue (see Chapter 7).~~

The overall transit system concept consists of a system of primary ~~regional trunk~~ routes providing direct, high quality service between major activity centers (regional centers and town centers) with convenient connections at timed-transfer transit centers to neighborhood areas by feeder, crosstown, and local routes.

As illustrated in Figure 4-24, each of the region's major travel corridors ~~(with the exception of the Northwest)~~ will be served by a primary ~~major~~ transit ~~trunk~~ route. These trunk routes provide the backbone of the transit system (much like freeways and arterials do for the highway system) and are intended to provide the highest quality service (i.e., speed, frequency) and carry the highest passenger volumes. ~~The transportation capacity needs along the Northwest Corridor are more directly related to the movement of goods and services than the movement of large volumes of people.~~

As also depicted in Figure 4-24, connection of the primary ~~regional trunk~~ routes to neighborhood areas not directly served by the primary network will be made at transit stations located at major activity centers. The transit centers will form the focus of the transit system and will be designed to provide convenient transfers to feeder and local routes serving communities around the transit centers, as well as providing the connection to additional cross-town transit routes. Transit vehicles on routes converging at the transit centers will also provide timed-transfer opportunities between routes with a minimum waiting time.

Another facet of the transit system proposed in the adopted Plan is service to local areas composed of feeder, cross-town ~~crosstown~~ and local routes. In areas of higher density (such as

Therefore, the Federal RTP supports actions to establish a National Transpotation System (NTS) incorporating the NHS with public transit (urban and inter-city), other non-highway freight corridors, and encourage safe and convenient walking and bicycling in our communities.

Oregon's State Transportation Planning Rule (TPR) established a hierarchy for consistency between local, regional and state transportation system plans (TSPs). Regional plans in the major urban areas, such as Metro's RTP, are required to be consistent with the Oregon Transportation Plan, and local TSPs must be consistent with the regional plans. The consistency requirements for local, regional and state plans will ensure connectivity of transportation routes in Metro's jurisdiction with those outside the regional planning area.

The Regional Freight System

Federal and state policy recognizes the importance of the movement of freight as national and state interests. Freight movement is also vital to the Portland area economy. The transportation sector in the Portland area is proportionally larger than other west coast cities. Portland's relatively low congestion, proximity to the Pacific Rim, and its multi-modal freight network provide a competitive advantage.

The objective for freight movement is to maintain that competitive advantage. To do so, strategies and actions are focused on key freight through-routes and intermodal locations. The main components of the freight network include intermodal terminals and facilities, access routes to those terminals and facilities, mainline commodity routes (road, rail, and water), and major freight generators. Those facilities are shown in Figure 4-3. Freight-related projects are described in the Chapter 5 project matrix. Major freight actions to supplement policies include the following:

Action: Work with the private sector, local jurisdictions, ODOT and other public agencies to:

- develop and maintain the regional Intermodal Management System (IMS) and Congestion Management System (CMS);
- monitor the efficiency of freight movements on the regional transportation network;
- identify existing and future freight mobility problems and opportunities; and
- reduce inefficiencies or conflicts on the freight network.

Action: Give priority to investments, projects and actions that enhance efficient freight movement on the designated regional freight network.

Action: Collect and analyze accident data related to the freight network using the IMS data base.

Action: Implement TSM improvements that enhance the efficiency of the existing infrastructure.

Action: Coordinate public policies to reduce or eliminate conflicts between current and future land uses, transportation uses and freight mobility needs, including those relating to:

- land use changes/encroachments on industrial lands;

- ~~"b~~Beltways~~"~~ type regional through-route freeways connecting the radial ~~these~~ freeway routes through the suburban areas and bypassing the Central City ~~downtown~~ core;

- Regional through-route ~~principal~~ arterials ~~routes~~ in the Southern and Northwestern corridors; and

- a supportive feeder system of major and minor arterial routes throughout the region.

~~Specific details of each principal and major and minor arterial facility are described in Tables 4-1 and 4-2.~~

National Highway System

The Intermodal Surface Transportation Efficiency Act (ISTEA) calls for the establishment of a new National Highway System (NHS). The NHS is to consist primarily of existing Interstate routes and portions of the Primary System, including significant state highways, principal urban roadways, and connections to national and international terminals. The NHS is being established to focus certain federal resources on roads that are the most important to interstate travel and national defense, roads that connect with other modes of transportation, and are essential for international commerce. Congress has until September 30, 1995 to approve an NHS.

Figure 4-2 shows the proposed NHS system for the Portland area. The system was adopted by the Metro Council and JPACT in March, 1993 (Resolution No. 93-1771) in response to federal deadlines. States had until April 30, 1993 to submit proposed NHS routes. In developing the NHS, the Federal Highway Administration set mileage parameters for states to follow. Oregon was allocated just over 3,700 miles, of which 200 were in the Portland area. In addition to federal requirements to include Interstate and major defense highways, Metro and JPACT used the following criteria to select the Portland area NHS:

1. NHS routes will provide direct connections to the primary interstate and inter-regional routes (Interstates, state Access Oregon Highways, and other key facilities).

2. Direct NHS access should be provided to international, interstate, and inter-regional port, airport, and passenger facilities.

3. Cities within the urban area shall have direct access to at least one NHS route.

4. Direct NHS routes should be provided to key employment areas with the region that have international and national significance.

5. With the exception of "spurs" to ports and the airport, the system should be inter-connected. Duplicative, parallel facilities should not be included.

Congress has not yet acted on the the NHS. The Federal RTP, however supports the establishment of the NHS to preserve and maintain significant national and inter-national highway facilities.

The Federal RTP also recognizes the importance of a multi-modal transportation system for the movement of people and goods to the region, state, and nation. A safe, convenient, and efficient multi-modal transportation system will help this region achieve its quality of life, environmental, economic, and other objectives. Healthy urban areas, both central cities and suburbs, should be of a national priority.

on areawide demand management programs to reduce the number of vehicle trips, especially during the peak hour.

The transportation capacity required in each of the major radial travel corridors is provided through a balanced combination of:

- a freeway or principal arterial highway route and supportive major and minor arterials;
- a regionally significant bikeway and supportive local bikeways;
- a primary transit route and the necessary feeder route system;
- a freight route as appropriate;
- demand management techniques and programs in the corridor itself and/or at the major destination zones; and
- safe convenient pedestrian connections

Due to the widespread origin-destination patterns associated with circumferential travel demand, the roadway ~~highway~~ system generally provides the bulk of the capacity required, with most movement in private automobiles However, regional transit trunk route service in the circumferential corridors will improve the convenience of suburban subarea-to-subarea transit travel and eliminate the need to travel through the central city ~~downtown sector~~.

In the Regional and Town Centers, ~~suburban subareas~~ an urban roadway ~~highway~~ infrastructure is provided, with transit service increases to concentrated employment areas. In the close-in subareas, transit service improvements will provide improved connectivity, greater coverage and more convenient access to a wider variety of destinations. A grid system and transit transfer project will be instituted in the older, more densely developed areas of the City of Portland. Timed-transfer service and transit centers will be provided in the less densely developed areas.

The Regional Roadway ~~Highway~~ System

The regional roadway principal and major arterial system (Figure 4-1) depicts the location of the roadway ~~major highway~~ facilities planned for the region up to and beyond the year 2005 15. ~~The minor arterial system of regional significance required to support the principal and major arterial system is depicted in Figure 4-2.~~ This regional roadway ~~highway~~ system defines the framework within which the facility improvements, land use design activities and protection of rights-of-way recommended in this Plan will be used to increase the effectiveness of the roadway ~~highway~~ element of the regional transportation system. Significant features of the long range highway system include:

- Regional Through-route freeways radiating from an inner freeway loop through the Northern, Southwestern, Eastern and Western travel corridors;

- The fundamental interdependence of the three major elements of a cost-effective transportation system: roadway ~~highway~~ facilities, transit service and demand management programs (rideshare, carpool, parking, bicycle and pedestrian incentives);
- The need to provide alternative modes of travel to the individual; ~~and~~
- The need to maintain an efficient freight system; and
- The interconnected nature of each of the major travel corridors within the region.

The adopted Plan provides adequate levels of transportation service in each of the major regional travel corridors through a balanced combination of strategic investments in all four major elements. Each element and each corridor is expected to provide a significant portion of the total transportation capacity needed by the year 2005 15. This balance of elements and corridors is such that a lack of investment in any individual element or corridor will seriously affect the ability of the remainder of the system to provide adequate levels of transportation service.

Metro, in coordination with other state and regional agencies, is in the process of developing the management systems for the Portland region, as required by ISTEA. The management systems will identify prioritized facility needs, policies, and strategies that will be analyzed during the development of the next RTP update and future TIPs. The ISTEA management systems are discussed in more detail in Appendix "MS".

Freight movement and intermodal capacity needs are an important part of the regional roadway ~~highway~~ element and will be evaluated by the Intermodal Management System (see Appendix "MS"). The RTP currently addresses roadway and transit capacity requirements for access to intermodal facilities, such as the terminals operated by the Port of Portland and the Portland International Airport. The Congestion Management System and the Public Transportation Management System will also provide new data and analysis on transportation system needs.

Regional Overview of System Elements

Described here are the basic regional components of the recommended long range transportation system. Specific improvements to be implemented over the next 20 years are presented ~~on a sector by sector basis~~ in Chapter 5. The regional roadway , transit and demand management elements are, in general, intended to provide the necessary transportation capacity to carry long trips across or through the region. Regional bicycle and pedestrian elements are intended to serve shorter trips to the Central City, Regional/Town Centers and multi-modal corridors. The service provided on the regional roadway and transit systems are ~~is~~ intended to facilitate high speed and high capacity movements and to accommodate the largest volumes of travelers. Improvements identified in this Plan ensure that sufficient travel speed and capacity are maintained on the regional system within given financial and environmental constraints. These investments include a number of improvements to balance the capacity of the regional roadway ~~highway~~ system, significant increases in the quality, quantity and connectivity of the transit bicycle and pedestrian systems, and a major emphasis

an appropriate manner to ensure: 1) connectivity to a wider variety of suburban destinations; and 2) that transit remains a viable alternative to the automobile.

Regional Centers/Town Centers ~~Suburban Subareas~~

If residential and employment growth is to occur within Regional and Town Centers as ~~the suburban subareas of the region as~~ expected, adequate transportation capacity will be necessary to connect the new developments to the established areas of the region and provide movement of goods and services. Clearly, this growth cannot occur unless an adequate urban roadway ~~highway~~ infrastructure exists. As a result, timely provision of the needed roadway ~~highway~~ capacity to serve ~~new suburban~~ development in these areas is an important component of the region's economic health. In addition, as concentrated centers of employment and residential development arise, the transit system should be extended into those areas to provide: 1) additional capacity beyond the basic highway infrastructure into the concentrated suburban employment centers; and 2) linkage to the ~~radial~~ primary transit network ~~trunk routes~~ to facilitate a high level of transit ridership between the developing centers ~~suburban subareas~~ and Portland.

Close-In Subareas

The close-in subareas are generally more fully developed. An adequate roadways ~~highway~~ infrastructure already exists in most cases, and major improvements to these highway facilities would likely result in unacceptable environmental and neighborhood impacts. Major increases in close-in transportation capacity, therefore, should be provided by expanded transit service and connectivity and an emphasis on demand management programs. However, minor capacity increases and on-going operations improvements to the highway system are needed to react to evolving shifts in traffic patterns.

Downtown Portland/Central City

Transportation capacity within and into downtown and Central City is a constraint on the level of development that can actually occur. As elsewhere described in this Plan, additional transportation capacity is required to accommodate the significant increases in employment forecast to the year 2005-15.

For ~~highways~~ roadways, the available capacity is controlled by the capacity of the major radial routes and bridges entering downtown. Feasible increases in this capacity are limited to those proposed in this Plan (see Radial Corridors) and additional transportation capacity within and into the downtown area must be provided by increases in transit capacity and continued demand management efforts.

C. The Regional Transportation System Concept

The underlying concept embodied in the adopted RTP is based on the following principles:

1) in the major radial travel corridors;

2) in the major circumferential travel corridors;

3) in the ~~suburban subareas;~~ regional centers/town centers;

4) in the close-in subareas; and

5) in downtown Portland.

Radial Travel Corridors

The continued economic vitality of the region is predicated on significant employment growth in both the ~~suburban subareas and downtown Portland~~ Central City and Regional Centers. In addition, residential development in the suburban subareas is required to house the population attracted by the new jobs. Additional transportation capacity in the radial travel corridors connecting central Portland with the ~~suburban subareas~~ Regional Centers is essential if that growth is to occur.

Improvements can be made on the existing major ~~highway~~ roadway facilities in the radial corridors to balance the system, i.e., remove bottlenecks and provide a consistent level of capacity. Widening of any of the major radial freeways beyond the level proposed in the Plan, however, would require reconstruction of major parts of the inner freeway loop (including the Marquam Bridge) to accommodate the added traffic volumes entering the loop from the widened radial freeways. This alternative would require funding levels beyond those which the region or ODOT can realistically bear (Chapter 7), as well as produce severe environmental impacts and neighborhood disruption.

As such, constructing major new roadway ~~highway~~ facilities in the close-in radial corridors and/or adding significant highway capacity to existing major radial routes beyond the improvements recommended in this Plan would violate two of the established regional policies and are not feasible. Therefore, adequate transportation capacity to meet the expected growth in travel demand in the central area radial corridors must be provided by selective roadway ~~highway~~ mprovements to remove bottlenecks and "balance" the capacity of the overall roadway ~~highway~~ system, together with a major expansion in transit service and demand management programs.

Circumferential and Suburban Radial Travel Corridors

The circumferential and suburban radial corridors provide the capacity for statewide travel through the region and for travel among developing suburban subareas without the need to enter the downtown Portland sector. Sufficient roadway ~~highway~~ capacity to serve the level of growth contained in the adopted local comprehensive plans in these corridors cannot be adequately provided through improvements to the existing system, and additional facilities are required. Additional transit service in these corridors, however, must also be provided in

determine where the additional households and employment should be located. In December 1994, the Metro Council adopted a 2040 Growth Concept that generally identifies a land use pattern which maximizes development within the existing UGB.

The concept promotes strong central city regional centers (e.g., Gresham, Beaverton, etc.), town centers (e.g., Lake Oswego, Troutdale, Forest Grove) and a series of corridors tied to strong transit service. The concept also recognizes the regions' relationship with neighboring cities such as Sandy and Newberg. The concept provides the basis for further work as part of the Regional Framework Plan (RFP). The RFP will include an updated Regional Transportation Plan (RTP) based on a refined and more detailed regional land use component. The work will also finalize any adjustments necessary to the UGB. The UGB analysis is scheduled to be completed by summer 1995. Refined land use and a formal RTP will be complete late 1996.

A lack of urban services has historically been an effective constraint on past development in specific areas of the region. Problems exist with government's ability to fund necessary transportation, sewer, water, school and other public services to support future development. The RTP is intended to establish the transportation investments and transportation funding levels required in both the near (10-year) and long (20-year) terms to support the development anticipated in the adopted local comprehensive plans, the 2040 Growth Concept and ultimately the RFP.

B. Transportation Capacity and the Policy Framework

Additional transportation capacity beyond that provided by currently committed transportation investments is clearly necessary in order to adequately serve expected growth to the year 20 ~~05~~ 15 and to allow the continued economic development of the region ~~(Chapter 3)~~ .The transportation system developed through the RTP to provide this needed capacity must be consistent with the following established regional transportation policies (Chapter 1):

- to provide adequate levels of multimodal mobility and accessibility to the region;
- to develop cost-effective solutions to the region's transportation problems recognizing the financial constraints of federal, state and local funding sources; and
- to minimize adverse environmental impacts and preserve the livability of the region.

As a result, the transportation investments presented in the Plan were chosen after vigorous local and regional review of possible alternatives and represent a conservative and prudent use of public funds. Efforts were taken to minimize the need for high cost improvements through the improved use of existing capacity, signal modifications, spot improvements, demand management techniques and other lower cost options. Highway projects have been scaled down to include only the most essential elements. The significant increase in transit service recommended in the Plan is based on a much more productive (more riders per service hour) transit operation than today.

The following paragraphs examine the options available to provide the necessary transportation capacity in light of the adopted policies:

CHAPTER 4

Policy Implications and the System Concept

A. Overview

The comprehensive land use plans adopted by the local jurisdictions in the region accommodate a significant amount of growth to the year ~~2005~~ 2015 The forecast population and employment levels, and the land use patterns associated with these plans, are described in Chapter 2.

The actual new growth and economic development that will occur in the next 20 years will depend upon the following essential elements:

- market demand;
- an absence of legal and political barriers to growth;
- an adequate supply of vacant developable or redevelopable land at a reasonable price; and
- sufficient public services, such as water, sewers, schools and transportation capacity to accommodate new growth.

Development trends over the past 10 years indicate the presence of a strong market demand for residential, commercial and industrial development in the region (see Chapter 2), as well as a shift toward higher density residential development. In addition, currently identified development proposals representing hundreds of millions of dollars are slated to occur in the next few years.

The region has taken a strong policy position to promote orderly urban development. Metro adopted the Regional Urban Growth Goals and Objectives (RUGGO) and administers the regional Urban Growth Boundary. RUGGO provides a policy framework for Metro's functional plans and, through these adopted functional plans, for land use planning in the region consistent with the statewide planning goals. The UGB clearly identifies the extent of the area in which urban development will occur in the Oregon portion of the region over the next 20 years. Furthermore, state law requires that the UGB contain sufficient land to accommodate growth for 20 years and that an adequate supply of developable land exists in each use category to ensure market choice. Although a precise calculation of this objective is clearly not possible, a binding determination based on forecast needs has been made through a lengthy technical, political and legal process.

Metro recently completed a long-range planning effort called Region 2040, which resulted in an adopted Regional Growth Concept (see Chapter 1). This program will help citizens and policy makers decide how the region should grow over the next 50 years. The region's population is expected to expand significantly over this period, and Region 2040 will help

Chapter 4

Policy Implications and the System Concept

~~residential and employment development now occurring. This situation could increase pressure to expand the urban growth boundary to allow more residential development east of I-205 in Clackamas County.~~

~~Regional Impacts~~

~~The region as a whole would likely lose some of its "quality of life" attractiveness with the committed transportation system. A large metropolitan area tends to be viewed as an entity from outside its borders. If significant parts of the region are plagued by poor access, infrastructure problems, neighborhood infiltration, major delays on the regional system, and inadequate local circulation, this situation would clearly impact location or relocation decisions of industries, developers and prospective residents. This region is dependent on a healthy economic relationship between the Portland CBD and the suburban jurisdictions. This interdependence indicates that severe impacts in several areas, including the central city, would ultimately be shared by all the jurisdictions in the region.~~

~~Circulation Plan policies to lose effectiveness, and unacceptable congestion would result on the downtown street system. Under these conditions, it is clear that the ability of the downtown sector to achieve its assumed development levels would be negatively impacted.~~

~~— Other Developments in the City of Portland~~

~~— Failure to make significant transportation investments in transit capacity and the removal of specific freeway and major arterial bottlenecks will likely reduce the ability of the City to attract economic development to the inner Eastside, Swan Island, Rivergate, the Northwest industrial area and the John's Landing area.~~

~~— Southwest Sector~~

~~— Regional access between the Southwest and the Portland CBD, the Beaverton area and the Southern sector (via I-205) will be seriously degraded (in both peak and off-peak periods) without increased transportation investments. In addition, significant circulation problems are anticipated within the Tigard-Tualatin-Lake Oswego-Sherwood area. Combined, these conditions would interfere with the anticipated development of a sector with a large potential for economic growth.~~

~~— Western Sector~~

~~— Access between Washington County and the rest of the region is significantly reduced with the Sunset Highway, Highway 217, Highway 99W/Barbur and I-5 South all congested and in serious trouble. This lack of adequate mobility will likely preclude the levels of residential development forecast for central Washington County due to lack of adequate access to regional employment opportunities, although a more balanced jobs-to-population ratio might result. At the same time, the lack of investment in the regional system would divert more longer distance trips onto county and city facilities, leading to higher local infrastructure investments to carry the travel demand.~~

~~— Southern Sector~~

~~— Access between the Southern sector communities (Milwaukie, Gladstone and Oregon City) and the Portland CBD and the Southwest area will be seriously impacted by committed system congestion. Losses in this sector will be associated with quality of life as well as economic opportunity, with potential growth in the Clackamas and Oregon City/South areas affected. Traffic infiltration in residential neighborhoods along McLoughlin Boulevard would continue to increase and local shopping access would be reduced.~~

~~— I-205 Corridor (Clark County to Clackamas County)~~

~~— Development opportunities along I-205 would be impacted from worsening transportation deficiencies in the corridor. Clark County, Washington, the Columbia South Shore area of Multnomah County (if sewer service can be provided) and the Clackamas Town Center/Sunnyside Road/ Highway 212 area would suffer decreased accessibility to the rapid~~

~~Retail markets (defined as the population within 15 minutes of regional shopping centers by the fastest mode in the off-peak) are expected to increase in size by the year 2005 as the result of growth occurring at a faster rate than congestion on the off-peak committed transportation system (Table 3-6). With the exception of Mall 205/Gateway, all the major retail areas experience a market increase comparable to the available potential (the year 2005 population accessible assuming 1987 travel times).~~

~~Labor Force Accessibility~~

~~The labor force (population) accessible to major employment centers within 30 minutes during the peak hour can be expected to decline in almost all cases by 2005 if no improvements beyond those currently committed are made to the region's transportation system (Table 3-7) — despite the significant increase in regional population forecast for the period. Significant accessibility losses over current (1987) levels can be expected by employment centers in Wilsonville (-36 percent), Rivergate (-25 percent), Tualatin (-24 percent) and central Beaverton (-20 percent).~~

~~Economic Development Impacts~~

~~The preceding analysis assumed a year 2005 growth pattern that is not constrained by transportation capacity. This is obviously a contrived situation but useful for a comparative analysis of investing vs. not investing in transportation. The actual conditions that would occur would be quite different as growth shifted in conflict with comprehensive plans due to the constrained transportation system.~~

~~A summary examination of the foregoing performance evaluation reveals a regional transportation system unable to provide the highway or transit capacity necessary to adequately serve the land use and activity patterns developed in local comprehensive plans. Clearly, a lack of transportation investment will not actually result in the specific congestion conditions pictured previously because the limitations of committed transportation capacity will not allow the levels of residential and employment development called for in the local plans. Travel volumes, therefore, would not reach the proportions portrayed. While it is not feasible to determine a precise estimate of the subsequent economic impacts, it is possible to ascertain general conclusions regarding the development of the region.~~

~~Areas of Significant Economic Development~~

~~Impact Portland CBD~~

~~The limitations on transportation capacity into and within the Portland CBD with the committed system are significant. There is insufficient highway capacity to handle the vehicle demand (+35 percent over 1987 — Table 3-8) created by a capacity constrained transit system without: a) increasing bridge access; b) rebuilding the inner loop freeway and other radial routes; and c) providing numerous additional all-day parking spaces in or adjacent to downtown. In addition, this vehicle trip demand would cause the Downtown Parking and~~

arterials are also expected to experience a significant speed decrease as a result of increased congestion.

Travel Times on the Regional Highway System

Year 2005 p.m. peak hour travel times will increase significantly as the result of growth in travel demand and associated congested conditions (Figure 3-5). The largest increases in travel times are expected to occur in the Western radial corridor between the Portland CBD and Beaverton and Hillsboro (over 40 percent longer), in the Lake Oswego to Oregon City radial corridor (+42 percent), in the circumferential corridors between Tualatin and Oregon City (+45 percent) and between Beaverton and Tualatin (+44 percent) in the Southwestern sector. In addition, travel times in the Northern (I-5) radial corridor (Portland CBD to Vancouver) will increase by 34 percent over current (1987) levels, in the Southern radial corridor between the Portland CBD and Milwaukie and Oregon City (over 32 percent) and in the Tualatin-Hillsboro corridor (+31 percent).

Energy (Fuel) Consumption

The total p.m. peak hour vehicle related energy consumption on the regional highway system was estimated at 39,600 gallons in 1987 (Table 3-4). Without any transportation improvements beyond those which are currently committed, by 2005 this usage will increase by over 52 percent to 60,500 gallons per p.m. peak hour. This increase in energy consumption is associated with only a 43 percent increase in vehicle miles of travel (VMT) for the peak hour in the 2005 committed system, and results from a nearly 20 percent decrease in average speed attributable to congestion on the regional system.

C. Year 2005 Impact of Growth on the Committed System

Job Accessibility

Congested conditions expected on the committed transportation system by the year 2005 will have significant impacts on the mobility of residents in the region. Access to job opportunities (defined as jobs within 30 minutes by the fastest mode during the peak hour from residential areas) will decrease for many of these areas, even with expected employment growth (Table 3-5). Major losses of job accessibility with the committed system are expected in the Southeastern sector, especially Oregon City (-42 percent) and Gladstone (-37 percent). In addition, the suburban communities of Gresham (-14 percent), Tualatin (-29 percent), Rock Creek (-30 percent) and Hillsboro (-20 percent) all lose substantial job accessibility. Of those areas which show accessibility gains, the level of job accessibility does not approach the potential number of jobs that would be available if current (1987) travel times could be maintained.

Retail Market Accessibility

Transit System

The year 2005 levels of service for the committed regional transit trunk route system during the p.m. peak hour are illustrated in Figure 3-4. On the Eastside, only the Banfield LRT meets the established performance criteria of travel times equal to or better than one and one-half times the off-peak highway time. All other Eastside trunk routes fail to meet the standard and exhibit slower travel times than current (1985) levels.

On the Westside, segments of several transit trunk routes meet the standard, but no continuous route between the Portland CBD and a major transit center equals the established performance criteria. In addition, the year 2005 committed transit system would:

- provide no significant difference in geographic coverage over today's levels and would, therefore, not be available to the entire urbanized area (UGB);
- generally exceed established crowding criteria; and
- be significantly over capacity on the major transit routes.

Vehicle Hours of Delay

Vehicle hours of delay on the region's highway system during the p.m. peak hour can be expected to increase by nearly two and one-half times over current (1987) levels by 2005 with only the committed improvements in place (Table 3-1). Of particular note is the dramatic four-fold increase in vehicle hours of delay on the principal and major arterials as the supportive links in the highway system begin to break down.

Lane Miles of Congestion

The number of lane miles on the regional highway system that will be congested during the p.m. peak hour will triple by 2005 if no improvements beyond those already committed are implemented on the region's transportation system (Table 3-2). Fully 11 percent of the total regional lane miles can be expected to be congested in 2005, as opposed to 3 percent in 1987. The largest percentage increase will occur on the freeway system, where the number of congested peak hour lane miles will rise from 12 in 1987 to 73 in 2005 — a five-fold increase.

Average Speed

As can be seen from Table 3-2, the average peak hour speed in the regional highway system is anticipated to decrease by nearly 20 percent (from 36 mph to 29 mph) by 2005 if no transportation improvements beyond those already committed are undertaken. This worsening of congestion will occur on all classifications of facilities, with the freeway system experiencing the largest decrease in average speed — slowing down by 25 percent, from an average of 44 mph today to only 33 mph by 2005. Principal (-17 percent) and major (-19 percent)

is conservatively defined, however, does provide a meaningful base from which to portray the general impacts on the region associated with limited transportation investment.

B. Year 2005 Characteristics of the Committed System

Modal Shares

The travel demand expected as a result of the land uses contained in the local comprehensive plans and the anticipated growth in population and employment in the region will increase by nearly 40 percent over the 20-year period, growing from slightly over 3.8 million daily person trips in 1985 to 5.3 million person trips per day by the year 2005. Slightly less than 94 percent of the peak hour person trips produced and attracted in the Oregon portion of the region in 1985 occurred in automobiles; transit trips made up slightly over 6 percent of the total. With a minimum of investment in new transportation services (represented by the committed system), little change from current modal shares can be expected. Lack of capacity on the committed transit system will enable transit ridership to increase at an annual growth rate only slightly greater than the overall increase in travel. The automobile will remain the predominant travel mode, continuing to account for nearly 93 percent of the peak hour travel.

Travel Volumes on the Regional Highway System

Illustrated in Figure 3-1 are year 2005 p.m. peak hour highway volumes expected on the regional highway system (principal and major arterials) for the committed transportation system. Figure 3-2 illustrates the difference in volumes from current levels. As can be seen from the figure, all future year volumes are higher than at present. The highway travel volumes represent conditions anticipated without the significant investments required to provide increased transit coverage, adequate transit capacity, or realize a shift from single occupant automobiles to shared ride vehicles. Particularly large traffic volume increases may be seen in the Western and Southwestern travel corridors since these are the major growth areas.

Level of Service of the Regional Transportation System

Highway System

The level of congestion in the year 2005 committed regional highway system (principal and major arterials) during the p.m. peak hour is illustrated in Figure 3-3. Unacceptable levels of service associated with severe congestion are expected in the Western radial (Sunset Highway to 158th, Tualatin Valley Highway, 185th Avenue, Murray Boulevard, Farmington Road, Beaverton Hillsdale Highway, Barnes Road, and 216th/219th/Cornelius Pass) and Southwestern radial (I-5 South to Multnomah Boulevard, Highway 99W in Tigard, Barbur Boulevard, Kruse Way, Highway 217, Highway 43 and Tualatin Sherwood Road) corridors.

On the Eastside, unacceptable service levels are expected along McLoughlin Boulevard, Powell Boulevard, I-84, Sandy Boulevard, the Slough Bridge on I-5 North, I-5 from the Marquam Bridge to the Fremont Bridge several east/west arterials east of I-205, I-205 at Sunnyside Road, the Oregon City Bypass, Highway 213 and Harmony Road.

• Analysis and information as part of transportation programming (funding) activities since the adoption of the federal ISTEA. These programming activities were for state and federal funds including separate actions on congestion mitigation/air quality (CMAQ) programs. Each programming decision was concluded with the adoption of a Metro/JPACT resolution and included active public involvement.

• The final determination of need will come from the public. Metro's *Priorities '95* public meetings in April of 1995 were, in part, intended to generate discussion of 20-year transportation needs.

Consequently, for this draft of the Federal RTP, no new or dedicated network analysis has been conducted. However, following the *Priorities '95* meetings, and based on public and agency feedback, a financially constrained RTP will be first developed and then analyzed using basic system performance measures and objectives. Chapter 6 describes the basic performance measures to be used. Through 1996, an integrated state and federal RTP will be developed. This Federal RTP will provide the basis for that integrated plan. As part of the development of the integrated RTP, extensive analysis will occur to evaluate alternative transportation system plans, both financially constrained and recommended. The recommended plan will differ from the constrained plan in that it prioritizes transportation needs based on desired performance, not available funding. While federal law requires a financially constrained plan, it also allows for a recommended plan, regardless of cost (see also Chapter 7).

~~Description of the Committed System~~

~~For the purposes of this analysis, the year 2005 "committed" transportation system was defined as the currently existing highway and transit systems and demand management programs plus additional facility and transit service improvements that had full funding obligations and/or were begun in 1987. Major highway investments that were considered part of the committed system include: the Banfield freeway widening from I-205 to 181st, the I-84/181st Avenue interchange reconstruction, Airport Way (east of I-205), improvements to the I-205/Airport Way interchange, the new Lester Road/I-205 interchange, the Fremont Bridge connection to Yeon, the completion of the I-5 widening near the Columbia Slough, the Water Avenue and McLoughlin Boulevard access ramps to I-5, the reconstruction of Murray Boulevard and Cornelius Pass Road interchanges with the Sunset Highway and McLoughlin Boulevard improvements. Committed transit investments include: transit stations at Tigard, Oregon City, Milwaukie (Phase I), Sunset (Peterkort), Beaverton and Hillsboro; park-and-ride lots at Beaverton, Sunset (Peterkort), Hillsboro, Tigard and Oregon City. The transit service characteristics of the committed system consist of operating today's system (including the Banfield LRT) with a slight increase in capacity over current levels as a result of the larger vehicles (articulated buses).~~

~~Although it is understood that additional transportation system investments beyond those included in the committed system would undoubtedly be made prior to the year 2005, the nature and location of those specific investments are uncertain and would wholly depend on the availability of funding and the timing of actual development. Using a committed system that~~

CHAPTER 3

Impact of Growth on the Committed Transportation System

This chapter of the Plan is intended to presents the impact of expected growth as called for in Metro's adopted Region 2040 Growth Concept and local comprehensive plans assuming limited transportation investments. Generally, "limited transportation investment" is defined as those "committed" projects which are fully or nearly fully funded. Committed transportation projects are limited to those included in the current Metro Transportation Improvement Program (MTIP). Assessing the impact on the committed system provides the basis for understanding future needs. ~~For the sake of this assessment, the level of mobility provided by the "committed" transportation system assumes all transit and highway projects with construction funds obligated or authorized as of 1987 are completed.~~

As noted in the preface, the federal RTP is an interim document consistent with ISTEA and the Clean Air Act Amendments. It also provides the basis for work through 1996 to develop and adopt an integrated state and federal RTP meeting all relevant planning requirements. It is understood that over the next 12 to 18 months, significant analysis, public involvement and policy discussion will be required to finalize that integrated document. It is anticipated that part of the analysis of the integrated RTP will be an assessment of the impact of growth on the committed system.

The needs and projects identified in this federal RTP are generally being based on the following:

- A review of the need identified in the current 1992 RTP.

- A review of needs as identified in state and local transportation plans.

- Analysis of local and regional studies occurring since 1992, including the Bi-State Transportation Study, the Northwest Subarea Study, Regional TDM Study, the S/N LRT Study process, Westside LRT Final Environmental Impact Statement, City of Portland Columbia Corridor Study, and the Port of Portland Transportation Plan.

- Analysis contained in ODOT corridor-level studies including Western Bypass Study, Mt. Hood Parkway Study, Sunrise Corridor Draft Environmental Impact Statement, Highway 43 Study, and the Regional ATMS Study.

- The transportation analysis for the Region 2040 Study Concepts for Growth and for the adopted Growth Concept.

- Analysis performed by the inter-agency RTP work teams for freight, bicycles, pedestrians, roadways, transit, demand management, and systems management.

Chapter 3

Impact of Growth on the Committed Transportation System

~~(including LRT) and feeder systems to complement improvements to the radial highway facilities to maximize the effective operation of existing capacity.~~

~~The significant increase in circumferential travel demand (+60 percent from 1985 to 2005) will require additional highway capacity to link the growing suburban activity centers to each other and the existing regional system, as well as improvements in suburban transit service where such improvements are cost effective.~~

of the downtown Portland area will attract a 30 percent increase in radial corridor travel demand into the City (to 1.1 million trips per day) by the year 2005 (Figure 2-10), and significantly impact the ability of the transportation system to provide adequate capacity in these corridors. The largest increases in radial corridor travel demand into Portland are expected from the Western subarea (+32,000 daily trips), the Southwest (+27,000), and East Multnomah County (+43,000) subareas. Trips from western Clark County, Washington, to the Portland area will also increase substantially (+40 percent) over 1985 levels. In addition, radial trips produced within the City of Portland traveling to the other subareas (reverse flow) are expected to increase at a faster rate (+36 percent to 375,000 trips per day) than those coming into the City (+30 percent).

Although the radial corridor travel demand is expected to grow at a slower overall rate (+30 percent) than total trip making in the region (+42 percent), the magnitude of this type of travel demand (1.13 million trips per day) is significant and will account for over 20 percent of the total daily trips and three quarters of the region's non-internal travel demand.

Circumferential Corridor Trips

Circumferential corridor trips (Figure 2-9) are defined as those trips crossing a subarea boundary both originating and ending in the suburban areas of the region. As a result of forecast suburban development patterns, this type of travel demand is expected to increase by nearly 60 percent from 1985 to 2005, the highest growth rate by far of the three major types of trip movement. The Southwestern subarea (+79 percent to 113,000 trips per day), the South/Southeastern subarea (+61 percent to 113,000 trips per day) and the East Multnomah County subarea (+56 percent to 61,000 trips per day) show significant growth in this movement.

Effects on the Transportation System

As a result of the 42 percent increase in total trip making activity associated with the local comprehensive plan land use development expected by 2005 (to 5.68 million person trips per day), significant improvement is necessary to both the highway and transit elements of the region's transportation system. In order to accommodate this general growth in travel demand, as well as expected growth in movements through and into the region from areas outside the region, improvements to the regional freeways and principal and major arterials will be required. Within the region itself, the growth in each individual type of travel demand (internal, radial and circumferential) is expected to place a different type of burden on the overall transportation system by 2005.

The anticipated 45 percent increase (to 4.17 million trips per day) in internal travel demand will require substantial investments to provide an adequate local subarea network of collectors and arterials to facilitate these movements within a subarea and connect these trips to the regional system. The adequacy and financing of this subarea network is a significant problem in the newly developing suburban areas.

The anticipated 30 percent increase in radial trip making demand and the large number of trips associated with it (1.13 million trips per day by 2005) will require expanded transit trunk

vehicles) — which is increasing at a rate consistent with the overall growth in travel (43 percent increase for commercial trips vs. 40 percent for all trips).

— On a subarea basis (Table 2-3), the largest absolute increase in the number of daily trips in the Oregon portion of the region is expected to occur in the Westside subarea (+412,000 trips), representing a 66 percent increase over 1985. Travel demand in the Southwestern subarea is expected to increase by 63 percent over 1985 levels to a total of 550,000 trips per day.

— Both the East Multnomah County and South/Southeast subareas will experience a doubling of trip making activity by 2005, to 257,000 and 264,000 trips per day, respectively. The City of Portland will experience a moderate increase in trip making (+11 percent or 159,000 trips), but will still account for over a third of the total Oregon based travel demand in the year 2005.

Changes in Travel Patterns

— The land use pattern and year 2005 growth forecasts previously discussed will have a significant impact on the distribution of travel demand in the region. Combined with the continued development in the central Portland employment base, the strong trend toward the suburbanization of employment and residential development will produce substantial increases in all the major travel orientations — trip making that occurs within each subarea (internal travel), trip making in the radial corridors to and from the City of Portland, and trip making in the circumferential corridors.

Internal Subarea Trips

— Figures 2-9 and 2-10 illustrate the orientation of the year 2005 travel demand in the region by subarea. Clearly, the growing trend toward the suburbanization of residential and employment development discussed previously will have significant impacts on the year 2005 trip distribution and a large majority of the overall travel demand associated with any given subarea will remain within that subarea as internal travel. Regionwide, internal trips are expected to grow by 45 percent over today's levels (to 4.2 million person trips per day) and make up nearly three quarters of the total daily year 2005 travel demand (Figure 2-9). The growth in this type of trip making is most pronounced in the suburban subareas, increasing by 81 percent in the Western subarea to 798,000 trips per day (77 percent of the subarea total), by 79 percent in Clark County to 796,000 trips per day (83 percent of the County total), by 70 percent in the Southwest to 329,000 trips per day (60 percent of the subarea total), by 65 percent in the East Multnomah County subarea to 488,000 daily trips (65 percent of the subarea total), and by 52 percent in the South/Southeast to 570,000 trips per day (70 percent of the subarea total). Although the rate of increase for internal trips in the City of Portland subarea is expected to be small (+5 percent) the magnitude of this travel demand will be significant — nearly 1.2 million trips per day — nearly 50 percent more trips of this type than any other subarea.

Radial Corridor Trips

— Radial corridor trips are defined as those trips with one end in suburban residential areas and the (Figure 2-9) other in the City of Portland. Overall, the continued employment strength

growth specified for each of these 20 districts. It is understood that on the census tract level, growth rates and land use patterns will vary, depending on market demand and specific development proposals. The 20 district allocations, however, are considered reasonable and allow for fluctuations in specific census tract forecasts without major alterations to the district total. As a result, the regional travel demand forecast, based on the 20 district allocation, represents the combination of land use patterns and growth expectations developed at that level of detail and is adequate to define future travel demands on the regional transportation facilities (major arterials and above, and the regional transit trunk routes) covered by this Plan.

Relationship to Local Comprehensive Plan Holding Capacity

Based on a generalized relationship between land uses specified in the local comprehensive plans and densities of development that tend to occur on those land uses, an approximate estimate of the 2005 population and employment forecast can be developed. Subarea summary data depicted in Figures 2-7 and 2-8 indicates that the RTP year 2005 forecast represents about 80 percent of the overall regional holding capacity for population and about 84 percent of the overall regional holding capacity for employment (Urban Oregon portion — outside Portland CBD). It should be noted that these figures represent general order of magnitude estimates and do not attempt to scientifically define precise amounts of vacant land development potential available inside the UGB.

C. Year 2005 Travel Patterns

The following sections examine the impact of the land use plans and forecast population and employment growth on the year 2005 travel demand in the region. The first section focuses on increases in overall travel demand in the region and the second discusses changes in travel patterns that will occur as a result of planned land use and expected population and employment growth.

Growth in Travel Demand

The significant increase in population (+ 32 percent) and employment (+ 43 percent) in the Oregon portion of the metropolitan area between 1985 and 2005 will result in a corresponding increase in the travel demand to be served by the region's transportation system. Between 1985 and 2005, the number of person trips produced in the Oregon portion of the region will increase by nearly 40 percent, to more than 5.3 million trips per day (Table 2-2). Since employment is expected to increase faster than population, the number of trips devoted to work will increase faster than trips for non-work purposes, such as shopping and recreation. The number of work trips will grow by nearly 45 percent over 1985 levels, while non-work trips (excluding commercial and external trips) will increase by 36 percent. This significant increase in the number of work trips can seriously affect transportation system performance, since these additional work trips will tend to compete for capacity on the highway and transit systems when it is least available — during the morning and evening peak hours. Also related to the increase in employment is the increase in commercial traffic (e.g., truck traffic and delivery

cities of Portland and Vancouver, Washington, are already nearly fully developed and have only moderate amounts of infill and redevelopment potential available. In addition, the aggregate average family size is expected to decrease from 2.6 in 1980 to 2.45 persons per household by 2005 on a regional basis, thereby resulting in less population in built-up urban areas.

The suburban jurisdictions, on the other hand, offer large areas of residential zoned available land which is expected to be developed by the year 2005. As a result, approximately 90 percent of the new population forecast for the region will likely locate in the suburban jurisdictions. Because of existing housing stock, however, the established urban areas will still retain over 35 percent of the total regional population in the year 2005.

Washington County is expected to attract the largest share of the population growth — 145,000 people — and will house 24 percent of the regional population, up 4 percent from its share in 1985. Clackamas County is expected to increase by 113,000, going from 19 percent to 21 percent of the regional population. Clark County is expected to add 110,000 people, also increasing its share of regional population by 2 percent. Another fast growing community is the greater Gresham area, which gains 43,000 new residents.

Employment Growth

The distribution of employment growth, presented in Figure 2-5, shows the most rapid employment growth occurring in the suburban districts. Outside of the downtown Portland area, major commercial centers are developing in the suburban areas. These employment concentrations in the Gresham, I-5/Kruse Way, Clackamas Town Center, Sunrise Center, I-5 Corridor, Beaverton, Sunset Corridor, Hillsboro and Tanasbourne areas will provide an expanding focus for suburban residents to both work and shop within their subarea, thus reducing the overall need for long-distance trip making (see Chapter 2, Section C — Travel Patterns). As a result, the Portland/Multnomah County share of the region's employment is likely to decrease from 56 percent in 1985 to 48 percent in 2005. The largest absolute increase in employment occurs in Washington County, which is expected to gain 104,000 new jobs by 2005. However, in spite of a reduced share of all employment, the established areas are still expected to experience a large absolute increase of 93,500 new jobs. In addition, the downtown Portland sector is expected to remain strong and increase by 33,000 new jobs (to 120,000) by the year 2005.

20 District Allocation Summaries

Once the regionwide and major subarea control totals were established, the population and employment growth was allocated to 20 geographic districts within the region (Figure 2-6). These districts follow census tract and county boundaries and represent areas having similar growth-related characteristics (developing areas, stable areas, transition areas, etc.). The specific year 2005 20-district population and employment allocations are contained in Table 2-1.

The RTP is based on the expectation that local comprehensive plans will provide sufficient land capacity and transportation services and facilities to accommodate at least the level of

new jobs over the next 20 years. Combined with the regional land use pattern (Figure 2-1), they depict the shape and degree of development expected to occur within the region by the year 2005.

This growth pattern was projected from past growth trends for the different parts of the region subject to an understanding of those circumstances present in each community likely to slow, accelerate or maintain past levels of development. Among these considerations are the availability of vacant land and the existing or planned public services, such as sewer and water. Each district has a theoretical growth limit represented by the local comprehensive plan density limits on developable or redevelopable land.

Because the factors affecting the growth rate in a given community are complex and varied, they are subject to change over time. As a result, the growth projections used as a basis for the development of this Plan are also subject to change. In particular, as the projections for growth become more detailed, their relationship to actual development becomes more uncertain. For example, we can say with great certainty that employment in the region as a whole will grow by 50 percent over the next 20 years and that a certain portion will locate in Washington County. However, trying to specify which parts of the County will grow is largely subject to specific development proposals. It is Metro's intent, therefore, that growth trends in each community be monitored and updates to the year 2005 growth allocation be made as necessary to reflect actual conditions as closely as possible. This process, together with a biannual update of travel projections (both for the base and future horizon years), ensures timely assessments of the transportation improvements recommended in this Plan (Chapter 5) to reflect the changing nature of the transportation needs to serve the urbanized area of the region over time.

For the purpose of allocating population and employment growth, it was necessary to make a number of general assumptions regarding existing and future conditions.

- The composite of all city and county comprehensive plans comprise the regional land use plan. Future land development will be consistent with these local plans and the LCDC Statewide Planning Goals.

- Currently adopted policies of jurisdictions influencing regional growth and development will not change significantly in the future.

- Current or projected transportation deficiencies were not considered as a constraint on the future land development pattern.

- The growth trends of the past decade are a significant indicator of how and where the next two decades' growth will occur.

Population Growth

The population growth forecast illustrated in Figure 2-4 clearly shows the continuation of the recent trend toward rapid residential development in the suburban areas of Washington, Clackamas, East Multnomah and Clark counties. Older, established areas such as much of the

development in the region. Downtown employment levels have increased nearly 50 percent in the last 15 years, a slightly higher rate than the 42 percent growth in the SMSA employment as a whole.

Population and Employment Growth Forecasts

The RTP focuses transportation investment decisions on a year 2005 travel demand. As such, it is necessary to determine the extent to which the long range regional land use pattern within the urban area discussed previously will be developed within the next two decades. This section of the Plan summarizes a year 2005 population and employment forecast developed through a series of workshops attended by representatives from the region's cities, counties, other interested public agencies and private sector groups. Detailed descriptions of the forecast, allocation process and methodology are documented in *Regional Population and Employment Forecast to 1990 and 2005* (and subsequent updates) which represents Appendix A of the RTP and is available under separate cover.

The key components in the development of the year 2005 forecast were regional control totals for population and employment. These 20 year control totals are defined every five years by the Regional Growth Forum, consisting of public and private sector professionals involved in forecasting economic growth, employment, population and housing. These control totals were then reviewed by representatives of the various governmental jurisdictions in the region who attended workshops to disaggregate the overall forecasts to subareas and districts within the metropolitan region. The method employed was to use the output of a long range forecasting model as a starting point and to develop a consensus on future employment by sector through discussion and modification of that output. (The most recent model output was from a BPA Northwest Region model developed by Wharton Econometric Forecasting Associates in 1984, disaggregated to the SMSA by Metro). This 20 year employment forecast (909,987 jobs regionwide in 2005) represents the best knowledge, experience and judgment of the individual members of the group developed over time through the analysis of the various economic components of the region. It is stressed that this is a likely forecast; events external to this region and actions taken within the region could change the totals represented here.

A related population forecast was developed by estimating the ratio of the level of job participation (employment) to population. This ratio produces a year 2005 regional population estimate of approximately 1,740,000 people.

Metro monitors the growth in the region on an ongoing basis: publishing a Regional Development Trends update twice a year; annually updating the base year population and employment figures to reflect actual growth (and extending the 20 year forecast one year further out); and conducting a major update of the 20 year forecast through the Regional Growth Forum process every five years.

Population and Employment Growth to 2005

The growth pattern illustrated in Figures 2 4 and 2 5 represents a regional distribution of nearly half a million new people (+36 percent over 1985) and 300,000 (+48 percent over 1985)

The implications of this overall development pattern on the form of the region's transportation system are evident. The high density developments along the radial routes east of the Willamette and to the southwest offer significant opportunities for cost effective transit service provided by primary transit routes. Concentrations of employment activity in suburban locations such as Beaverton, Gresham and the Clackamas Town Center area provide a focus for suburban development easily served by transit stations. In effect, the successful development of many of the higher density areas/nodes specified in the 2040 growth concept and in local comprehensive plans depends on adequate levels of transit service. New industrial developments, dependent upon adequate highway access for the movement of goods, have been planned to expand near major regional highway facilities such as I-5, I-84, I-205, Highway 212/224 (the Sunrise Corridor), Highway 217 and the Sunset Highway. These highways also serve the intermodal needs of industry. The remaining areas of residential development require a more balanced combination of urban highway infrastructure and local transit service. Obviously, transit and other transportation investments, while necessary to serve the travel demand associated with a particular development pattern, can also be used as tools to achieve locally adopted land use and economic development goals.

Market Demand

In recent years, the demand for development in the region's economic system has greatly outpaced that exhibited by the national economy. Figure 2-2 illustrates the 1970-1985 annual population and employment growth rates of the nation and the Portland SMSA. Using the 2.35 percent compound annual rate of employment growth from 1970 to 1985 as an indicator for the demand for economic development, the Portland region is experiencing a market demand that is 20 percent per year greater than the national average of 1.96 percent. The residential demand in the region, represented by the 1.62 percent compound annual growth rate over the last 15 years, is 56 percent greater than that of the nation as a whole (1.04 percent). Employment is expected to continue to grow at a faster rate than population due to the anticipated increase in the average number of workers per household.

While the regional economy has expanded, it has also diversified significantly. Historically, the Portland area has constituted the center of urban services for one of the nation's major timber producing regions. In recent years, however, the regional (SMSA) economy (Figure 2-3) has complemented continued growth in the durable manufacturing sector (+18,400 jobs in the last 15 years) with significant increases in employment in the finance, insurance, real estate, trade and service sectors (+124,000 jobs). In addition, the composition of employment in the manufacturing sector has shifted toward the electrical and instrument manufacturing industry (+16,500 jobs — 90 percent of the new growth in durable manufacturing employment).

Although a major portion of the region's residential growth in the last 15 years has occurred in the suburban areas, extensive suburban development of employment has begun only recently. An important feature of the regional economy is the fact that this suburban development of employment is expected to occur in addition to (not at the expense of) the growing employment base in the downtown Portland sector. The demand for downtown development is anticipated to remain strong compared to the overall level of economic

Metro's Regional Land Information System (RLIS), along with existing development patterns and environmental features. In the next update to the plan, the RTP's impact on land use will also be reviewed at the regional scale using RLIS in a unique link with the EMME/2 travel forecasting model. This new technology will allow for an unprecedented integration of local land use plans with regional transportation planning.

Implementation of the Region 2040 Growth Concept will involve further recognition of land use/transportation link, as outlined in Chapter 1. Currently, local comprehensive plans must be, and are consistent with the RTP; however, the Growth Concept overlays the region's major functional elements (i.e. Regional Centers, Town Centers, Station Communities, etc.) onto these local plans. It is anticipated local plans will be revised to reflect the Growth Concept and Regional Framework plans as the region implements the Growth Concept, a ranking system for projects is being developed which organizes and prioritizes RTP projects around these major functional elements--rather than just local comprehensive plans.

~~Highway and transit facilities are functionally related to the development pattern they are intended to serve, providing for movement of people and goods among employment, housing and shopping opportunities. The location, intensity and timing of future land development in the region will be directly related to two primary factors: 1) the land use designations of local comprehensive plans that establish where various land use types will be allowed; and 2) the complex set of economic and social forces that determine market demand for new development. This section describes the regional land use framework represented by the full development of local comprehensive plans, followed by an examination of market demand and the resultant level of growth expected by the year 2015. This relationship is significant because the capacity for development in the local comprehensive plans is greater than the amount of development expected by the year 2015.~~

~~Regional Existing Land Use Pattern~~

~~A regional composite land use map for the urbanized area was developed by combining the individual comprehensive plans prepared by the cities and counties within the region. This composite plan (Figure 2-1) is accurate as of June 1990, and aggregates the more detailed local plans into four generalized land use groupings which represent areas of greatest regional interest within the Urban Growth Boundary (UGB): 1) single family residential; 2) multi-family residential/commercial; 3) industrial; and 4) public/open space. These categories of land use, due to their travel generation characteristics, are considered most important for transportation planning purposes.~~

~~The development pattern evidenced in the figure has been strongly influenced by opportunities and constraints afforded by the regional topography. The obvious opportunity is the confluence of the Columbia and Willamette rivers, which has encouraged the region to become a major shipping and distribution center for a large portion of the Pacific Northwest. As a result, there are significant concentrations of industrial land uses along the Oregon portion of both rivers. The major constraint imposed by the topography is the location of the West Hills between downtown Portland and the Tualatin Valley. This physical barrier to easy access has encouraged the development of a more autonomous suburban area in Washington County than has historically developed in suburban Clackamas or Multnomah counties.~~

developed. Employment in this subarea is expected to grow by more than 100,000 jobs, or more than 25% of the region's total increase. The scale of residential and employment growth, coupled with a partially developed transportation system, points to a need for significant improvements to the roadway and transit system in this subarea.

Subarea 6 - Suburban Clackamas County

Some 58,000 additional residents are forecast for this subarea by 2015, representing 16% of the region's population growth. Most of the residential growth will be focused on areas east of Interstate-205, where access to the regional transportation system is limited. This subarea is also expected to gain over 40,000 additional jobs, by 2015, many of which will be located in the Interstate-205 and Highway 224 corridors, and around the Clackamas regional center. While recent highway improvements and planned light rail service will help to accommodate this growth, the roadway system is this subarea is not fully developed, and will require substantial improvements by 2015.

Subarea 7 - Lake Oswego and the I-5 Corridor

Though Lake Oswego and West Linn are largely developed, growth in this subarea is forecast to bring over 50,000 new residents by 2015 -- 15% of the region's total. Most new residents will be located along the I-5 corridor. Similarly, employment growth in this subarea will also be concentrated in the industrial areas and business parks located along the I-5 and Highway 217 corridors, with nearly 50,000 additional jobs forecast by 2015. Like other suburban areas, this subarea does not have a fully developed roadway system, and significant improvements in both roads and transit service will be needed during the plan period.

Effect of the Plan on Local Land Use

To a great extent the RTP is 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 form the basis for local elected officials and representatives to provide input at the regional level.

The local transportation planning process begins when jurisdictions weigh regional system improvements against local land use policies to measure the effect of transportation on land use patterns. In most jurisdictions, transportation is the key building block used to assemble a long-range vision for community design and, therefore, is considered at the most fundamental level when local zoning ordinances take shape. Oregon law requires local jurisdictions to consider the impacts of transportation improvements, as well as other urban facilities, in a comprehensive manner in local plans. Once adopted, local comprehensive plans are reviewed at the state level for compliance with statewide planning goals.

Because the RTP is reflected in all local plans, it is tested at a relatively detailed level for consistency with local land use policies. Currently, local land use plans are incorporated into

Subarea 1 - Downtown

The downtown area is expected to gain a relatively small share (3%) of the region's population growth by 2015. However, this geographically small subarea is also forecast to gain over 35,000 jobs -- nearly 10% of the regional increase -- with just 2,800 of these jobs in the retail sector. These figures reflect an already high proportion of professional jobs in this subarea, and underscore the significant role that the downtown area continues to play in the region's economy, and the need to provide continued multi-modal access to this employment center.

Subarea 2 - East Portland

This subarea is characterized by mostly built-out neighborhoods, reflected by the relatively small amount of forecast population growth -- just 3% of the regional share. East Portland is the region's largest concentration of jobs, and employment growth in this subarea is expected to increase by nearly 80,000 jobs, more than 20% of the forecast increase. Of these, just over 11,000 are expected in the retail sector, reflecting East Portland's role as a center of manufacturing and distribution employment. These figures, and the fact that east Portland forms the crossroads of the region's main travel routes, reinforces the need to maintain a high quality system of multi-modal routes in this subarea, with an emphasis on freight movement.

Subarea 3 - West Portland

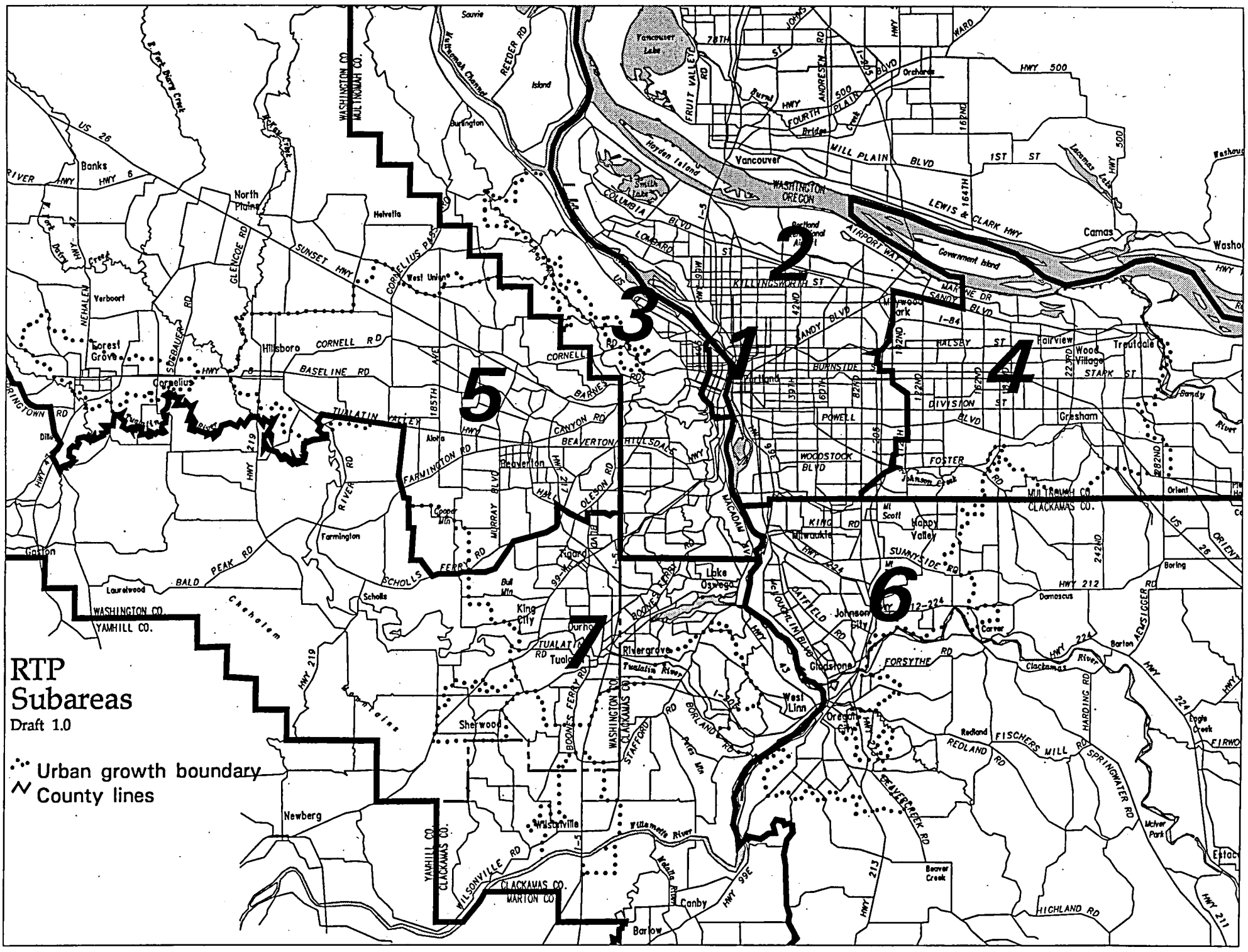
Like the East Portland Subarea, this part of the region is very developed, with most of the forecast residential growth occurring along the Washington and Clackamas boundaries. However, this subarea includes the densely developed Uptown district of NW Portland, reflected in the addition of nearly 2,000 retail jobs by 2015, and almost 18,000 new jobs overall. Because much of the future employment in this area will occur adjacent to the downtown subarea, transportation needs are similar as well, with an emphasis on multi-modal accessibility from points throughout the region.

Subarea 4 - Suburban Multnomah County

This subarea includes a mix of largely developed land in the eastern portions of Portland, and rapidly developing land in the cities of east Multnomah County. Nearly 15% of the region's population growth is expected here, with most new housing in the eastern portion of the subarea. Employment growth is expected to produce over 30,000 new jobs in the subarea, many located in the Columbia South Shore east of 122nd Avenue. As suburban Multnomah County continues to develop, growing travel demand will require improvements to the roadway system in the subarea, and improved transit service to emerging centers of employment.

Subarea 5 - Beaverton and the Sunset Corridor

The suburban heart of Washington County is forecast to receive over 42% of the region's growth through 2015, translating into over 150,000 new residents. Most of the residential growth will occur to the west of Beaverton, where the regional transportation system is least



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Employment Areas

Industrial areas would be set aside exclusively for industrial activities. They include land-intensive employers, and are expected to accommodate ten percent of regional employment and no households.

Other employment centers would be designated as mixed-use employment areas, mixing various types of employment and including some residential development as well. These mixed-use employment areas would provide for about 5 percent of new households and 14 percent of new employment within the region.

Neighborhoods

Residential neighborhoods would remain a key component of the recommended alternative and would fall into two basic categories. Examples of inner neighborhoods are Portland and the older suburbs of Beaverton, Milwaukie and Lake Oswego, and would include primarily residential areas that are accessible to employment. They would accommodate 28 percent of new households and 15 percent of new employment (some of the employment would be home occupations and the balance would be neighborhood-based employment such as schools, child care and some neighborhood businesses).

Outer neighborhoods would be farther away from large employment centers and would have larger lot sizes and lower densities. Examples include outer suburbs such as Forest Grove, Sherwood and Oregon City, and any additions to the urban growth boundary. These areas would accommodate 28 percent of new households and 10 percent of new employment.

Growth Through 2015: A Step Toward Region 2040

Metro's interim population and employment for the year 2015 echoes the scale of growth anticipated in the Region 2040 vision, with about 40% of the growth expected by the year 2040 forecast expected during the next two decades. This translates into some 367,000 new residents, and 380,000 new jobs in the region by 2015. Table I shows the 2015 forecast according seven regional subareas mapped on Figure 2-1. A discussion of the 2015 forecast by subarea follows this table.

Table I

Population and Employment in 2015 (within UGB)

	Population			Total Employment			Retail Employment		
Sub area	1990	2015	%change	1990	2015	%change	1990	2015	%change
1	9,968	20,677	107%	110,737	146,271	32%	8,959	11,773	31%
2	311,075	322,124	4%	204,625	284,170	39%	35,517	47,113	33%
3	83,831	104,719	25%	79,464	97,194	22%	10,446	12,392	19%
4	170,245	224,887	32%	56,416	109,745	95%	13,523	22,714	68%
5	226,681	381,775	68%	117,297	220,704	88%	23,022	37,044	61%
6	117,282	175,266	49%	75,930	118,798	56%	17,187	26,764	56%
7	124,434	181,424	46%	80,250	129,482	61%	16,147	25,461	58%
Total	1,043,516	1,410,872	35%	724,719	1,106,364	53%	124,802	183,261	47%

The ratio of single-family and multi-family in new development would be 62 percent to 38 percent – the current ratio is 70 percent single-family, 30 percent multi-family. 20 percent of the single-family market would be accommodated by rowhouses, duplexes or small-lot development. This housing type would mostly occur along transit corridors.

The majority of housing in 2040 would be in neighborhoods (52 percent), followed by corridors and station communities (33 percent), and city, regional and town centers (8 percent). The majority of new jobs (two-thirds) would be accommodated in centers or along corridors and main streets, which would be well served by transit. Industrial areas would provide land for about 10 percent of new jobs and employment areas would provide space for 14 percent of new jobs. Significantly, residential neighborhoods would account for 15 percent of total jobs (this includes people working at home, child care, schools and small-scale commercial within neighborhoods), up from 11 percent currently.

The following land use components and associated growth forecasts of the Region 2040 Concept are the long-range growth assumptions for the federal RTP:

The Central City

Downtown Portland serves as our major regional center and functions quite well as an employment and cultural hub for the metropolitan area. In addition, downtown Portland has a high percentage of travel other than by car – three times higher than any other part of the region. Today, about 20 percent of all employment in the region is in downtown Portland. Under the recommended alternative, downtown Portland would grow at the same rate as the rest of the region, and would remain the location of 20 percent of regional employment. Improvements to the transit system network and maintenance of the highway system would provide additional access to and from the city center.

Regional Centers

These regional centers would become the focus of compact development, redevelopment, and transit and highway improvements. Eventually, these centers would grow to the density of downtown Vancouver, Wash. – about one-third of downtown Portland's density, but three times denser than these areas today.

Town Centers

Smaller than regional centers are the third type of center with compact development and transit service. Town centers would accommodate about 3 percent of new households and more than 7 percent of new employment.

Corridors, Main Streets & Station Communities

Corridors and main streets are not as dense as centers, but also are located along good quality transit lines. Typical new developments will include rowhouses, duplexes and one- to three-story office and retail buildings. Station communities are nodes of development centered around a light rail or high capacity transit station. They provide for the highest density other than that found in regional centers. Station communities would encompass an area approximately one-half mile from a station stop. Because the Growth Concept calls for many corridors and station communities throughout the region, they would together accommodate 27 percent of the new households of the region and nearly 15 percent of new employment.

CHAPTER 2

Land Use, Growth & Travel Demand

A. Overview

The 2040 Growth Concept discussed in Chapter 1 provides general direction for development of the federal Regional Transportation Plan, but does not prescribe or limit what the federal RTP will ultimately include in the regional system. The 2040 Growth Concept, having been adopted by resolution, will likely be modified, and the specific transportation elements will be further defined in the framework plan. The federal RTP builds upon the broad land use and transportation directions that are advanced in that Growth Concept and the RUGGOs. Among these broad directions is a strong commitment to greater land use efficiencies and a truly multi-modal transportation system. This chapter focuses both on the region's long term transportation needs, and improvements required during the 20-year plan period to ultimately reach the broader Region 2040 vision.

In order to plan effectively for ~~the urbanized area~~ transportation needs ~~of the region to~~ through the year ~~2005~~ 2015, ~~it is necessary to define the location, size, and characteristics of the travel demand in the region. the transportation system will be expected to serve.~~ this chapter of the Plan describes these basic elements which, in combination, will determine the future demand for transportation services in the region:

- The regional land use pattern defined by the 2040 growth concept and local jurisdictional comprehensive plans developed under the LCDC Statewide Planning Goals will determine in large part the location of future development in the region. (These land use patterns, upon which the RTP travel forecasts are based, will be subject to change based on the policies included in the LCDC Goal 12 Transportation Rule, and other functional plans adopted to implement RUGGO. These changes in residential distribution and density will be incorporated into the travel forecasts in future RTP updates);

- The levels of population and employment growth that are expected to occur in the region by the year ~~2005~~ 2015; and

- The regional travel patterns that can be expected as a result of the form, location and extent of anticipated growth.

B. Land Use and ~~Year 2015~~ Growth Forecasts

Growth through 2040

The Region 2040 Growth Concept provides a unique forecast of what the region may become over the next fifty years. In 2040, some 2,674,000 residents will populate the region, an increase of nearly one million over today's population. Employment in the region will grow to over 750,000 jobs over today's levels, to 1,634,000 workers. Even with increased densities in new development, the Growth Concept would require and expansion of the urban growth boundary by 14,500 acres to accommodate these increases.

Chapter 2

Land Use, Growth and Travel Demand

- 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.

Parking Programs

Parking programs which limit parking around regional transit trunk route stops and transit centers or provide preferential locations and prices for individuals that rideshare can be an important technique to increase ridesharing and maximize transit ridership. The RTP forecast of travel demand to downtown Portland is consistent with the expected supply of parking in the downtown by the year 2005, as well as the emphasis on shifting the use of parking to short term trips.

Among the parking programs that should be considered by local jurisdictions are:

- provide preferential parking locations and prices for carpools and vanpools at public parking lots, curbside parking areas and in private employee parking lots;

- establish maximum parking requirements for new development within 1/4 mile of regional transit trunk route stops and transit stations according to the land use type and quality of transit service; and

- develop areawide parking management plans in existing and planned high density areas.

~~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.~~

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 work 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 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 other TDM strategies aimed at meeting DEQ's Parking Ratio Rule and to those aimed at increasing both ridesharing and transit use.

~~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.~~

Performance Criteria:

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

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

- Delay or eliminate the need for new rodes and/or expansion of existing roads

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

Program Design Criteria and Guidelines

Presented here are recommended 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. The purpose of these programs and actions is to make it easier for people to shift their travel to non-SOV modes, but by themselves, may not be the direct cause of the shift. For example, the provision of covered bus shelters, emergency-ride-home and education/marketing programs as stand alone measures have little effect on switching people to non-SOV modes of travel.

However, when these strategies are used in conjunction with other supply strategies such as improved or new transit service, carpool and vanpool programs, and TDM regulatory or market-based pricing programs, they can contribute significantly to increases in non-SOV use, reductions in VMT, improvements in air quality and improvements in the overall quality of travel. In addition, the provision of incentives such as transit fare subsidies and/or tax exemptions for implementing non-SOV programs will complement TDM actions to switch people to non-SOV modes of travel. The implementation and/or continuation of Infrastructure/Support strategies requires a strong local and regional commitment.

Infrastructure and TDM support programs are designed to provide the basis for a comprehensive TDM program of strategies and policies to: (1) help the region achieve the TPR Tier 1 (1995-2005) and Tier 2 (2006 – 2015) VMT per capita and parking per capita reduction goals; (2) complement local jurisdiction efforts to assist employers in implementing programs to meet the mandates of the Employee Commute Options rule; and (3) help the region achieve its 2040 land use and mobility goals.

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

~~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 a program to reduce parking supply for drive alone trips 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, bicycle and pedestrian travel. Therefore, local jurisdictions should consider demand management measures in a comprehensive manner in the preparation of local system plans and incorporate policies that implement those combinations of TDM measures that best support regional goals and that meet local needs for both work and non-work travel. This approach will help ensure maximum achievement of TPR, air quality and mobility goals at the regional and local level.

~~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.

Regional TDM Program Goals & Objectives

Goal 1 - Comprehensive regional approach to transportation demand management (TDM). The Regional Transportation Plan (RTP) includes policies that will help the region achieve its VMT, air quality, mobility, and livability goals in a cost-effective manner. The term TDM encompasses the measures to reduce reliance on single occupant vehicle travel (ie., driving alone) and the strategies, techniques and supporting actions, that encourage non-single occupant vehicle trave (ie., transit, walk, bike and telecommute)

1. Objective: To reduce or eliminate the incentives that promote reliance on the single occupant vehicle (SOV) for travel and to enhance 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 at the regional and local level to assist the region in maintaining federal air quality standards for Ozone and Carbon Monoxide (CO).

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 the measures to reduce reliance on single occupant vehicle travel (ie., driving alone) and the strategies, techniques and supporting actions that encourage non–single occupant vehicle trave (ie., transit, walk, bike and telecommute).

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, telecommute) 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.

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 hot stabilized and 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 hot soak emissions.

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

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.

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.

- 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 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.

~~• 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 practical and 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 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.

- 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.~~

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 in 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;

~~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

	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

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~~

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 4-4 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 and 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 provided, 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.

- 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 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 transit trip between regional centers and the central city should 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

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 systems discourage walking and bicycling for local trips, and auto travel becomes the only viable option. 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;

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.

- 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 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

~~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 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~~.

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 equal current travel times. ~~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 also equal current travel times ~~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. The following are the regional functional classification categories:

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 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 federal RTP update is to develop multi-modal design objectives and criteria for roadways.

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 regulate local street connections in the regional roadway network. Currently, the range is estimated to be 8-20 local street connections per mile.

- 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 will be 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, the new concept of Rural Reserves are intended to 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" transportation 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 final Region 2040 Growth Concept will soon include a designation for urban reserve areas, and a system of Regional Centers, Town Centers, Corridors and other urban components. Future updates of the federal RTP will continue to incorporate these elements of the Regional Growth Concept as the vision becomes more detailed, leading to adoption as the transportation component of the Regional Framework Plan.

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's regional planning program, including development of functional plans and management of the region's urban growth boundary. The 1992 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 concepts that are basic building blocks, 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 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

- 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 federal 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 federal 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 federal 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)).

These requirements have been integrated into Metro's planning process primarily through the public involvement process; this process is outlined in Appendix "PI."

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 Advanced Traffic Management System (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 federal 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 Transportation System Management (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

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 federal RTP are also advertised to the public, as well, and open for citizen comment.

Systemwide Goals and Objectives

The overall goal of the federal 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.

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 federal 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 federal 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 federal 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 federal ISTEA regulations emphasize public involvement. The process for adopting the federal RTP meets this objective by including public input at every level of decision-making.

The federal 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 a "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

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 federal 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 federal 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

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 Intermodal Surface Transportation Efficiency Act (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. Federal Regional Transportation Plan Goals And Objectives

Vision Statement

The federal 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 Regional Urban Growth Goals and Objectives (RUGGOs) and regional policy.

Guiding Principles

~~As a result,~~ The federal 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 is 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 analysis

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 Joint Policy Advisory Committee on Transportation (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 1992 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.

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 The 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

CHAPTER 1

Regional Transportation Policy

A. Introduction

This chapter presents the overall policy framework within which the specific transportation goals, objectives and actions contained in the adopted federal 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 federal RTP for the region's future transportation needs.

- Federal RTP ~~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 regional policy to transportation goals and objectives, with an emphasis on land use components of the regional 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 ~~federal~~ 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.

Chapter 1

Regional Transportation Policy

Chapter 7

Cost and Financial Analysis

CHAPTER 7

Cost and Financial Analysis

A. Background

Federal Requirements

Pursuant to Title 23, Code of Federal Regulations (CFR), Part 450, Subpart C, Metropolitan Planning Rules, subsection .322 (b) (11), metropolitan plans (Metro's federal RTP) must "include a financial plan that demonstrates the consistency of proposed transportation investments with already available and projected sources of revenue. The financial plan shall compare the estimated revenue from existing and proposed funding sources that can *reasonably* be expected to be available for transportation uses, and the estimated costs of constructing, maintaining, and operating the total (existing plus planned) transportation system over the period (20-years) of the plan" (emphasis added).

The regulations also note that projections should be based on historical trends, and that in non-attainment areas (such as the Portland region), the financial plan shall address the specific strategies required to ensure the implementation of projects and programs to reach air quality compliance.

Methodology

The financial analysis must consider all sources of transportation revenues and anticipated expenditures, or costs. On the revenue side, federal, state, and local sources must be estimated. These include: 1) federal ISTEA appropriations in all categories; 2) state revenues including the gas tax, vehicle registration fees, truck weight/mile taxes, and lottery funds used for transportation; 3) local jurisdiction revenues including local gas taxes, system development charges and other transportation or development charges, local shares of state gas taxes, and any local property tax on bonded revenue sources; and 4) local transit revenues including Tri-Met payroll tax and farebox revenues.

Federal and state revenues were allocated to the state's four metropolitan areas (Portland, Salem, Eugene, and Medford) by the Oregon Department of Transportation, consistent with federal guidelines. The allocations are contained in the March 1995 report titled "Financial Assumptions for the Development of Metropolitan Transportation Plans." The report was developed by ODOT in conjunction with representatives of the four metropolitan areas and the Oregon Department of Environmental Quality (DEQ).

Local revenue assumptions and costs were estimated by local jurisdictions, ODOT, and Tri-Met as part of the development of this federal RTP.

The methodology has three major elements as described below. The final element, Section D, describes a process, including public comment, where capital projects are funded with

residual revenues (residual revenue is the remaining revenue available for funding regional projects assuming all system operations, maintenance, preservation, and routine safety needs are met. As note in Chapter 1, maintenance and preservation of the existing system, along with system safety are the RTP's highest priorities).

As can be seen by the result of the analysis, when compared to the 20-year project needs (as identified in Chapter 5 and summarized below) the region has a significant shortfall in revenue. As part of the public and agency review of this draft of the federal RTP, Metro staff is asking for comments on prioritizing projects within the forecast revenues.

B. Revenue Estimates

As noted above, the objective for the revenue forecast is to identify a residual amount of revenue available for capital expansion that is not dedicated to operations, maintenance, preservation, or routine safety. Candidate capital expansion projects are listed in Chapter 5.

Federal Revenue

1. Federal Highway Trust Fund. These revenues, while referred to as "highway" funds, are essentially flexible, i.e., they can be used for all modes, including roads, bikeways, sidewalks, transit capital, transportation system management (TSM), and air quality programs. To estimate trust fund revenue, ODOT examined a number of federal fund growth rates (inflation, 20-year trend, etc.). A ten-year trend was chosen and extrapolated over 20 years. The trend is just under inflation and provides enough revenue to maintain the interstate system and provide a conservative to moderate level of expansion.

2. Federal Transit Section 9 funds. These funds are mostly for transit capital purchases. The ten-year trend was also selected. A substantial amount of this revenue went to purchasing replacement capital (buses).

3. Federal Transit Section 3 funds. These funds are for major new starts in transit and represent the federal share of Portland's light rail construction program. Based on the region's past success in acquiring Section 3 funds, it is assumed the region will secure capital funding for the South/North light rail (Oregon portion).

State Revenues

ODOT examined a number of potential trends, including inflation rates and historical trends. Most recently, the Oregon legislature has approved annual gas tax increases of two cents per gallon. That trend ended with the 1993 legislature. ODOT has traditionally estimated that two cent increases are necessary to match inflation and provide for modest system expansion. However, an assumption of two cents per year does not seem to be politically realistic, according to the ODOT report. Consequently, ODOT assumed that over the next 20 years the gas tax (and corresponding weight/mile tax) will increase one cent per year, with an additional one cent every fourth year. ODOT also assumes that the state transportation planning rule goal of reducing per capita vehicle miles of travel by 10

percent will be achieved and revenue will reduce accordingly. ODOT noted that with this assumption, inflation would overtake the gas tax increases toward the middle to end of the 20-year period. They note that modernization (expansion) effort would be limited towards the end of the period and "rapidly decline" after 2015.

Lottery funding for LRT. State of Oregon participation in South/North light rail is assumed to be $425 million, and similar to the Westside LRT, would be financed through lottery funds.

Suballocation

ODOT assumed, based on past trends, lane miles, and revenue generated that about 30.2% of the discretionary federal/state funds would go to the Portland area. ODOT also estimated the amount of federal ISTEA funds apportioned directly to Metro (about $10 to $12 million per year over the period).

Local Revenues

As noted, local revenues were estimated for the 24 cities and 3 counties within the Metro area. Accounted for were state gas tax revenues apportioned to cities and counties, local gas taxes, local system development charges or transportation fees, and local bonding (for example Washington County's Major Streets Improvement Program).

Figures 7-1 and 7-2 summarize revenue assumptions and are discussed in section D, below.

C. System Costs

The objective of the cost estimating exercise is to ensure that routine maintenance, preservation, operations, and safety needs are identified and funded. Once those costs are identified and funding mechanisms are found, then capital expansion costs can be identified. It is the capital expansion projects which will meet the region's growth over the next 20 years.

Interstate and State System

ODOT sets pavement standards and has identified major preservation and rehabilitation needs on the state system. Again, given that maintaining the system is the highest priority, those costs were assumed to be covered.

Local (city, county) System

Similarly, local maintenance and preservation needs are funded.

RTP System Costs and Revenues (exc. transit)
(Federal Fiscal Years 1999-2015)

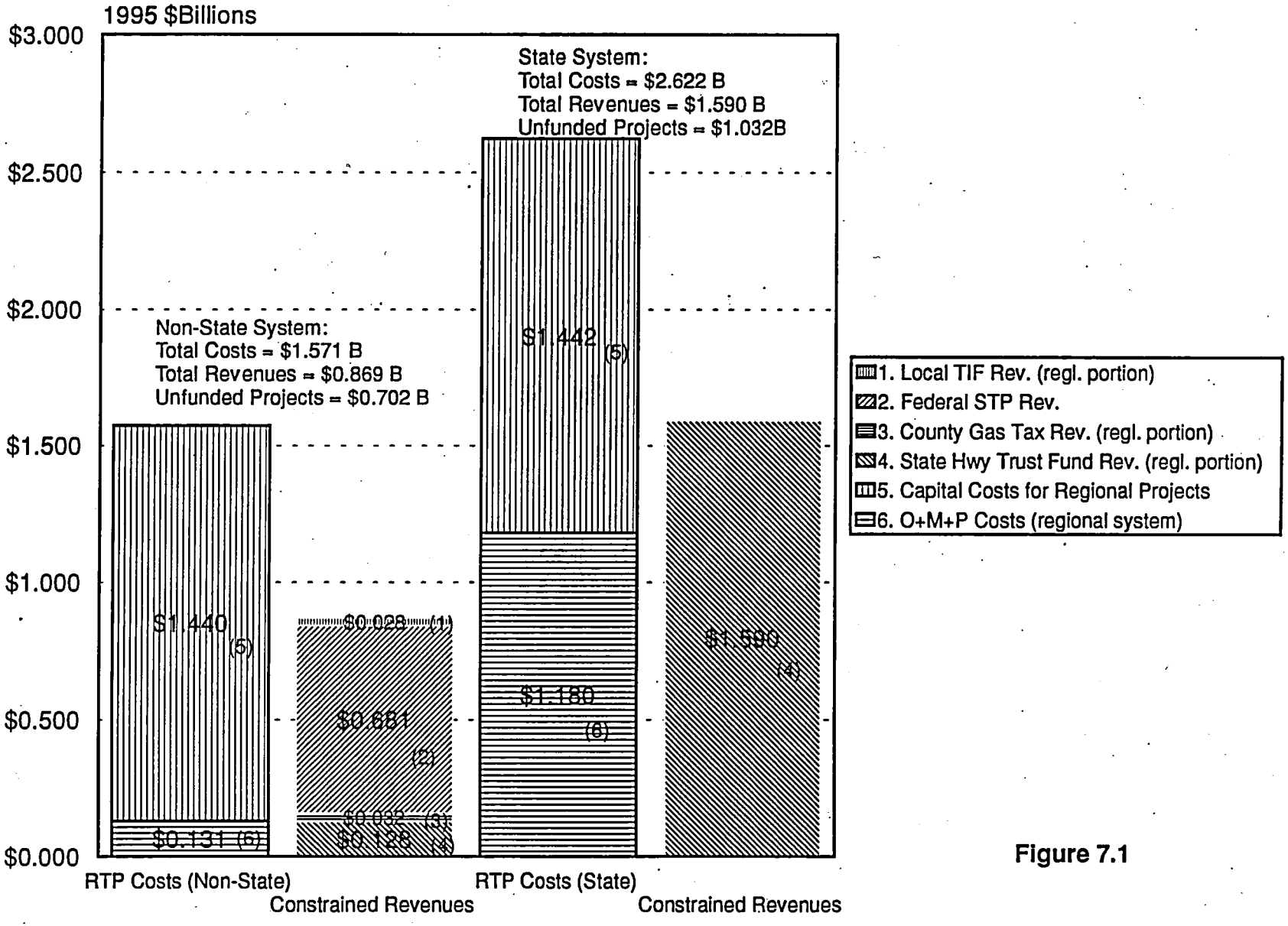
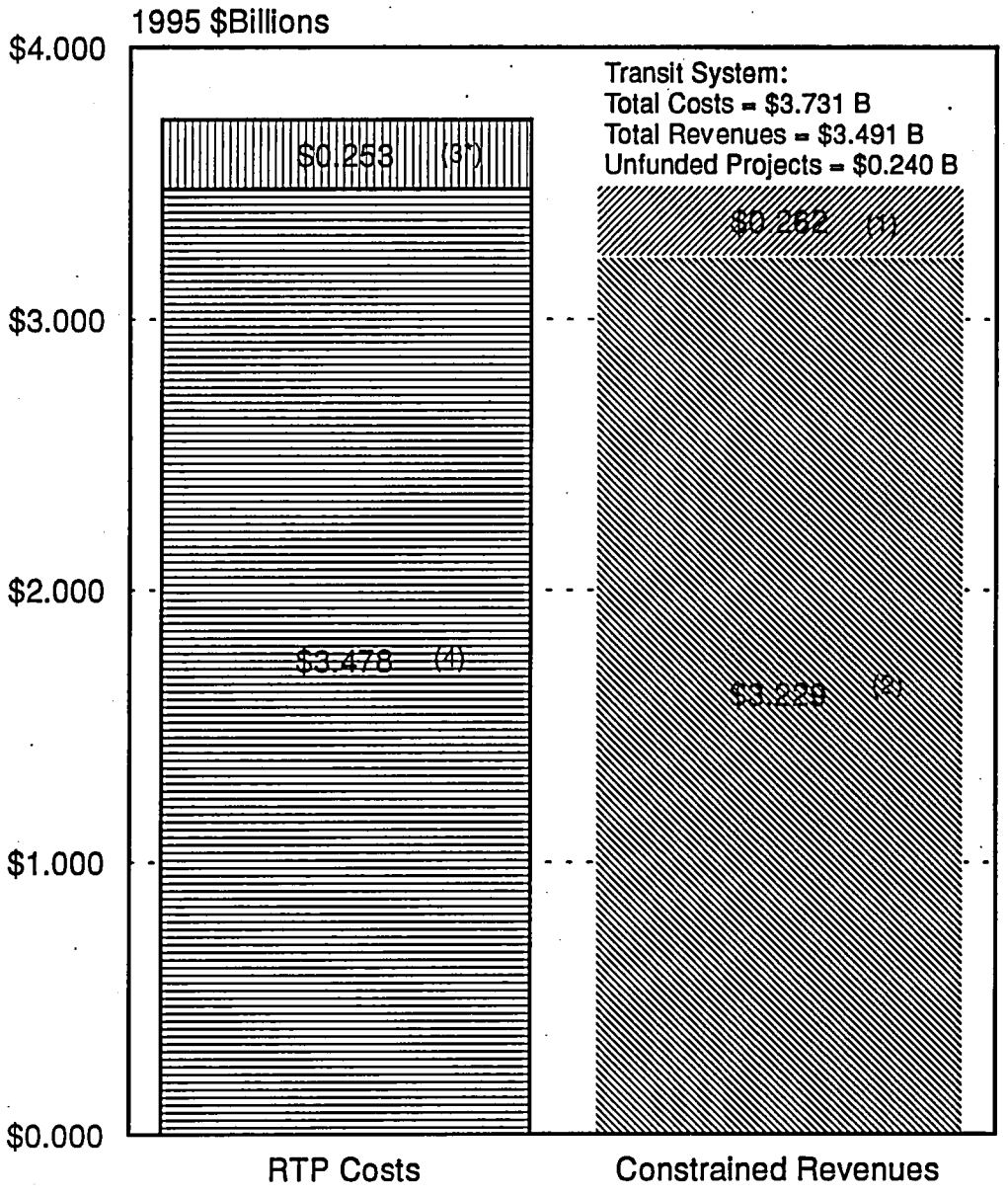


Figure 7.1

RTP Transit System Costs and Revenues
(Federal Fiscal Years 1999-2015)



1. Transit Capital Revenues
2. Transit Operations Revenues
3. Capital Costs for Service Increase (no oper.)
4. Oper./Routine Cap. Costs (existing system)

*Note to (3): Operating expenses for service increase are <u>not</u> included in these costs.

Figure 7.2

D. Selection of Financially Constrained System

RTP System Costs and Revenues

Figure 7-1 shows the costs and revenues in 1995 dollars for the "regionally significant" (i.e., RTP) system excluding transit. Transit system costs and revenues in 1995 dollars are shown in Figure 7-2. Regionally significant systems are defined as those described or mapped in Chapter 4 of this document (for all modes, i.e., bike, pedestrian, freight, roadway, transit, TSM, and TDM). The forecast period is for 1999 through 2015, a period of 16 years. For the period 1995 to 1998, costs are assumed to equal revenues and are based on currently programmed funding contained within the Metro Transportation Improvement Program (MTIP), Tri-Met's Transit Development Program, and local capital improvement programs (CIP). Those documents are essentially capital budgets and must be balanced to available revenues. Any unfunded capital, maintenance, or operations within the 1995 to 1998 period is included as unfunded backlog within the 1999 to 2015 period.

Figure 7-1 is divided into state regional system costs and constrained revenues on the right, and non-state regional system costs and constrained revenues on the left. (Note: local costs and revenues have been factored out for this exercise since the RTP only addresses "regionally significant" projects). For the state portion of the regionally significant system, operations, maintenance, and preservation (O+M+P) is shown as number 6 in the legend and estimated to amount to $1.180 billion through the period. Capital expansion costs on the state system (as identified in the Chapter 5 project list and shown as number 5 on the bar chart) equal approximately $1.442 billion. Revenues (number 4) are forecast at $1.590 billion. After covering maintenance needs, approximately $410 million remains for state system needs (number 4 minus number 6).

Subtracting the available $410 million from the $1.442 billion capital need leaves a $1.032 billion shortfall on the regionally significant state system for capital expansion.

Similarly, total constrained revenues on the regionally significant non-state system (as identified in Chapter 4 system maps) total $869 million (sum of numbers 1, 2, 3, and 4). Costs include an estimate of $131 for operations, maintenance, and preservation on that system (note: the $131 million is only the amount expected to be necessary from discretionary regional sources. Local jurisdictions provide the majority of O + M + P costs on the regionally significant non-state system which consist of selected minor and major arterials, see figure 4-1).

Capital costs on the regionally significant non-state system are identified in Chapter 5 and total $1.440 billion and consist of roadway, bicycle, pedestrian, and freight projects, plus TSM and TDM projects and programs. After covering the $131 million of O + M + P costs, a residual amount of $738 million is available to fund capital needs. Subtracting the $738 million of revenue from the $1.440 billion need leaves a $702 million shortfall on the regionally significant non-state system.

For transit, Tri-Met anticipates general revenues will increase by approximately 1.5% per year. That increase will allow them to maintain the same number of buses on the road as today (with supportive programs) and operate a light rail system that includes the Banfield MAX, Westside LRT, and South/North LRT after an opening in approximately 2007. Figure 7-2 essentially reflects this balance of service expansion to anticipated revenue. Shown as unfunded in the figure are transit capital projects identified in Chapter 5. Operating expenses for service increases are not reflected in Figure 7-2 or Chapter 5.

Not shown in Figure 7-2 are costs associated with the map of the Primary Transit Network shown in Figure 4-4. That system will significantly upgrade transit service by improving transit frequency, speed, and reliability. Tri-Met estimates that system to require an additional $45 million per year in operating revenues.

Funding Choices

A number of considerations go into developing a financially constrained system. Metro will be asking the public, agencies, and decision-makers (through JPACT and the Metro Council) to assist in the creation of the constrained system. As can be seen, anticipated revenues are well short of identified needs (costs). Consequently, a number of priority projects are needed but cannot be funded with anticipated revenues over the next 20 years.

Metro will provide information beginning at the *Priorities '95* public meetings in mid-April to begin to develop the constrained system. A primary consideration will be relationship to the adopted Region 2040 Growth Concept. Other considerations will focus on prior commitments or previously highly ranked projects, identifying smaller, key phases of larger projects, multi-modal aspects of a project, geographic and modal distribution, and system completion.

Conclusions

- Metro's financially constrained system includes generally enough revenue to fund roadway operating, maintenance, and preservation needs.

- Tri-Met will able to construct and operate a light rail system that includes the Banfield MAX, a Westside LRT line to Hillsboro, and an Oregon portion of the South/North LRT.

- Operating S/N LRT limits future bus expansion given the transit revenue forecast of 1.5% growth per year.

- Based on state system capital needs of $1.442 billion and forecast revenues for capital of $410 million (after O + M + P), a shortfall of $1.032 billion is projected on the Portland area state system.

- Based on regional system capital needs of $1.440 billion and forecast revenue for capital of $738 million, a shortfall of $702 million is projected for the Portland area non-state system of regional significance.

~~A. Regional Highway System~~
~~Capital Costs/Revenues~~

~~Overview~~

~~The highway projects recommended in this Plan have been developed within the policy framework of making the most efficient use of the existing highway system. This policy of developing cost effective highway projects combined with a commitment to significant increases in transit service and demand management programs embodied in this Plan:~~

- ~~provides adequate service levels on the region's major arterial system;~~
- ~~protects the significant past investments in the regional highway system; and~~
- ~~reduces as much as practical the amount of new capital investment necessary to meet the region's travel needs.~~

~~A major portion of the new capital costs associated with the highway improvements recommended in the Plan (Chapter 5) are a result of the need to provide an infrastructure in the rapidly developing growth areas of the region. The remaining portion is required to accommodate the continued growth of travel in the built up portions of the region and to alleviate currently congested conditions on major facilities.~~

~~The 20 Year Plan~~

~~The Regional Transportation Plan identifies over $2.545 billion (assuming a 4 percent annual inflation rate) in capital improvements necessary on the region's highway system over the next 20 years (Figure 7-1). Of this total, nearly two thirds, or $1.634 billion, is needed for improvements in the major regional highway corridors (see Chapter 5), and $911 million (36 percent) on the region's urban arterial system. Committed and anticipated capital funding that the region can reasonably expect from existing resources will amount to $978 million, leaving a shortfall of $1.567 billion, or over 60 percent of the 20 year highway capital improvement program. By category, 58 percent ($911 million) of the shortfall is attributable to projects needed in the major regional highway corridors (based on a 20 year revenue estimate of $723 million) and $656 million (42 percent of the total shortfall) is associated with the region's urban arterials (based on a revenue estimate of $255 million for the next 20 years).~~

~~10 Year Priorities~~

~~In order to effectively focus the significant challenge facing the region in terms of the enormity of the financial resources needed to implement the capital improvements called for in this Plan, JPACT has adopted a package of capital improvements for both the major regional corridors and urban arterial systems as priorities for construction in the next 10 years (see Chapter 5). This 10 year priority program calls for a total of $1.466 billion in investments in~~

the region's highway system over the next decade (Figure 7-2). Of this total, $928 million (63 percent) is required for projects in the major regional highway corridors and $538 million (47 percent) for improvements to the urban arterials in the region. Toward this need, the region can reasonably expect about $663 million in committed and anticipated capital revenues from existing sources. This revenue stream leaves a shortfall of $803 million, or 55 percent of the 10-year priority program, to be developed through increases in existing funding source levels or the establishment of new revenue mechanisms. Of the total shortfall, $482 million (60 percent) is attributable to projects needed in the major regional highway corridors (based on a revenue projection of $446 million), and $321 million (40 percent) on the region's urban arterial system (based on committed and expected revenues of $217 million).

Regional Highway Corridors

20-Year Plan

The total 20-year capital costs associated with the Plan improvements recommended for the Regional Highway Corridors (Figure 7-3) are expected to amount to over $1.6 billion. Of this total, about 58 percent ($940 million) will be for improvements to the region's Interstate system. The remaining 42 percent ($694 million) will be needed for projects on the other major corridors of regional significance (Sunset Highway, Highway 217, Sunrise Corridor, Tualatin-Hillsboro Corridor, U.S. 26, McLoughlin Boulevard, and Highway 99W). Of this overall need, the region can reasonably expect to be able to pay for about 44 percent ($723 million) of the total from existing and anticipated capital resources. The unfunded portion of the 20-year Regional Highway Corridor program (56 percent or $911 million) will have to be developed from either increased levels of funding from existing resources or new sources of revenue. Of this shortfall, about 58 percent (or $526 million) is attributable to improvements needed on the region's Interstate Freeway system (based on a 20-year revenue estimate of $414 million) and $385 million, or 42 percent (based on revenues of $309 million), is associated with projects required in the other major corridors of regional significance.

10-Year Priorities

JPACT has adopted a package of capital improvements in the major regional highway corridors as being priorities for implementation in the next 10 years (see Chapter 5). The total cost associated with these projects is estimated to be $928 million (Figure 7-4). Of this total, nearly 53 percent ($489 million) will be required to improve the region's Interstate Freeway system, and $439 million (47 percent) will be needed for projects in the other major highway corridors of regional significance.

To address these combined needs, the region can reasonably expect a total of $446 million (48 percent of the required funds) to come from currently committed and anticipated transportation-related capital revenue sources. This level of funding would leave the region with a $482 million (53 percent) shortfall in the Regional Highway Corridor 10-Year Priority program. This shortfall is comprised of slightly over $200 million in unfunded Interstate needs (based on $288 million in committed and anticipated revenue) and $282 million in unfunded

improvements (based on a $156 million revenue estimate) in the other major highway corridors of regional significance.

Urban Arterials

20 Year Plan

The total 20 year capital costs associated with the Plan improvements recommended for the region's urban arterial system (Figure 7-5) are expected to amount to approximately $911 million (assuming an annual inflation rate of 4 percent). Of this total, about 43 percent, or $388 million is needed for improvements to state owned urban arterials within the region, and $523 million (57 percent) is required to improve arterials under the jurisdictions of the cities and counties. Of this total need, the region can reasonably expect to fund only about 28 percent of the necessary improvements, based on a 20 year revenue estimate for urban arterials of $255 million. This committed and anticipated revenue stream leaves a funding shortfall of $656 million (72 percent of the 20 year urban arterial program) to be made up from increases in revenues from existing resources or the development of new funding sources. Forty seven percent ($311 million) of the 20 year shortfall is attributable to needed improvements on state owned arterials.

The remaining $345 million (53 percent) shortfall is associated with city and county owned arterials in the urban areas.

10 Year Priorities

JPACT has adopted a package of improvements to the region's urban arterial system as being priorities for implementation in the next 10 years (see Chapter 5). The total capital cost associated with these priorities is estimated at approximately $539 million (Figure 7-6). Of this amount, 38 percent or $203 million is for improvements to state owned arterials and $336 million (62 percent) is for projects on urban arterials under the jurisdiction of the region's cities and counties. In the 10 year period, the region can reasonably expect a total of $217 million in committed and anticipated funding for urban arterial improvements. This leaves a shortfall of $322 million, or nearly 60 percent of the revenue required to implement the 10 year priorities, to be generated from increases in existing resources or the development of new funding mechanisms. Of this total shortfall, $126 million (39 percent) is attributable to state owned urban arterials and $196 million (61 percent) to arterials in the urban areas of the region's cities and counties.

Conclusion

If the region is to implement the improvements called for in this Plan, it is obvious that steps to increase revenues must be taken. First, the region must aggressively seek congressional action to increase federal funding availability. Second, the region should seek increases in the state funding available for regional highway corridors. Finally, the region should pursue a program to increase the amount of local funds available for arterial improvements.

B. Highway System Operations, Maintenance and Preservation Costs/Revenues

Overview

In addition to the capital costs described in the preceding section, the region must protect the enormous past investments in the highway system with an ongoing program of maintenance and preservation of the existing facilities. If the activities do not occur on a timely basis, the facilities deteriorate and then require a much more costly capital investment to bring them up to acceptable service standards. An adequate maintenance and preservation program is a prudent investment to prolong the life of facilities already in place and paid for, thereby minimizing the need for capital intensive reconstruction expenditures.

Costs

Cost estimates (Figure 7-7) were derived from a variety of sources including the Oregon Roads Finance Study (1986) and individual city and county reportage. They include a 4 percent per annum inflation rate based on a 1986 base of $92.6 million per year. This amount represents the estimated costs associated with operations and maintenance activities, "backlog" repairs to bring the facilities suffering from deferred maintenance up to acceptable service standards over the 20 year period, and an annual overlay program. It should be noted that these estimates reflect only those costs associated with facilities owned by the three counties (Washington, Multnomah, and Clackamas) and the cities within Metro's Urban Growth Boundary (UGB). State owned facilities under the jurisdiction of the Oregon Department of Transportation (ODOT) are not included in the analysis.

Revenues

Revenue estimates of funds available for city/county operations, maintenance and preservation activities for the 20 year period are depicted in Figure 7-8. These estimates include city/county shares of the statewide gas tax, local county gas taxes in Washington (1¢) and Multnomah (3¢) counties, and other local sources of funds, such as forestry receipts, parking meter revenue, etc. As can be seen in the figure, annual revenue available in the current year totals about $65 million. This rises to about $80 million per year in 1991 as a result of the continued phase in of the adopted state gas tax increases. Beyond that year, revenues will tend to level off as gasoline consumption is not anticipated to rise (more mileage traveled, but in more fuel efficient vehicles).

Shortfall

A summary of the operations, maintenance and preservation costs/revenues (Figure 7-9) shows that, regionwide, revenues over time begin to approach the constant dollar (FY 1989) need of $92.6 million. Without the development of new or more elastic funding sources, however, inflation (at whatever rate) will produce a continually widening gap between the ability of the region to perform these activities and the need required by an aging facility

system. As shown in the following table, the shortfall will nearly double over the near (10-year) term, from $29 million annually today, to $33 million annually in five years and to $55 million annually by 10 years.

C. Transit System Costs/Revenues

Overview

The primary objectives for transit in the RTP are to provide transit service throughout the urbanized portion of the metropolitan area and to provide a quality of transit service that is reasonably comparable to alternative modes of travel. Increased reliance on transit is an important aspect of the adopted Plan and allows the region to achieve identified accessibility and mobility goals within the identified cost and environmental constraints. This increased transit role will require new capital investments in transit facilities as well as assurances that the region will be financially capable of operating a more extensive transit system. Cost/revenue projections for the transit system are shown in Figure 7-10. Tri-Met currently operates 29,300 weekly platform hours of transit service in the region at a cost of $72.5 million. In 1987 $8.5 million was required for capital expenditures (bus replacements, transit centers, parts, etc.), combining to produce a total annual cost of $81 million for the transit system. In order to implement the transit system identified in this Plan, Tri-Met would provide 48,000 weekly platform hours of service by 2005. This 64 percent increase in service will produce an increase in operations costs to $123.6 million $130.2 million per year (depending on the number of LRT lines). Local funds required for capital needs (including annualized local LRT match) are expected to be $8.7 million in 2005, about the same as today.

Revenues for the transit system are expected to rise by over 40 percent from 1987 to 2005, from a total of $75.6 million to $106.6 million. Fare revenues are expected to nearly double, however, from $18.3 million in 1987 to $35.2 million in 2005 as a result of increases in ridership.

A lesser rate of increase in income from the payroll tax (+32 percent) and a complete phase-out of federal operating assistance will produce a shortfall of $25.7 $32.3 million in 2005 — a three-fold increase from the 1987 level of $5.4 million (which was covered by a drawdown from Tri-Met's working capital).

Evaluation

Present analysis indicates that the region should be able to increase the present level of transit service by approximately 15 percent into the future without requiring a new revenue source for transit operations. However, the small service base of the minimal growth system would result in severe impacts on mobility and accessibility, which potentially could hinder the region's economic development objectives and would change the magnitude of highway improvements required to achieve the goals of the Plan.

The adopted Plan calls for a significant expansion of the transit system's role in serving travel demand in the region. Transit ridership is projected to increase by 90 percent over today's levels, while overall travel demand increases by only 40 percent. Although a major

~~increase in transit service is necessary to accommodate the increased ridership, productivity gains are anticipated to account for much of the improvement in service. Through a much greater reliance on articulated buses and light rail vehicles, the 90 percent increase in transit patronage will be served with only a 40 percent increase in the size of the fleet and at an operating cost increase of 60-70 percent, depending on the amount of off-peak and weekend service provided.~~

~~As a result, farebox revenue will provide approximately one-half of the transit system's operating cost in the year 2005, rather than only one quarter as is currently the case. However, even with these significant productivity and farebox revenue gains, additional revenues will be necessary to build and operate the recommended system expansion.~~

~~The region has taken positive steps toward the implementation of the transit elements of this plan through the successful region-wide vote in November 1990 approving a $125 million bond measure to provide half of the 25 percent local match for the Westside LRT and to provide funding for planning, engineering and ROW acquisition for an East Portland/Clackamas County LRT project. In addition, the State Legislature approved state funding to cover the remaining one half of the 25 percent Westside local match.~~

~~If the region is to pursue implementation of the recommended transportation plan, efforts must be taken to increase transit funding. First, the region must continue to aggressively seek congressional action to assure the continuance of federal capital grants, argue against the phasing out of federal operating assistance and ensure a continuance of state matching funds for federal capital grants. Secondly, the region must be prepared to accept an increased reliance on local funding sources in order to construct and operate the recommended transit system. Failure to secure the necessary funding to expand the transit system would require a reexamination of the RTP to expand the recommended highway system or a reexamination of land use plans to reduce planned levels of development.~~

~~D. Regional Bicycle System Costs/Revenues~~

~~Overview~~

~~Implementation of proposed bicycle routes in this region is contingent primarily on the amount of funding available and the manner in which priority projects are determined. The predominant funding source for the construction of bicycle facilities in the Portland region is revenue derived from the 1 percent of state gas tax receipts which are allocated to a statewide bicycle fund. The region then competes with other communities from throughout the state for funding for specific projects.~~

~~Since 1983, when the Regional Bicycle Plan was adopted, cities and counties in the Metropolitan Service District have worked cooperatively to seek funding from the state bicycle fund. This process has worked well and has enabled the region to move significantly forward towards meeting its bicycling objectives.~~

~~This chapter describes all the existing sources of funds available for bicycle projects, describes the methodology used for allocating these funds in an efficient and equitable manner, and discusses the importance of securing additional funds to hasten facilities development.~~

~~Background~~

~~During the early 1970s, there was a bicycle boom across the country and in Oregon. Rising gasoline prices forced many people to seek alternatives to the automobile for their transportation needs, and many turned to the bicycle. As more and more bicyclists took to the streets, they found that many of those streets were not adequate to ride on.~~

~~Concerned citizens felt this issue to be important enough to warrant legislative action. As a result, the Oregon Legislature enacted what became known as the "Bicycle Bill." This 1971 legislation mandated the expenditure of not less than 1 percent of the State Highway Fund (gasoline tax revenues) received each year by the state or by any city or county for the establishment of bicycle trails and footpaths.~~

~~This statute further requires that the amount "shall never in any one fiscal year be less than one percent of the total amount of the funds received from the highway fund" (unless that amount is less than $250.00 in any year for a city, or $1,500.00 for a county). In lieu of spending these funds each year, a city or county may credit the funds to a bikeway financial reserve where they can be held for not more than 10 years.~~

~~The success of that legislation, together with the comprehensive bicycling development effort that emerged from it, resulted in the completion of over 70 miles of bicycle routes throughout the region, representing an investment of over $6.5 million from 1973 to 1983. Since Metro's Regional Bicycle Plan was adopted, another 70 miles of bicycle routes have been constructed.~~

~~Funding Sources~~

~~There are presently two major sources of funds available for bicycle projects in this region: Federal Highway Trust Funds and Oregon Gasoline Tax Revenues, which are described below. In addition to these major sources, local jurisdictions often supplement them with resources from their own general fund.~~

~~Federal Highway Trust Funds~~

~~Although no federal statute requires bikeways to be built on federal highways, federal policy (23 CFR 652.5) states that "full consideration is to be given to safely accommodate bicycle/pedestrian traffic on all Federal Aid highway projects." Further, 23USC 109(n) prohibits "severance or destruction of an existing major route for non-motorized vehicles unless such project provides for a reasonable alternative route or if such a route already exists."~~

~~From the Federal Highway Trust Fund, two alternatives for funding bicycling facilities are provided:~~

1) Constructing bicycle and pedestrian facilities as part of any Federal-Aid highway project and within publicly owned right-of-way. Federal participation for bicycle projects is at the same rate as the highway facility to which it is attached. However, Federal-Aid Urban projects are eligible for 100 percent federal funding.

2) Constructing bicycle and pedestrian facilities independently of a highway project, but serving corridors that are part of the federal highway system.

Oregon Gasoline Tax Revenues

The entire State Highway Gas Tax Fund is divided among the state, the counties and the cities. The formula used by the state for allocating gasoline tax revenues to individual cities and counties is based on total vehicle registration for counties and total population for cities. The Bicycle Bill mandates that a portion of these funds be used for bicycle facilities development as described below:

1) Cities and Counties Portion

Cities and counties are required to spend not less than 1 percent of their State Highway Fund monies for the establishment of footpaths and bikeways.

In addition, the Oregon Transportation Commission has determined that this money may be spent for other uses such as:

- Administrative and personnel costs of bicycle programs
- Preliminary engineering costs of bikeways
- Construction and right-of-way costs for bikeway/footpath facilities within highway right-of-way
- Auxiliary facilities such as signs, curb cuts ramps and parking
- Maintenance of existing bikeways/footpaths
- Development and printing of bicycle route maps and brochures

2) State's Portion

The state is required to spend not less than 1 per cent of total gasoline tax revenues on bicycle and pedestrian projects under the following system of priorities:

Priority One

- Construction of bikeway projects wherever a highway, road or street is constructed, reconstructed or relocated. This is primarily used as match for projects funded with Federal Aid monies and for state projects.

Priority Two

- Maintenance of existing bikeways for which the state is responsible.

Priority Three

- Construction of bikeway projects independent of a highway project, but within state highway right-of-way.

Priority Four

- Construction of local governments' bikeway projects on or off the state highway system (requires local match).

Cost of Building the Regional System

A variety of factors enter into the construction of a bikeway system, and for that reason, cost estimates at a regional level cannot be developed easily or with great confidence. The configuration for a particular bicycle project depends upon the type of bikeway (whether it is a separated path, a bikeway which is adjacent to the travel lane, or a bikeway that shares the road with motor vehicles), the amount of right-of-way required, the type of construction materials used and the degree of safety for which the bikeway is designed. In addition, jurisdictions estimate costs differently for shoulder widening, striping, signing, and other improvements.

Each link of the regional bicycle route system yet to be constructed was briefly examined for needed improvements. Rough cost per mile estimates were then applied. The total cost estimate to complete the regional bicycle route system currently ranges from $8 to $12 million dollars.

It must be emphasized that this estimate is very general and is only intended to put into context the amount of money required to build approximately 130 miles of proposed bicycle facilities needed to complete the network. A more definitive cost estimate for completion of these routes would necessitate a formal preliminary engineering process for each route.

Of the 130 miles of proposed bicycle routes, approximately 35 miles are under construction or are programmed for construction. Funds from the state bicycle fund will be sought for many of the remaining routes as streets are reconstructed, or through the Priority 3 and Priority 4 programs. In addition, jurisdictions will use general funds and their allocated state bicycle funds to construct other routes.

~~In most cases, cities and counties have had to accumulate their annual 1 percent money over several years in order to construct even a one-mile segment of bikeway. This procedure will most likely continue because construction costs continue to increase while revenues are decreasing.~~

~~Conclusions~~

~~Funding of bicycle facilities and programs are essential to the implementation of this Plan. Without a commitment to seek new funding sources and efficiently use existing sources, many of the proposals called for in the Plan may never be realized. The Plan adopts the following:~~

- ~~Metro and local jurisdictions should cooperatively seek additional funding sources for constructing bicycle facilities and developing new bicycle programs.~~

- ~~Supporting continuation of the state 1 percent gas tax fund for construction of local and regional bicycle routes in the Portland metropolitan area.~~

- ~~Limiting expenditure of the state's 1 percent bicycle fund monies for bicycle projects constructed independently of a highway project (Priority 3) primarily to bicycle routes designated on the regional bicycle network.~~

- ~~Supporting the Oregon Transportation Commission policy to make Priority 3 money available not only to independent bikeways within state owned rights of way, but also on routes parallel to and serving the same corridors as state highways.~~

- ~~Allowing the use of state 1 percent funds for financial assistance to local government bikeway projects (Priority 4) on either local or regional bicycle routes (at the discretion of local jurisdictions.)~~

- ~~Supporting current ODOT policy which establishes an annual target amount of local discretionary grant (Priority 4) money and working to establish an equitable distribution policy for this money that is not biased against areas of highest bicycling use.~~

- ~~Continuation of the regional funding committee which annually prioritizes bicycle projects in this region to submit to the state for funding. This applies to projects eligible for Priority 3 and 4 funds only.~~

Chapter 8

Implementation

CHAPTER 8

Implementation

A. Overview

Implementation of the adopted Plan involves a cooperative effort of all jurisdictions responsible for the various components. First and foremost, it involves a concerted effort to secure sufficient funding over the next 20 years to build new or improved transportation facilities and maintain and operate an expanded transit and highway system; it involves the construction and operation of the improvements recommended to serve expected growth; it involves an ongoing process of monitoring actual development and the associated changes in travel demand to update or refine the Plan and to resolve a number of outstanding transportation issues; and finally, it involves the establishment of a framework for consistency among the ~~Regional Transportation Plan, local comprehensive plans, statewide planning goals and other~~ local government and other implementing agency plans (the Oregon Department of Transportation's (ODOT) Six-Year Program; Tri-Met's Transit Development Plan).

The tool for implementing the plan at a regional scale is the Transportation Improvement Program (TIP). The TIP is updated annually as part of the region's ongoing planning process, with each revised TIP prioritizing transportation funding over a five-year horizon. The TIP review process begins at the local government level, with city and county elected officials receiving input from citizens through local planning efforts, and later sharing their transportation needs at the Joint Policy Advisory Committee on Transportation (JPACT). Additional public comment is received at the regional level, as well, when JPACT and the Metro Council review the TIP for final approval. Upon adoption by the Council, the TIP is submitted to the Oregon Transportation Commission (OTC) for approval as part of the State Transportation Improvement Plan (STIP).

[The following text was moved from Subsection "B"]

The comprehensive plans adopted by the cities and counties within the Metro area are the mechanisms by which local jurisdictions plan for transportation facilities ~~implement the elements of the RTP~~. These local plans identify future development patterns that must be served by the transportation system. In addition, the local comprehensive plans define the configuration of the highway system and identify needed investments.

~~While a~~ All 1992 RTP provisions are recommendations unless clearly designated as a requirement of local government comprehensive plans~~,~~. ~~a~~ All local comprehensive plans and future amendments to local plans ~~shall~~ must be consistent with all adopted RTP policies and guidelines as explained in Chapter 8, Section C~~.~~ of the 1992 RTP. For inconsistencies, local governments or Metro may initiate the dispute resolution process in Section F prior to action by Metro to require an amendment to a local comprehensive plan. Specific items in the 1992 RTP that require local comprehensive plan compliance are as follows:

- Highway System Design criteria;
- Highway Capacity and Project criteria;
- Transit System Designation criteria;
- Transitway Implementation criteria; and
- Regional Bicycle Route designation.

Activities described in the 1992 RTP that local jurisdictions are encouraged to pursue are:

- Policies supporting ridesharing for work trips;
- Demand Management Program Design criteria described in Chapter 1;
- The rideshare, parking, land use controls and related activities described in Chapter 4; and
- The protection of transitway right-of-way opportunities as described in Chapter 8, Section C-6.

B. Transportation Improvement Program

~~Transportation System Implementation~~

~~The RTP identifies the parts of the transportation system most important for regional travel and includes investments to ensure that the regional system can effectively serve expected growth over the next 20 years. Projects that must be included in the RTP are those modernization improvements that are on, or significantly affect, the capacity of the regional highway, transit or bicycle systems (see Chapters 4 and 5).~~ The ~~Transportation Improvement Program (TIP)~~ TIP is the five-year incremental capital improvement program for the region to implement planned improvement projects and includes all transportation projects or project phases proposed to use federal funds ~~to implement~~. The TIP is updated and approved annually by Metro; approval of the Governor of the State of Oregon is also required for adoption. Copies of the TIP are distributed in accordance with applicable laws (including ISTEA).

The TIP is the primary tool for scheduling and implementing the transportation system improvements identified in the RTP. The annual TIP describes how federal transportation funds will be prioritized and obligated for the current year and two subsequent years. Additionally, in order to maintain fiscal continuity, long-term projects are programmed over time by including activities completed prior to the current year and programmed for years beyond the three-year horizon.

The TIP contains modernization projects ~~that are depicted in Chapter 5 of the RTP~~, as well as preservation and smaller scale modernization activities that are consistent with the

policies and objectives of the federal RTP but are not of sufficient scope to warrant inclusion in the federal RTP. Small projects are grouped in the TIP by function, geographic area and work type. Additionally, all projects which require FHWA or FTA approval are included in the TIP, whether or not they will be funded with federal funds; those projects requiring federal approval but not using Title 23 or Federal Transit Act funds are included for informational purposes only. Transportation projects which will not be funded with federal funds but are of regional significance are also included in the TIP for informational purposes.

ISTEA created important new fiscal requirements for the TIP. In accordance with ISTEA, the TIP is fiscally constrained and includes only those projects for which federal resources are reasonably available. Projects are grouped by funding category, with project costs not to exceed expected revenue sources. The TIP financial plan is comprehensive in that it identifies funding needs for maintenance and operations activities, as well as for expansion and new construction projects.

The TIP is also required to identify federal funds allocated to the area pursuant to 23 U.S.C. 133(d)(3)(E). In accordance with ISTEA, all transit funding activities identified in the TIP are allocated by formula with the exception of certain Section 3 Capital Grants and the national portion of the Planning and Research Program.

Because Portland is currently designated a non-attainment area for the National Ambient Air Quality Standards (NAAQS) for ozone and carbon monoxide under the Clean Air Act Amendments of 1990, additional ISTEA requirements for non-attainment/maintenance areas apply to Metro's TIP. These additional directives apply to adopted Transportation Control Measures (TCMs) and air quality conformity analysis activities. When a new State Implementation Plan (SIP) is developed and approved for the Portland region, the TIP will include TCMs from the SIP as priorities for implementation. ISTEA also requires the TIP to describe any conditions which may delay implementation of the TCMs.

With regard to air quality analysis, all projects are specified in the RTP and the TIP in sufficient detail to permit conformity analysis as required by the U.S. Environmental Protection Agency. Any project found in conformity in a previous TIP that is now considered part of the 'base case' for air quality conformity must be identified in the TIP until its construction has been fully authorized. Metro, FHWA and FTA make conformity determinations on new and amended TIPs.

As a management tool for monitoring progress in implementing the federal RTP, the TIP is required to identify the criteria and process for prioritizing the implementation of the federal RTP elements. Any changes in prioritization from previous TIPs must also be noted. Implementation schedules, including significant delays, for major projects from the previous year's TIP are also required to be identified in the current TIP.

It is the responsibility of the cities, counties, ODOT, ~~and~~ Tri-Met and the Port of Portland to implement necessary improvements to the regional system, as well as those needed for local travel. The TIP is prepared by Metro in consultation with these agencies. Inter-regional coordination throughout the planning and programming process will help to ensure

that improvement projects are consistent with regional objectives and with each other. All projects included in the TIP must be consistent with the federal RTP. ~~Because of the inter-relationship between different improvements by different jurisdictions, it is important that these improvements be implemented in a manner consistent with the adopted federal RTP.~~

The opportunity for public comment on the TIP is provided at various stages in the planning/programming process. The public may comment on projects and programs proposed for inclusion in the federal RTP and TIP at workshops and hearings held at the local, regional and state levels. At the regional level, the public is also invited to comment on the proposed TIP at JPACT and Metro Council meetings. Announcements of public meetings are typically made in local newspapers; other channels can include distribution of meeting notices to elected officials and other interested parties.

[Portions of this subsection moved to Subsection "A" and "C"]

~~C. Elements of Consistency with the RTP~~

~~1. Highway System Design~~

~~It is essential for Metro and the local jurisdictions to designate the full arterial and collector system necessary to serve development of local comprehensive plans anticipated to the year 2005. The RTP includes criteria for a highway classification system (Chapter 1, Section D) and adopts maps delineating the principal and major arterial (Figure 4-1) and minor arterial (Figure 4-2) components of such a system. In accordance with this, local jurisdictions are required to adopt maps delineating the various regional highways in their jurisdiction and, in so doing, it is recommended they adopt Metro's classification categories and definitions. If, however, local jurisdictions elect to retain their own classification categories, they must provide for Metro's adopted principal routes and major arterials as shown in Figure 4-1, and minor arterials of regional significance as shown in Figure 4-2. In addition, local jurisdictions are required to designate an adequate Local Minor Arterial and Collector system to meet two objectives of regional interest:~~

- ~~the local minor arterial/collector system must adequately serve the local travel demands expected from development of the land use plan to the year 2005 to ensure that the Principal, Major and Minor Arterial system is not overburdened with local traffic; and~~

- ~~the system should provide continuity between adjacent and affected jurisdictions (i.e., consistency between neighboring jurisdictions, consistency between city and county plans for county facilities within city boundaries and consistency between local jurisdiction and ODOT plans).~~

~~Metro's Classified Highway System map will consist of the Regional Principal, Major and Minor Arterials defined in Chapter 4 of the adopted RTP.~~

~~(this text moved up from # 7 below) Until such time as a definite decision to construct a transitway is made as a result of the EIS decision process described above below (#7), local~~

jurisdictions are encouraged to work with developers to protect logical right-of-way opportunities from encroachment. Parcels that cannot be protected in this manner should be identified to Tri-Met for acquisition on a case-by-case basis in accordance with adopted regional priorities.

2. Highway Projects

The RTP divides highway investments into two main categories:

- Modernization Improvements: facility widenings that significantly (by 50 percent or more) affect capacity, such as adding travel lanes, new facility construction, etc., major intersection or interchange construction, and/or coordinated Transportation System Management projects over one mile in length; and

- Operations, Maintenance and Safety Improvements: those facility widenings that increase capacity by less than 50 percent, signalization projects not part of a coordinated TSM investment, minor intersection projects, bridge replacements (within existing right-of-way) and general maintenance (restriping, repaving, etc.) and operations (signal controllers, channelization, etc.) activities.

The federal ISTEA specifically limits funding for projects that significantly increase capacity for single occupancy vehicles (SOVs). This provision will likely affect how and when modernization improvements contained in the RTP actually occur, since ISTEA focuses instead on alternative modes of travel and efficiency improvements to existing facilities. During the next update to the RTP, a review of planned modernization improvements will accompany the overall evaluation of plan elements in response to both ISTEA and the Transportation Planning Rule (Rule 12). The impact of funding restrictions will be considered at that time.

All modernization improvements (regardless of funding source) contained in local comprehensive plans located on or directly affecting the capacity of the regional highway, transit and bicycle system plan elements, identified in Chapter 4, must be consistent with the RTP goals and policies and included in the RTP (Chapter 8, Section F.2.).

In addition to the regional system improvements included in this Plan, local jurisdictions must ensure that their designated local minor arterial and collector system provides the desired level of traffic service. Toward this purpose, local jurisdictions must identify in their comprehensive plan (or the appropriate implementation program) sufficient investments in transportation capacity to ensure its arterial/collector system can adequately serve at least the travel demand associated with Metro's year 2005 population and employment forecast (Table 2-1) and subsequent updates. Project objectives for these investments should include at least the arterial level of service defined as the minimum desired in the RTP (Chapter 1, Section D). Further improvements in transportation capacity consistent with the policies of the RTP that serve more than Metro's year 2005 population and employment forecast and/or to provide a higher level of traffic service than that identified in this Plan can be designed and/or provided at the option of the implementing jurisdiction. This identification of transportation capacity must, however, be consistent with the level of transit ridership and ridesharing

delineated in the RTP for the particular area, but may include actions to further expand the use of these modes, thereby reducing the need for additional highway capacity.

These improvements should be designed to serve the designated function for the street and should first consider low-cost actions (such as additional transit expansion, ridesharing, flextime, signal modifications, channelization, etc.) before consideration of a major widening investment. Identified widening projects that provide more capacity than specified in this Plan will be considered consistent with the RTP if: a) a longer range evaluation of travel demand indicates a probable need for right-of-way preservation beyond that necessary for the 20-year project design; or b) the additional service provided by the higher level design is the result of a design characteristic necessary to achieve the minimum RTP service levels. In either case, the higher level of service must be deemed cost effective.

All operations, maintenance and safety improvements are considered consistent with the policy intent of the RTP if: a) they are needed to serve the travel demand associated with Metro's population and employment forecasts; and b) they are consistent with affected local plans.

3. Transit System Designation

The delineation of the transit system must be coordinated between Metro, Tri-Met and the local jurisdictions. Metro's adopted regional transit trunk route system (Figure 4-4) provides direction to Tri-Met on where to target high speed, high capacity service for long distance travel and provides direction to local jurisdictions on where to target high density land uses. In addition to these routes, Tri-Met is expected to adopt a system of sub-regional trunk routes and local routes.

Local jurisdictions are required to include Metro's regional trunk routes, transit centers and park-and-ride lots (Figure 4-4) in their comprehensive plans and identify other streets suitable for sub-regional trunk routes and local transit service as a guide to Tri-Met. In addition to these bus route designations, Metro, Tri-Met and the local jurisdictions must agree on specific alignments for the potential transitways identified in Figure 4-5 to be protected from encroachment from development. Local jurisdictions are required to identify these alignments in their local comprehensive plans for future consideration.

4. Transit Service Implementation

The Portland metropolitan area is dependent upon a significant expansion in transit use to accommodate expected growth in travel demand. Expansion in service, however, is very costly and beyond the current financial ability of Tri-Met. As such, Tri-Met must incrementally implement new transit service as growth in ridership demands and financial resources allow. Additional increments of transit service should be phased in consistent with the following criteria:

- new routes should be cost-effective in terms of ridership return on the operating subsidy as defined by Tri-Met service standards;

- service expansion should be consistent with growth in travel demand in the regional corridors where highway, transit and rideshare improvement programs are interdependent;

- service improvements should be implemented consistent with new development, particularly in cases where high density developments are dependent on transit capacity; and

- service improvements should be consistent with the local jurisdiction's designation of transit streets.

5. Transit Service Planning

In accordance with FTA UMTA Circular 7005.1, recipients of FTA UMTA funding are required to develop a process for considering the capability of private providers to perform mass transportation and related support services. They are also required to provide periodic documentation on the results of implementation of the policy. This requirement falls both on Metro as the Metropolitan Planning Organization and Tri-Met as the principal provider of transit services and FTA UMTA grant recipient. Specifically, Metro is required to adopt a policy which provides for consideration of private enterprises in local transit service planning, ensure a fair resolution of disputes and certify at the time of submission of the annual Transportation Improvement Program that the local process is being followed. The following policies are intended to respond to these requirements while recognizing that the principal responsibility for involving the private sector should rest with Tri-Met since it is the only operator in the Portland region.

a. Transit Service Planning

1) Tri-Met should ensure private enterprise involvement in transit service planning and development of transit capital improvements, to include:

a) Notice to and early consultation with private providers in plans involving new or restructured service, as well as the periodic reexamination of existing service;

b) Periodic examination, at least every three years, of each route to determine if it could be more efficiently operated by a private enterprise;

c) Description of how new and restructured services will be evaluated to determine if they could be more effectively provided by private sector operation pursuant to a competitive bid process; and

d) The use of costs as a factor in the private/public decision.

2) Metro will review the results of these analyses and provide TPAC and JPACT an opportunity for review and comments.

~~3) In transit service studies where Metro has lead responsibility, Metro will provide notice to and ensure early consultation with private providers.~~

~~b. Dispute Resolution~~

~~Tri-Met should establish a dispute resolution process that provides a clear opportunity for interested parties to object to a decision. The process should also include the opportunity for final appeal to FTA UMTA..~~

~~c. Documentation~~

~~1) In conjunction with submittal of projects to Metro for inclusion in the Transportation Improvement Program, Tri-Met shall submit documentation that this private enterprise policy has been followed, including:~~

a) ~~a description of the involvement of the private sector in the development of the specific projects. The determination~~ of provider ~~can be arrived at through use of requests for proposals, requests for bids, or other means in the local planning process;~~

~~b) a description of the proposals received from the private sector and how they were evaluated;~~

~~c) a description of impediments to holding service out for competition and the measures taken to address the impact of such impediments; and~~

~~d) a copy of the Tri-Met dispute resolution procedure and a description and status of private sector complaints.~~

~~This documentation shall be provided no later than the time of submission of projects for the annual update to the Transportation Improvement Program (June 1). In addition, supplemental documentation should be submitted at the time of submittal of any additions to the Transportation Improvement Program, if necessary.~~

~~2) Metro will include this documentation as part of the certification to FTA UMTA that the region is in compliance with federal requirements.~~

~~6. Transitway Implementation~~

~~Transitways have been identified as the long range method to provide regional trunk route service in the radial travel corridors (Figure 4-5). Local jurisdictions are required to identify these alignments in their comprehensive plans for future consideration. However, due to the high construction cost, incremental implementation is necessary, as growth in transit ridership warrants implementation and as funding is available. The next priority for transitway construction is the Westside Corridor, where the Westside LRT (long tunnel with Zoo station) alignment has been selected as the preferred alternative to connect downtown Portland and~~

Hillsboro. A Preliminary Alternative Analysis study will result in a decision between the Milwaukie LRT or I-205 LRT as the next priority after Westside for FTA UMTA Section 3 or other regional, state or federal funding. A similar Pre-AA study will be conducted for high capacity transit alternatives designed to serve Clark County, Washington in either the I-5 North corridor or in the I-205 corridor. The purpose and scope of the Preliminary Alternatives Analysis and the full Alternatives Analysis studies are described in the following:

- Preliminary Alternatives Analysis studies will be initiated to identify which set of promising alternatives in a corridor warrant further consideration. The Pre-AA study will consider the short and long term ridership potential, capital and operating costs, existing or planned transit supportive land uses and right-of-way availability;

- The full Alternatives Analysis will be initiated to examine alternatives in detail and select the one that is most cost-effective. The study will conclude with an Environmental Impact Statement presenting costs, benefits and impacts of the alternatives, leading to the identification of the preferred alternative for implementation; and

- The implementation of high capacity transitway alternatives in additional corridors will utilize the results of a Regional HCT Study which will identify promising HCT alternatives within the study corridors for advancement to Alternatives Analysis.

Due to limited staff resources, it is impractical to pursue the preparation of "Draft" Environmental Impact Statements on several transitway corridors simultaneously.

7. Transitway Right-of-way Reservation

(text moved to #2 above)

8. Handicapped Transit Service

Tri-Met is responsible for providing handicapped transit accessibility, including coordination of special transit services provided by social service agencies. In addition, Tri-Met conducts the detailed special handicapped transit planning necessary to identify required service improvements and adopt a plan for meeting federal requirements for handicapped accessibility consistent with the Americans with Disabilities Act of 1990 (ADA). Metro must certify that Tri-Met's Paratransit Plan conforms to the RTP and include expected uses of federal funding in the TIP. In addition to Tri-Met's handicapped service, private, non-profit agencies provide handicapped services and may apply for federal funding for equipment (through the FTA UMTA Section 16(b)(2) program). Use of this equipment must be consistent with Tri-Met's plan, be included in Metro's TIP and be endorsed by the ODOT Transit Division to be funded.

9. Rideshare Promotion

The overall responsibility for promoting ridesharing as an alternative mode of transportation rests with Tri-Met. As described in Chapter 5, this includes regional services for matching prospective carpoolers, assistance to employers and several targeted programs to deal

~~with ridesharing in particular corridors or subareas. However, the full scope of implementing potential rideshare strategies is too diverse to characterize as being the responsibility of a single agency. In addition to Tri-Met, local jurisdictions have responsibility to incorporate into their comprehensive plan rideshare techniques identified in Chapters 1 and 4 of the RTP that are suitable for their area. Similarly, employers are vital to the implementation of rideshare programs. Metro's Rideshare Advisory Subcommittee provides a forum for public and private sector individuals to provide direction for implementing potential programs throughout the region.~~

~~10. Regional Bicycle Plan~~

~~The implementation of the provisions of the bicycle element of the RTP is a shared responsibility of the state, local jurisdictions and Tri-Met. The actual construction of the bicycle facilities identified in Chapter 4 of the RTP (Figure 4-7) is the responsibility of the state and local jurisdictions. Local jurisdictions are required to identify this network in their local comprehensive plans, and any jurisdiction planning street improvements covered under ORS 366.514 that are proposed to not include bicycle facilities on roadways designated as regional bicycle routes must consult with Metro and other affected jurisdictions. Tri-Met is responsible for the installation of bike racks at the designated major transit stations and major park-and-ride lots specified in Chapter 4 of the RTP. Tri-Met and local jurisdictions are encouraged to install bicycle parking facilities at minor transit stations. In addition, local jurisdictions are encouraged to incorporate into their local comprehensive plans the supportive techniques identified in Chapters 1 and 4 of the RTP. Metro's regional bicycle funding committee will provide a forum to provide direction for designating projects for State Priority 3 and 4 bicycle funds used in the region.~~

~~D~~ C. Funding

As described in Chapter 7, the funding for implementation of the federal transportation plan is approaching a crisis situation. Federal funding availability is projected to fall short of capital needs for highway improvements and may be subject to further federal budget cuts. Current state and local sources are generally insufficient to adequately maintain the existing highway system (as a result of past and expected losses of buying power from inflation) and are clearly inadequate for needed major capital improvements. Local funding is inadequate to operate the significant expansion in transit service called for in the Plan and federal funding for transit capital improvements is uncertain. The amount of funding required to complete the identified Regional Bicycle Route System is nearly double the amount spent on bicycle facilities in the past 10 years. To correct these funding problems, the following activities are necessary:

1. Federal Funding

Metro, ODOT, Tri-Met and the local jurisdictions must present a united front to its congressional delegation and the federal government to ensure past federal funding commitments are fulfilled in a timely manner. In particular, federal legislation is necessary to rectify "Interstate," "Interstate Transfer" and "FTA ~~UMTA~~ Capital Assistance" funding short-

falls. In addition, loss of federal transit operating assistance would worsen the expected transit funding shortfall.

2. Local Priority Setting

Regardless of how successful this region is in acquiring federal funds, it is clear that priorities must be set to phase implementation of the federal RTP over a longer than optimal time frame. JPACT has already undertaken such a process and set priorities for guiding the region's funding decisions. The applied general guidelines for ranking improvements for funding is as follows:

Priority 1: Improvements that correct severe existing traffic problems will have top priority;

Priority 2: 10-year priority improvements identified in Chapter 5 and any additional improvements that can be demonstrated as necessary to correct traffic problems anticipated in the next decade or correct access capacity deficiencies that constrain development areas during the next decade will have next priority; and

Priority 3: Those improvements identified in Chapter 5 as needed beyond 10 years.

To ensure cost-effectiveness whenever possible, regional corridor improvements will give priority to options which reduce costs by increasing people-moving capacity. Those options include ramp metering, signal improvements, access control and high-occupancy vehicle lanes. In addition, large projects will be broken into manageable parts so that the most critical part is given priority for construction. This approach is consistent with the federal ISTEA, which emphasizes projects that improve existing services and facilities, and discourages improvements that increase capacity for single-occupancy vehicles (SOVs).

Should additional resources become available, consideration should be given to the region "reserving" a portion of available funds in order to be able to provide needed transportation improvements which quickly respond to economic development opportunities. As part of the decision to establish such an "opportunity fund," specific criteria for its allocation will be adopted by JPACT.

In addition, since Interstate and Federal-Aid Primary (FAP) funding is allocated to the entire state, the Oregon Transportation Commission must set priorities between competing projects in the Portland area and elsewhere in the state. The region's priorities for projects to be funded from these statewide allocations are also based on the above criteria.

3. State and Local Funding

All of the state, regional and local agencies must establish a coordinated effort to correct state and local funding shortfalls. Adequate funding sources must be secured for both capital expansion projects and ongoing maintenance and operation programs. This could be accomplished through development of a variety of special purpose funding sources in each jurisdiction or through one or more larger state or local funding programs. The alternative

techniques described in Appendix 26 should be explored and a complete funding strategy adopted ~~(see Chapter 8, Section G, Outstanding Issue No. 1).~~

~~E~~ D. Statewide Planning Goal Consistency (see 1992 RTP, Chapter 8, Section E)

~~1. Overview~~

~~This section of the RTP provides a framework for the relationship of planned transportation improvements to the overall functional planning process to assure consistency among statewide planning goals, the RTP and local comprehensive plans.~~

~~As such, this section identifies the planning context for transportation improvements and identifies the timing and nature of applicable land use decisions associated with those improvements to establish clear and appropriate opportunities for public comment and appeal.~~

~~2. RTP Relationship to Statewide Planning Goals~~

~~a. Context~~

~~OAR 660 Division 11 (Public Facilities Planning) requires jurisdictions to adopt Public Facility Plans (PFPs) that identify the nature and location of significant transportation projects needed to serve planned land uses. The list and map of projects included in these PFPs must be adopted as part of the local comprehensive plan, along with a statement identifying the service provider for each improvement. The requirements of OAR 660 Division 11 have subsequently been folded into OAR 660, Division 12 (see below).~~

~~OAR 660, Division 12, requires development of MPO Transportation System Plans (TSP) by 1995 for development of local TSPs which include public facilities plan provisions for transportation facilities.~~

~~ORS 197.015(10)(a)(A) defines any amendment to a comprehensive plan or land use regulation as a land use decision. ORS 197.175(2) requires such decisions to comply with the statewide planning goals and ORS 197.825 provides for the appeal of these decisions to LUBA. Thus, the action to amend a local comprehensive plan to include projects listed in the PFP is a land use decision and should be accompanied by findings that demonstrate compliance with all applicable land use regulations.~~

~~Since all land use decisions are subject to appeal, no decision to build a significant transportation project may be considered final until the appeal period on the local comprehensive plan amendment has lapsed, or the amendment has been appealed and upheld.~~

~~In addition, OAR 660-18-022(1) allows local governments to make a determination that the statewide goals do not apply to a particular land use decision. Such a decision is considered a land use decision and is itself appealable and, as such, must still demonstrate compliance with any applicable comprehensive plan policies and with RTP requirements.~~

~~b. Transportation Improvements as Land Use Decisions~~

~~Regardless of the scope of a project, when protected resources or hazards are affected, detailed goal findings for these impacts will likely be needed. In many cases, for projects with a small, well-defined scope affecting clearly delineated resources in direct and obvious ways, all relevant goal issues should be addressed at the time the comprehensive plan amendment is first adopted.~~

~~Complete or final goal findings for aspects of some projects, however, will require detailed impact information not typically available until the preparation of an Environmental Impact Statement (EIS). In these cases, jurisdictions should adopt as full a set of findings as can be made based upon the information available at the time the project is included in the PFP, regarding the need, mode and general location. At the time the PFP is adopted, the need for project level goal findings at the time the EIS is prepared shall be identified. In addition, the issues these findings will address, and what form and when this latter decision will be made, shall be determined.~~

~~Local comprehensive plans and the RTP are intended to identify projects needed to serve land uses identified in the acknowledged comprehensive plans over the long term, as these acknowledged comprehensive plans are amended to comply with Goal 12 and other Metro functional plans. ODOT will select projects to be scheduled in its six year improvement program from among the improvements identified in local PFPs.~~

~~Although a project does not need to be placed in the RTP before it is included in ODOT's six-year improvement plan, it cannot actually be funded for right-of-way acquisition and construction until this is done.~~

~~c. RTP Consistency: Principles~~

~~The following principles of consistency with the RTP are embodied in this Plan:~~

~~1) All projects in PFPs must be consistent with the RTP and those modernization improvements directly affecting the regional system as defined in Chapter 4 must be included in the RTP.~~

~~2) At the time the projects are included in the PFPs, all projects recommended in the RTP to meet the long-term needs of the region must satisfy the applicable state planning goals regarding need, mode and general location of the project.~~

~~3) All projects must demonstrate consistency with the RTP before inclusion in the Transportation Improvement Program (TIP).~~

~~4) RTP decisions require local action to include the project in its comprehensive plan, in conjunction with adoption of appropriate goal findings, before the decision becomes final. The local jurisdiction is thus responsible for local (i.e., site specific) goal requirements.~~

~~5) Local jurisdictions must plan their internal transportation system to be consistent with RTP compliance requirements identified elsewhere in this chapter and make efficient use of the regional system.~~

~~6) The RTP consists of policies contained in Chapters 1, 4 and 8; system plan elements mapped in Chapter 4 that are designed to support and implement plan policies; criteria for determining RTP consistency in Chapter 8; and a list of improvements contained in Chapter 5, designed to implement the system plan. As Metro develops land use policy in the form of land use goals and objectives functional plans for solid waste, air and water quality, and other activities of regional significance. and policies for Urban Growth Boundary (UGB) management, the RTP policies, system plan elements, consistency criteria and project list should be reviewed and amended as necessary to ensure that the transportation system plan supports adopted policies land use policy.~~

~~7) All projects will be reviewed for consistency with RTP local plan compliance requirements as previously stated in Section C. This review assures state goal compliance at the generalized regional level except as noted immediately below.~~

~~8) In general, consistency of the RTP with all applicable state planning goals is achieved through the procedures described in this chapter. These amendments to the RTP (November 1991) are consistent with Regional Growth Goals and Objectives which are, in turn, consistent with statewide goals.~~

~~Local comprehensive plans and local findings of goal compliance when needed shall generally establish statewide goal compliance for RTP projects. Exceptions to this occur when:~~

~~a) a project in the RTP located outside the UGB has a Goal 14 impact which Metro is responsible for addressing;~~

~~b) Metro orders a change in the local comprehensive plan(s) to achieve consistency with the RTP, in which case Metro is responsible for assuring compliance with all applicable goals; or~~

~~c) LCDC adopts new goal or administrative rule language that assigns direct responsibility for goal compliance to the RTP.~~

~~9) Metro will make every effort to coordinate with, and resolve conflicts among, jurisdictions prior to RTP amendment. When all other efforts fail, however, Metro will order a local plan change when necessary to maintain the efficiency of the regional transportation system and assure regional goal compliance.~~

E. ~~F.~~ Federal RTP Consistency: Process

1. RTP Policy, System Plan and

Consistency Criteria Amendments

When Metro amends federal RTP policies (Chapters 1, 4 and 8), system plan elements (Figures 4-1, 4-4, 4-5 and 4-7) or compliance criteria (Chapter 8), it will evaluate and adopt findings regarding consistency with Regional Growth Goals and Objectives. ~~There may be local (site-specific) goal issues or Goal 14 issues associated with a policy decision at this level — as, for example, when a major new facility is added to the system.~~ No federal system decision made at this level can be considered a final land use decision, since at least one subsequent decision on project specifics will be needed before anything can be built. However, a federal system decision should not foreclose or appear to foreclose full and fair consideration of all relevant goal issues at the time the project specifics are adopted by the local jurisdiction (see 1992 RTP, Chapter 8, Section F).

~~In addition, in those cases where an RTP goal, policy or system plan element amendment implies a particular improvement to such an extent that the goal, policy or system plan element would change as the result of a "no build" project decision later in the process due to goal compliance issues, Metro will prepare an analysis of the broad regional interest in the statewide planning goals based on the information used in the RTP consistency review (Chapter 8, Section F.2.). Metro will identify as part of analysis related to the RTP amendment any and all goals it believes must be addressed by the local jurisdictions before a project decision to implement the system plan can be finalized. If the local jurisdiction determines that the project cannot comply with the statewide planning goals, the RTP will be amended as needed to eliminate reliance on such a project and initiate a cooperative analysis to develop an alternative solution.~~

~~— Whenever RTP policies, system plan elements or consistency criteria are amended, Metro shall specify: a) which elements it requires local jurisdictions to adopt, which it recommends and which it simply encourages or suggests; and b) a date by which local action on these elements must occur. The date identified shall not be sooner than the next regularly scheduled plan amendment process for the affected jurisdiction, nor later than the affected jurisdiction's next periodic review.~~

~~— Proposed amendments to the RTP policies, system plan elements or consistency criteria will be circulated for review to the Department of Land Conservation and Development (DLCD) and parties who request it prior to the action by the Joint Policy Advisory Committee on Transportation (JPACT).~~

~~— At least two weeks before the date of the hearing on any RTP amendment, Metro shall notify by mail all cities and counties affected whenever the proposed amendments (to policy, system or projects) would require local plan changes for compliance.~~

~~— Within two weeks of adoption of an RTP amendment with local plan compliance elements, Metro shall notify by mail each jurisdiction subject to specific recommendations or requirements by that action. This notice shall identify: a) the plan changes recommended or required; b) the date by which the plan change is required; c) the circumstances under which the jurisdiction can~~

~~deny the plan change; and d) the process for resolution when a plan change that Metro has requested or required is denied by the local jurisdiction.~~

~~If the proposed amendment requires Metro action on a UGB issue (amendment or exception), the RTP amendment should identify when and how Metro will address the UGB issues for which it is responsible.~~

The affected jurisdiction is responsible for preparing the specific local plan amendments relating to transportation facilities in this plan ~~recommended or required~~, along with findings of compliance with all applicable goals, and scheduling them for hearing before the governing body in time for action by that body by the time required.

2. Federal RTP Project Amendments

The federal RTP establishes a unified policy direction for the federally funded transportation system and recommends a balanced program of highway, transit and demand management programs to implement that policy direction. The actions recommended, however, do not solve all the transportation problems and are not intended to be the definitive capital improvement program on the local Minor Arterial/Collector system for the next 20 years. Rather, the federal RTP is intended to emphasize the projects estimated to be necessary on the regional and local systems required to make the regional system work. Major developments located on the local minor arterial and collector system may require additional analysis and additional improvements to provide an acceptable level of service. Furthermore, since many of the recommendations are designed to serve expected year 2005 travel demands, an ongoing monitoring and update process is necessary to identify the actual occurrence of a problem. As such, Metro will formally update the plan annually. This consideration by the Metro Council will take place prior to the annual update of the TIP. Since the TIP schedules the expenditure of federal funding in the next five-year period and must be consistent with the adopted federal RTP, it is essential that the federal RTP be reaffirmed or amended prior to updating the TIP.

The type of changes that are expected to be incorporated into the annual update of the federal RTP include the following:

- As the findings of major studies are produced, they will be recommended by a resolution of JPACT and the Metro Council. Annually, they will be incorporated into the Plan.

- During the period between updates, Metro and local staffs will conduct studies resulting in the identification of new highway, transit, bikeway, pedestrian and demand management improvements necessary to meet the objectives of the Plan. The modernization project additions to the federal RTP will be accompanied by an evaluation of 1992 RTP consistency based on the following issues:

  1) Are the objectives to be met by the proposed improvement consistent with the 1992 RTP goals, policies and objectives (Chapter 1);

  2) The degree to which the proposed action meets the identified objectives;

3) The impact of the proposed improvement on the balance of the system;

4) The impact of the proposed action on other 1992 RTP objectives, such as accessibility, air quality, energy consumption, etc.;

5) Functional Classification: Is the proposed action consistent with the function of the facility identified in: a) Chapter 4 of the RTP (for minor arterials of regional significance and above); or b) the local comprehensive plan (for the minor arterials and below); and

6) Performance Criteria: Is the proposed action needed to achieve the performance criteria identified in the RTP as follows:

a) Minor Arterials of Regional Significance and Above Deficiencies are deemed to exist at level-of-service E (exceeding the D-E boundary). Improvements 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 (as a result of policy, impact, cost or other constraints), decisions will be made to accept a lower level of service on segments of particular facilities.

Improvements that are designed to provide a higher level of service than D can be designed and/or provided at the option of the implementing jurisdiction. Such actions must be found consistent with the 1992 RTP as outlined in this section and either: a) a longer range evaluation of travel demand indicates a probable need for right-of-way preservation beyond that necessary for the 20-year project design; or b) the additional service provided by the higher level design is the result of a design characteristic necessary to achieve the minimum RTP service levels.

b) Local Minor Arterials and Collectors.

The proposed action must be consistent with the following principles:

- the local minor arterial/collector system must adequately serve the local travel demands expected from development of the land use plan to the year 2005 to ensure that the Principal, Major and Minor Arterial system is not overburdened with local traffic; and

- the system should provide continuity between adjacent and affected jurisdictions (i.e., consistency between neighboring jurisdictions, consistency between city and county plans for facilities within city boundaries and consistency between local jurisdictions and ODOT plans).

7) Population and Employment Projections: Is the need for the proposed action based on Metro's adopted population and employment projections?

8) Balanced Modal System: Is the proposed action consistent with the mode split and rideshare assumptions identified in the adopted federal RTP?

9) Cost-Effectiveness: Is the proposed action the lowest cost system alternative solution acceptable? If not, why?

10) Are there unacceptable environmental impacts or other considerations that would significantly affect or possibly prohibit construction?

11) Would a goal, policy or system plan element in the federal RTP change as the result of a "no-build" project decision later in the process?

12) Is the project in the local jurisdiction's RFP, and has final local land use action occurred? ~~(The decision to include the project in the RTP would then be a final RTP decision)~~.

13) Is the project contained in or consistent with the RFP, adopted comprehensive plan, or implementation plan(s) of any affected jurisdictions/agencies? Do affected jurisdictions/agencies concur with this project request?

14) What public involvement/information activities have occurred to date regarding the proposed improvement?

The amount of information required to answer these questions should be commensurate with the scope of the project. These additions will be amended into the federal RTP as part of the project update process.

Operations, maintenance and safety improvements are deemed consistent with the policy intent of the federal RTP if: a) they are needed to serve the travel demand associated with Metro's adopted population and employment forecasts; and b) they are consistent with affected jurisdictional plans.

After a project has been incorporated in the federal RTP, it is the responsibility of the local sponsoring jurisdiction to determine the details of the project (design, operations, etc.) and reach a decision on whether or not to build the improvement based upon detailed environmental impact analysis and goal findings demonstrating consistency with all applicable goals and the local comprehensive plan.

If this process results in a decision not to build the project, the federal RTP will be amended to delete the recommended improvement and an alternative must be identified to correct the problem.

3. Local Comprehensive Plan Amendments

All local plans must demonstrate consistency with the 1992 RTP as part of their normal process of completing their plan or during the next regularly scheduled update. It is Metro's

practice to work closely with jurisdictions to obtain consistency in a cooperative manner. A local plan shall be considered in compliance with the adopted 1992 RTP if the following criteria are met:

a. It contains the specific items listed in Chapter 8, Section C, of the 1992 RTP as required for compliance;

b. It does not contain any policies that directly conflict with those adopted in the 1992 RTP; and

c. It contains either:

1) policies which support, encourage or implement one or more of the activities listed above that local jurisdictions are encouraged to pursue; or

2) the local plan or the background materials adopted to support it contain an explanation of why none of the listed activities were considered feasible or appropriate for that jurisdiction.

Metro will review local plans and plan amendments for 1992 RTP consistency. Whenever a local jurisdiction is considering plan amendments which are subject to 1992 RTP local plan compliance requirements, the jurisdiction shall forward the proposed amendments to Metro and to parties who participated in Metro hearings (if applicable) at least four weeks before the final hearing on that amendment, longer if possible. The jurisdiction's staff report shall be provided as soon as available.

Within three weeks of receipt of notice, the ~~Transportation~~ Planning Director shall provide the jurisdiction with a letter certifying that the amendment complies with 1992 RTP requirements, or denying certification for reasons indicated. The jurisdiction may appeal a letter denying certification first to JPACT and then to the Metro Council.

When a proposed local plan amendment directly affects a specific facility, any jurisdiction (ODOT, Tri-Met or local jurisdiction) who owns, is responsible for maintaining or has land use jurisdiction over any portion of that facility, also has standing to appeal to JPACT and the Council a letter granting or denying certification of 1992 RTP compliance.

A jurisdiction shall notify Metro of its decision within two weeks of its final action on a proposed amendment. JPACT shall hold a hearing and forward a recommendation to Metro Council in cases where a jurisdiction has refused to adopt a plan change recommended or required by Metro, or has adopted a proposed amendment which was denied certification. The Metro Council may decide to: 1) amend the 1992 RTP; 2) initiate proceedings to order a plan change; or 3) tolerate the inconsistency.

A decision to amend the 1992 RTP to eliminate or modify the requirement or otherwise achieve consistency might be made on functional grounds, or because the Metro Council accepts

the local jurisdiction's justification for its action (in terms of state planning goal or local plan requirements or other issues) as sufficient reason to accept a functionally inferior solution.

A decision to initiate proceedings to order a plan change would be made when the local justification does not appear to warrant such 1992 RTP changes as deemed necessary to achieve consistency, but it does not at this stage in the proceedings represent a decision that the goals can be complied with — only that the need to achieve consistency by means of a local plan change is sufficiently compelling to warrant ordering that change if the goals can be complied with. The decision to initiate proceedings to order a plan change should specify the specific changes to be ordered.

A decision to tolerate the inconsistency might reflect either the recognition of a process that will lead to eventual resolution of the problem or a judgment that the nature or impact of the inconsistency is insignificant. Where eventual resolution is expected, the Metro Council action should specify when and how the inconsistency should be eliminated and what action is appropriate if resolution does not occur.

If the Metro Council decides to initiate proceedings to order a plan change, those proceedings shall be conducted before a Hearings Officer following the contested case procedures. If a jurisdiction has refused to make a required plan amendment on the grounds that it violates the goals, the Hearings Officer will prepare recommended findings on the goal issues for Council action. Inconsistency of the required plan change with other local plan policies shall be considered a goal issue only if the order proposed by the Metro Council would not eliminate the inconsistency.

If the Metro Council finds that a required plan amendment does meet goal requirements, it will adopt goal findings to support the amendment and an order requiring a jurisdiction to change its plan to adopt that amendment. A date by which the plan must be changed shall be specified in the order.

At the time of each federal RTP update, the project list contained in the appendices to ~~in~~ the federal RTP will be amended to note which projects have received final approval from the local jurisdiction, and to delete any projects rejected by local jurisdictions as a result of its goal analysis or for other reasons.

Those projects that do not require goal findings or inclusion in the local plan or the federal RTP must nonetheless be found to be consistent with the federal RTP before they may be included in the TIP. If such projects require local approval prior to TIP amendment, the Transportation Director will evaluate them and prepare a letter of certification prior to local action if so requested at least a month beforehand.

4. Plan Maintenance

These changes will be incorporated in the federal RTP as part of the update process. In particular, development throughout the region will be monitored to determine whether growth (and the associated travel demand) occurs as forecast. Metro will review its population and

employment forecasts annually and update them at least every five years for the following conditions:

- national or regional growth rates differ substantially from those previously assumed;
- significant changes in growth rate or pattern develop within jurisdictions; and
- a jurisdiction changes its land use plan (and, therefore, its "holding capacity" for new development), thereby increasing or decreasing the maximum allowable level of development in their jurisdiction.

New information gathered during the course of the year on such issues as energy price and supply, population and employment growth, inflation and new state and federal laws may result in different conditions to be addressed by the Plan. These modifications will be incorporated [as part of the annual] as needed during periodic updates to the plan. Each update will occur in cooperation with affected jurisdictions, state agencies and public transit providers. Updates to the federal RTP are completed at least triennially, and cover a 20-year planning horizon.

F ~~G~~. Outstanding Issues

~~Major outstanding issues to be resolved at a later date which may be included as amendments to the Plan are as follows:~~

The following summarizes those issues which will be addressed either as part of the integrated state and federal RTP planning process over the next year or as separated planning studies:

1. Funding

Alternative financing techniques and a comprehensive funding strategy to implement the, ~~highway~~ roadway, freight, transit, bicycle, pedestrian and demand management improvements called for in the federal RTP ~~Plan~~ are currently being developed by various regional bodies composed of both public and private officials. This effort will recommend coordinated mechanisms to address funding shortfalls in the following major categories of system improvements:

Regional Highway Corridors
~~LRT Corridors~~
Urban Arterials
Transit Operations and Routine Capital
Willamette River Bridges-- Major Maintenance/Rehabilitation

The funding strategies will include mechanisms utilizing many sources of funding, such as federal, state, regional, and public/private partnerships.

2. Transportation Rule/Region 2040

The ~~next major~~ integrated update of the RTP (scheduled from June, 1995 through late 1996) will reflect requirements of the Goal 12 Transportation Rule and follow the direction and guidelines established as part of the Region 2040 planning process. The Transportation Rule requires that regional and local planning bodies develop policies and implementation measures which avoid a principal reliance on a single mode of transportation.

Both the Transportation Rule and the Region 2040 planning process will require the region to better understand the transportation/land use relationship as the region grows to the level allowed in the local comprehensive plans. The RTP will be developed as the region's Transportation System Plan (TSP) as called out in the Transportation Rule. As such, it must be consistent with the state TSP (the Oregon Transportation Plan) and will guide local TSPs. As a TSP, the RTP will also be designed to meet State requirements for per capita VMT reductions, increased peak-hour auto occupancy rates, and will based on the adopted and refined Region 2040 Growth Concept. ~~examine alternative land use scenarios to address transportation needs.~~

~~As part of the Region 2040 planning process, alternative land use and transportation scenarios will be evaluated consistent with RUGGO in an effort to formulate a vision for how and where the region should develop as it approaches build-out of the current comprehensive plans over the next 50 years. The evaluate those scenarios and develop the vision, Metro has begun a three to four year study. The RTP will be updated as necessary consistent with results of the study and findings of consistency with RUGGO will be developed for the entire document.~~

The integrated update will ~~Both the Region 2040 process and Rule 12 implementation will~~ utilize new updated employment, population, and travel forecasts, different than the interim set used for this federal RTP..

~~3. Bi-State Transportation Study~~

~~Metro and the Intergovernmental Resource Center of Clark County (IRC) initiated the Bi-State Transportation Study in the summer of 1990 to address the future capacity deficiencies across the Columbia River between Portland and Clark County, Washington based on anticipated growth to 2010 and an RTP level of improvements. The study is also examining the economic inter-relationships between the two sides of the river and is developing a methodology for evaluating the impact of major transportation investments in the corridor on land use. The study is scheduled for completion in late 1991. A decision must be made on whether to proceed with further evaluation of Bi-State alternatives which would include the alternative land use scenarios and the evaluation of urban form resulting from the Region 2040 Plan process.~~

~~4. I-205 LRT/Milwaukie LRT~~

~~Two Preliminary Alternatives Analysis studies will be conducted concurrently examining high capacity transit (HCT) alternatives in travel corridors serving north Clackamas County and south Clark County, Washington. The I-205/Milwaukie HCT study will select either the~~

~~Portland CBD to Clackamas Town Center (CTC) via Milwaukie corridor or the I-205 corridor between the Portland International Airport (PIA) and CTC (connecting east Portland and north Clackamas County with Gateway and the Portland CBD via the Banfield LRT) for advancement to a full scale Alternatives Analysis. The study will also select a set of promising alternatives to be carried into the AA and develop an action plan for the corridor not selected for Alternative Analysis.~~

~~The I-5/I-205 Portland-Vancouver HCT study will make a decision on the preferred corridor for HCT development to connect downtown Portland with Clark County. The alternatives are the I-5 corridor connecting the Portland CBD with central Vancouver and the I-205 corridor connecting east Clark County with Gateway (and the Portland CBD via the Banfield LRT). (The I-205 corridor north to Clark County will not be considered for LRT development within the next 20 years but may be considered for LRT development beyond twenty years). This study will recommend a priority corridor to pursue through an Alternatives Analysis. The timing of the AA for the priority corridor to Clark County will be dependent on the overall funding strategy developed in conjunction with the I-205/Milwaukie study.~~

35. Southeast Corridor ~~Study~~

The initial phase of the Southeast Corridor Study was completed in 1989 ~~has been completed~~. The first phase examined a series of transportation alternatives for minimizing traffic impacts on Johnson Creek Boulevard and recommended action plan. Other outstanding transportation issues exist in the Southeast Corridor extending from the I-5/I-405 loop to U.S. 26 in Boring include: a) an evaluation of the adequacy of Willamette River crossing capacity needs. Metro has begun the South Willamette River Crossing Study to evaluate multi-modal river crossing demand in a study area extending south from the Marquam bridge to Oregon City/West Linn. The study will result in recommendations for replacing the Sellwood Bridge and other potential improvements to existing or potentially new crossing locations; and b) the engineering and definition of improvements to Highways 224 and 212 in the Sunrise Corridor from McLoughlin Boulevard to U.S. 26 (including the alternative designs of expressway or freeway). Portions of the Sunrise Corridor improvement as currently defined may impact resources protected by Statewide Land Use Planning Goals (see also Land Use Issues). ODOT is completing Draft Environmental work on the Sunrise Corridor and beginning to coordinate corridor alternatives with the Region 2040 growth concept.

46. Tualatin-Hillsboro Corridor

The Western Bypass was adopted as a contingent recommendation subject to the findings of a land use and environmental analysis. ODOT continues ~~has begun~~ a study of the Tualatin-Hillsboro Corridor evaluating the need for transportation improvements in the corridor and assessing the land use consequences of a range of reasonable alternatives. The ODOT Western Bypass Study is ~~will~~ incorporating the results of 1000 Friends of Oregon LUTRAQ Study if that study produces a viable land use/transportation strategy.

5~~7~~. Mt. Hood Parkway

There exists a need to develop a principal arterial connection in this corridor and perform engineering and the EIS evaluation process to determine the scope and alignment of the improvement. ODOT continues their study process in this corridor. Certain alternatives identified to date may impact resources protected by Statewide Land Use Planning Goals (see also Land Use Issues).

6~~8~~. TV Highway Corridor

The east-west arterial north of TV Highway will construct a five-lane arterial between 110th and Murray Rd. The route will parallel Center Street and then utilize the existing Milikan Way between Hocken and Murray Road. The major outstanding issue with this project is the proposed arterial's interface with Highway 217. The city and ODOT must decide whether a new interchange will be developed or whether the arterial will simply cross over Highway 217 with no direct access.

ODOT's TV Highway Reconnaissance Study will examine issues in the segment of TV Highway between Murray Blvd. and Hillsboro.

7~~9~~. Land Use Issues

The federal RTP continues to show ~~contains~~ three new proposed improvements on the regional highway system that would likely impact resources protected under the Statewide Land Use Planning Goals:

- Tualatin-Hillsboro Corridor (Western Bypass) in Washington County;
- Highway 224 Extension (I-205 to 135th) in Clackamas County; and
- I-84 to U.S. 26 Connector (Mt. Hood Parkway) in Multnomah County.

The Goal 12 Transportation Rule details the criteria for "Exceptions for Transportation Improvements on Rural Land". It requires that an exception adopted as part of a transportation system plan (TSP) (i.e. the RTP and local comprehensive plans) shall, at a minimum, decide need, mode, function and general location for the proposed facility or improvement. The finding of need must show that the transportation need cannot be accommodated through alternative modes, TSM measures or improvements to existing facilities.

As noted, ~~S~~studies are underway in each of these three corridors to determine whether the transportation needs in those corridors warrant a finding of exception to Goal 14.

~~10. Goods Movement~~

~~Recognizing that freight movement is equally as important as people movement in an effective transportation system, Metro will examine access constraints to industrial development and existing truck travel constraints as a tool for setting priorities for needed highway improvements.~~

~~11. Five Year Transit Development Plan~~

~~Consistent with the RTP, Tri-Met will develop detailed transit service improvements and update their five year plan annually. This will be submitted to Metro for endorsement and the key features will be incorporated into the RTP. In addition, studies will be undertaken to examine the feasibility and cost effectiveness of alternative transit strategies for suburban areas.~~

~~12. Demand Management Planning~~

~~The FY92 Unified Work Program identifies a number of air quality planning activities, including a regional demand management planning study. The study will evaluate and adopt demand management programs for inclusion in the RTP to, in part, reduce vehicle miles traveled, reduce automobile related emissions, conserve energy, and generally assist other objectives related to congestion and mobility. Study recommendations will reflect both RTP and Oregon Transportation Plan demand management policies. The study process will coordinate with the Portland Area Demand Management Working Group.~~

~~8~~13. Access Control Plans

ODOT and Metro will examine existing access control plans on the principal arterial system and develop specific techniques to minimize direct property access. Major and minor arterials will be examined by Metro or the local jurisdiction as re-sources are available. Additional policy development for access control is required.

~~14. Light Rail Analyses~~

~~It is necessary to specifically identify alignments for the alternative LRT routes specified in the adopted Long Range Transitway System component of the RTP to provide local jurisdictions sufficient information to protect the right-of-way from encroachment. In addition, the process and priorities for the transition from bus trunk routes to transitways should be developed through an examination of factors relating to ridership, economy, densities and compatibility of adjacent land uses, and the staging of initial increments as opposed to future branches and extensions.~~

~~Studies should be undertaken in the future to determine if an appropriate corridor or level of demand exists to provide a loop extension of the MAX LRT line in East Multnomah County. If~~

~~such a corridor can be found, subsequent studies should be undertaken to determine the feasibility of such an extension or alternative suburban transit strategies.~~

~~9~~15. Development Impacts

As development plans for specific sites are developed, conflicts between transportation and neighborhood objectives will arise. Localized impacts of development on the transportation system should be assessed and measures undertaken to resolve these conflicts.

~~10~~16. U.S. 26/I-405/I-5 Connection

Alternative connections to provide improved access and traffic flows will be developed and evaluated through the South Willamette River Crossing Study and potentially through the I-405 Reconnaissance Study.

~~17. Cornell and W. Burnside~~

~~— Issues surrounding the functional classification and sizing of these facilities require resolution.~~

~~18. Clean Air Act Amendments of 1990~~

~~— The region must comply with the provisions of the CAAA which include a requirement that the projects included in the Transportation Improvement Program (TIP) demonstrate conformity by reducing regional VMT when compared with a No-Build condition.~~

~~19. 2010 RTP Update~~

~~— The Interim RTP update scheduled for next year will begin to address the changing policy issues brought about by the Goal 12 Transportation Rule, the Clean Air Act Amendments and RUGGO. This will involve updating the population and employment forecasts for the year 2010. This interim update will provide the opportunity to address alternative transportation strategies consistent with RUGGO but will stop short of thoroughly addressing the analysis of alternative land use scenarios called for in the Transportation Rule. An RTP update will provide 2015 travel forecasts and will implement functional plans and the Region 2040 transportation and land use recommendations.~~

11. Performance Measures/Modeling Tools

A number of planning activities are underway to enhance the ability to evaluate the transportation system. More and more, these measures are oriented toward the transportation system user. In other words, translating information into how it will effect a driver, transit rider, bicyclist, walker, or trucker. These activities include:

- Congestion Management System (CMS). Required by ISTEA, the CMS requires better information and measures prior to increasing roadway capacity for single-occupant drivers.

Alternative modes of travel must be considered within congested corridors. Metro is working with ODOT and local jurisdictions to develop the CMS. New measures will examine people movement through a corridor, as opposed to vehicles. Capacity will thus be determined based on reasonable expectations of people, not vehicles. The CMS will being implemented beginning October, 1995.

- Intermodal Management System (IMS)/Freight System. Similar to the CMS, the IMS and freight system will include performance measures related to the movement of commodities. Metro is the lead agency with ODOT and the Port of Portland for the IMS in the Portland area. Implementation of the full IMS will begin in October, 1995.

- Other Management Systems. ISTEA also required safety, pavement, and bridge management systems. ODOT is lead agency on those systems. As the systems are completed, relevant measures may be incorporated into future federal RTPs.

- Modeling. Metro is the lead agency for the regional travel forecasting model. Historically, the model has primarily been used to evaluate the roadway and transit networks. Metro is working with ODOT and other Oregon metropolitan areas with similar models to improve bicycle, pedestrian, freight, and demand management analysis tools.

- Cost/Benefit. One of the most difficult to determine, yet most often requested measure, is cost/benefit. The difficulty lies in that different projects have different intentions and/or serve different modes. Further difficulty lies in putting a value on those varied benefits. Similarly, while determining a project cost is fairly straight-forward, there are major philosophical differences as to the true cost of transportation projects, particularly when environmental costs are included. Metro will be looking at developing a cost/benefit method over the next year. It may only be applicable to the Transportation Improvement Program.

- Multi-modal accessibility. Metro hopes to develop an accessibility measure to evaluate the quality of accessibility from place to place within the region by various modes. The measure would be a useful comparative analysis tool to locate public investment.

12. Multi-Modal Design Criteria.

Similar to a multi-modal accessibility measure, a need exists to develop multi-modal design criteria for roadways. With the multi-modal emphasis of federal and state law, roadways must more and more be shared among competing modes, including autos, trucks, bicyclists, and pedestrians. Design criteria, tied to land use characteristics should be developed. The criteria would recognize that a roadway function changes over its entire length and that design criteria would also vary.

13. Congestion Pricing.

On behalf of the region, Metro and ODOT have applied to FHWA for pre-project funding for a Congestion Pricing Pilot Project. Pre-Project funding will focus on developing consistent and

accurate information about congestion pricing for the public and decision-makers; a public involvement, education, and learning component to better understand public response to pricing as a transportation tool that addresses congestion; model upgrades to better predict the effects of pricing on the system; social and environmental analysis to determine impacts on the environment and income groups; and, an alternatives analysis to determine a preferred location for a potential congestion pricing demonstration. The study will be complete in 1997. Any test demonstration would require additional FHWA funding and state legislative approval.

14. Several remaining projects have been identified in the planning process but require further review and consensus- building prior to inclusion in the RTP. It is anticipated that additional analysis of these projects will commence at a point after the adoption of the RTP or be included in the efforts to resolve the outstanding issues mentioned above.

- Boeckman Road/I-5 Interchange
- Cornelius Pass Road (function and scope of improvement)
- I-5 North/N. Kerby Avenue Off-Ramp
- Birdsdale Bypass/Corridor Study

Glossary

Glossary

C-TRAN - Transit agency for Clark County, Washington.

Capital Improvement Program (CIP) - Local document which programs funds for non-operational (capital) infrastructure improvements/investments.

Citizen Advisory Committee (CAC) - Selected for a specific issue, project, or process, a group of citizens volunteer and are appointed by Metro to represent citizen interests.

Congestion Mitigation/Air Quality (CMAQ) - A program within the ISTEA ($6 billion over 6 years) to address congestion and transportation-related air pollution.

Functional Plan - A limited purpose multi-jurisdictional plan for an area or activity having significant district-wide impact upon the orderly and responsible development of the metropolitan area that serves as a guideline for local comprehensive plans consistent with ORS 268.390.

Growth Concept - A concept for the long-term growth management of our region, stating the preferred form of the regional growth and development, including if, where, and how much the urban growth boundary should be expanded, what densities should characterize different areas, and which areas should be protected as open space.

Inner Neighborhoods - Areas in Portland and the older suburbs that are primarily residential, close to employment and shopping areas, and have slightly smaller lot sizes and higher population densities than in outer neighborhoods.

Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 - The most recent federal highway/transit funding reauthorization, which provides regions and states with additional funding and more flexibility in making transportation decisions. Among other things, the Act requires the metropolitan area planning process to consider such issues as land use, intermodal connectivity, methods to enhance transit service, and needs identified through the management systems.

Joint Policy Advisory Committee on Transportation (JPACT) - A 17-member committee of local-area elected officials, Metro councilors and other transportation officials who coordinate transportation decisions for the region.

Land Conservation and Development Commission (LCDC) - The 7-member directorship of Oregon's statewide planning program. The LCDC is responsible for approving comprehensive land use plans promulgating regulations for each of the statewide planning goals.

Local Comprehensive Plan - A generalized, coordinated land use map and policy statement of the governing body of a city or county that inter-relates all functional and natural systems and activities related to the use of land, consistent with state law.

Main Streets - Neighborhood shopping areas along a main street or at an intersection, sometimes having a unique character that draws people from outside the area.

Metro -The regional government and designated Metropolitan Planning Organization (MPO - see below) of the Portland metropolitan area. It is governed by a 7-member Metro Council (see below) 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 (UGB - see below), and for regional transportation planning activities such as the preparation of the RTP, and the planning of regional transportation projects including light-rail.

Metro Committee for Citizen Involvement (MCCI) - composed of citizen representatives from the Tri-Counties area, to "advise and recommend actions to the Metro Council on matters pertaining to citizen involvement."

Metro Council - composed of 7 members (formerly 13) 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 Transportation (JPACT - see above).

Metro Policy Advisory Committee (MPAC) - Established by the Metro Charter and composed of local elected officials (including representatives from Clark County, WA and the State of Oregon), MPAC is responsible for recommending to the Metro Council adoption of or amendment to any element of the Charter-mandated Regional Framework Plan.

Metropolitan Housing Rule - A rule (OAR 660, Division 7) adopted by the Land Conservation and Development Commission to assure opportunity for the provision of adequate numbers of needed housing units and the efficient use of land within the Metro Urban Growth Boundary. This rule establishes minimum overall net residential densities for all cities and counties within the urban growth boundary, and specifies that 50% of the land set aside for new residential development be zoned for multifamily housing.

Metropolitan Planning Organization (MPO) - An individual agency designated by the state governor in each federally recognized urbanized area to coordinate transportation planning for that metropolitan region. Metro (see above) is that agency for Clackamas, Washington and Multnomah Counties; for Clark County, Washington, that agency is the Southwest Washington Regional Transportation Council (SWRTC, formally the Intergovernmental Resource Center, or IRC).

Metropolitan Transportation Improvement Program (M-TIP) - a staged, multiyear, intermodal program of transportation projects which is consistent with the metropolitan transportation plan.

Mixed-use employment areas - Areas that include various types of commercial and retail development as well as some residences.

Neighborhood Centers - Retail and service development that surrounds major MAX stations and other major intersections, extending out for one-quarter to one-half mile.

Oregon's Statewide Planning Goals - 19 goals in four broad categories: land use, resource management, economic development, and citizen involvement. Locally adopted comprehensive plans and regional transportation plans must be consistent with the statewide planning goals.

Oregon Transportation Plan (OTP) - the State's official statewide, intermodal tranportation plan that will set priorities and state policy in Oregon for the next 40 years. The plan, developed by the Oregon Department of Transportation through the statewide transportation planning process, responds to federal ISTEA requirements (see above) and Oregon's Transportation Planning Rule (TPR - see below).

Outer Neighborhoods - Areas in the outlying suburbs that are primarily residential, farther from employment and shopping areas, and have slightly larger lot sizes and lower population densities than inner neighborhoods.

Project Management Group (PMG) - A group of technical staff managers from the government agencies participating in the project. The PMG is responsible for directing and reviewing the work of the Technical Advisory Committee (TAC - see below) and forwarding recommendations to advisory groups and the local decision-making bodies.

Regional Centers - Areas of mixed residential and commercial use that serve hundreds of thousands of people and are easily accessible by different types of transit.

Regional Framework Plan - Required of Metro under the Metro Charter, the Regional Framework Plan must address nine specific growth management and land use planning issues (including transportation), with the consultation and advice of MPAC (see above). To encourage regional uniformity, the regional framework plan shall also contain model terminology, standards and procedures for local land use decision making that may be adopted by lcoal governments.

Regional Transportation Plan (RTP) - The official intermodal transportation plan that is developed and adopted thorough the metropolitan transportation planning process for the metropolitan planning area.

Southern Washington Regional Transportation Council (SWRTC) - The designated Metropolitan Planning Organization (MPO - see above) for the Clark County (Washington state) portion of the Portland/Vancouver metropolitan region.

State Implementation Plan (SIP) - A plan for ensuring that all parts of Oregon remain in compliance with Federal air quality standards.

State Transportation Improvement Program (STIP) - A staged, multiyear, statewide, intermodal program of transportation projects with is consistent with the Statewide transportation plan and planning processes and metropolitan plans, TIPs and processes.

Technical Advisory Committee (TAC) - A group of technical staff from government agencies participating in the project. The TAC is responsible for producing the base technical information that will ultimately be used by local decision-makers to complete the project purpose. (See also, PMG, above.)

Town Centers - Areas of mixed residential and commercial use that serve tens of thousands of people.

Transit-Oriented Development - A mix of residential, retail and office uses and a supporting network of roads, bicycle and pedestrian ways focused on a major transit stop designed to support a high level of transit use. Key features include: a mixed use center and high residential density.

Transportation Corridors - Residential and retail development concentrated along major arterials and bus lines.

Transportation Demand Management (TDM) - Actions, such as ridesharing and vanpool programs, the use of alternative modes, and trip-reduction ordinances, which are designed to change travel behavior in order to improve performance of transportation facilities and to reduce need for additional road capacity.

Transportation Disadvantaged/Persons Potentially Underserved by the Transportation System - Those individuals who have difficulty in obtaining transportation because of their age, income, physical or mental disability.

Transportation Enhancement Activities (TEA's) - An exclusive list of ten specific activities which are eligible for funding (at least 10% of STP funds). Included are bicycle and pedestrian facilities, rehabilitation of histroic transportation facilities, and control of outdoor advertising.

Transportation Planning Rule (TPR) - The implementing rule of statewide land use planning goal (#12) dealing with transportation, as adopted by the State Land Conservation and Development Commission (LCDC - see above). Among its may provisions, the Rule includes requirements to preserve rural lands, reduce vehicle miles traveled (VMT) per capita by 20% in the next 30 years, and to improve alternative transportation systems.

Transportation Policy Alternatives Committee (TPAC) - Senior staff-level policy committee which reports and makes policy recommendations to JPACT (see above). TPAC's membership includes technical staff from the same governments and agencies as JPACT, plus representatives of the Federal Highway Administration and the Southwest Washington Regional Transportation Council (SWRTC - see above); there are also six citizen representatives appointed by the Metro Council (see above).

Transportation Project Development - The process by which a planned transportation improvement is implemented, including: environmental analysis, location and design determinations, and right-of-way acquisition.

Transportation System Management (TSM) - Strategies and techniques for increasing the efficiency, safety, capacity or level of service of a transportation facility without major new capital improvements. This may include programs that encourage transit, carpooling, telecommuting, alternative work hours, bicycling, walking, signal improvements, channelization, access management, HOV lanes, etc.

Transportation System Plan (TSP) - A plan for one or more transportation facilities that are planned, developed, operated and maintained in a coordinated manner to supply continuity of movement between modes, and within and between geographic and jurisdictional areas.

Tri-Met - Tri-County Metropolitan Transportation District, which is the transit agency for most of Clackamas, Multnomah and Washington Counties.

Regional Urban Growth Goals and Objectives (RUGGOs) - An urban growth policy framework that represents the starting point for the agency's long-range regional planning program.

Transportation Planning Rule (TPR) - The implementing regulations for Statewide Planning Goal 12 (Transportation), adopted in 1991. Among its many provisions, the Rule includes requirements to preserve rural lands, reduce reliance on the automobile/reduce vehicle miles traveled (VMT) per capity by 20% in the next 30 years, and to improve alternative transportation systems.

Transportation Policy Alternatives Committee (TPAC) - Provides technical input to the JPACT policy-makers. TPAC's membership includes technical staff from the same governments and agencies as JPACT, plus others. There are also six citizen representatives appointed by the Metro Council.

Unified Work Program (UWP) - 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 by state transportation agencies or their subgrantees.

Urban Growth Boundary - The politicaly defined boundary around a metropolitan area outside of which no urban improvements may occur (sewage, water, etc.). It is intended that the UGB be defined so as to accommodate all projected population and employment growth within a 20-year planning horizon. A formal process has been established for periodically reviewing and updating the UGB so that it accurately reflects projected population and employment growth.

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

Priorities '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.

For 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** **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** **1,007,100**
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.

PTDM1 **Central City TMA** **300,000**
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** **120,000**
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** **400,000**
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** **150,000**
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**
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** **500,000**
Construct bike lanes and sidewalks on several local streets providing access to the Springwater Trail.

WP1 **City of Forest Grove: Pacific Avenue Pedestrian/Bikeway** **102,000**
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	**$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

Metro: 4/7/95

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 1980 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	LINK	2015 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						MULTI-MODAL FACTOR				REQUESTED FUNDS	CUMMULATIV TOTAL
						1990 V/C	SCALE 1990 >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 COMMT'D (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	$6,000,000	$6,000,000
2	W	RXt	14	Murray S. Sig. Intercon (Farmington - Millikan Ave.)	90	1.08	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	$6,031,000
3	M	RXt	1	238th Ave./Halsey St. Intersection	88	1.41	15	10	1.17	*	20	13	5.77	3.36	2.41	$419,650	$8,706	15	5	5	5	15	$376,531	$6,407,531
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	$65,963	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	$2,692	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	$115,500	$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	$6,172	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	$53,252	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	$553,000	$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	$600,000	$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	$1,015,000	$1,015,000	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	5	0	5	$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	8	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	$1,740,665	$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	0.54	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	0.60	0.9	0	0	0	0	0	$1,385,000	$1,385,000	0	0	5	0	5	$850,000	$60,496,273

TRANSIT

	AG'CY	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 = 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)

	AG'CY	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	M	TOD	6	Milikian 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

	AG'CY	MODE	PROJ NO.	PROJECT NAME	TOTAL SCORE	RIDERSHIP POTENTIAL				REGIONAL SYSTEM CONNECTIVITY	SAFETY		2040 SUPPORT FACTOR	COST/BENEFIT FACT				CUMULATIVE TOTAL	
						1990 TRIPS	2015 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	376	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

Fact Sheet - Regional Water Supply Plan for the Portland Metropolitan Area - Phase 2

- In January 1991 the Portland City Council adopted a resolution directing the Water Bureau (Bureau) to work with other water providers to begin to address regional water supply issues.

- The Water Bureau organized the region's water providers to discuss these issues. This Regional Providers Advisory Group (RPAG) has continued to meet on a monthly basis for the last two years.

- The Bureau, in cooperation with the RPAG, contracted with consulting firms to complete three studies. The "Phase 1" studies projected future regional water demand, evaluated potential water source options, and identified water conservation opportunities for the Portland retail customer base.

- Phase 1 indicated that future water demand in the region will exceed all existing supply sources by the year 2050. Some of the systems are already constrained on peak days or for the peak season.

- Phase 1 recommended that there be additional, detailed study of regional conservation, transmission and system efficiency, and several new supply sources including a third dam/reservoir on the Bull Run River, expansion of Barney Reservoir on the Trask River, expanded diversion and treatment of the Clackamas River, new diversions and treatment of the Willamette and Columbia Rivers, and aquifer storage and recovery.

- After the studies were finalized, the RPAG distributed summary reports and held workshops, roundtable discussions, and briefings throughout the region to receive public input on the Phase 1 and issues that should be addressed during "Phase 2" of the planning effort. This public input was incorporated into the scope of work for Phase 2.

- The RPAG determined that Phase 2 must provide clear guidance on how to meet regional water demand to the year 2050. Phase 2 must also provide phased implementation strategies for regional water demand management programs, transmission and systems efficiency, supply development, and institutional relationships. Public involvement must be a key component of the planning effort.

- A group of regional water provider representatives and several technical experts selected the firm Barakat and Chamberlin to manage the development of an *integrated water supply plan* for the region. B&C will be managing an interdisciplinary project team for the project. The team includes the firms Montgomery Watson, Parametrix, Barney & Worth, Murray Smith and Associates, and Squier Associates.

For more information contact: Dominique Bessee
823-7528

- The integrated resource planning approach resembles the *least cost planning* approach used by electric utilities. The approach involves evaluation of the costs, benefits, impacts (including environmental externalities) and risks of both demand management and supply options "on a level playing field." It includes extensive public involvement and assesses the ability of the individual options and scenarios to meet the policy objectives and values of the region.

- The project began in early May of 1993. Twenty-seven of the region's water providers have signed intergovernmental agreement (IGA) to fund and manage the project. The Administrator of the City of Portland Water Bureau chairs the 27 member Participants Committee. The project participants have delegated certain project management responsibilities to a six-member Steering Committee. The Steering Committee consists of two representatives from Multnomah, Washington, and Clackamas Counties, and chaired by the City Manager of Hillsboro. Portland is administering the project contract on behalf of the provider participants, and has assigned professional planning staff to provide specific project management and coordination services for the project as authorized through the IGA and contract.

- The project will cost approximately $2,229,965 and will take about two years to complete. Costs have been delegated apportioned on the basis of projected growth in peak day water demand.

- **Reasons for participating in the Regional Water Supply Plan project:**

  - Economies of Scale - the cost of doing this level of analysis as individual providers would be prohibitive.

  - Understanding the "big picture" - examining issues in regional, sub-regional, and hydrologic sub-basin contexts will provide an understanding of complex, interconnected issues that extend beyond jurisdictional and service area boundaries.

  - Facilitating program and project development - Using the integrated resources planning approach will help ensure the success of regional demand management efforts and reduce the risks associated with permitting of supply projects (e.g., the Two Forks project).

  - Facilitating public involvement and decision making - the IRP process incorporates public values into the analysis, and displays the benefits, costs, impacts, and risks of "alternative water supply futures" in ways that people can understand.

  - Demonstrating accountability as public service providers - participating in this planning effort shows that we can plan and operate regionally as responsible water providers.

For more information contact: Dominique Bessee
823-7528

Major Accomplishments of the Regional Water Supply Plan
Phase 2 Project May 1993 - March 1995

- Demand projections for the region have been generated based on the adopted Metro growth concept. Naturally occuring conservation and real price effects have been factored into the demand curves for winter, summer, peak day, and annual average.

- Analysis of the source options (Columbia, Bull Run, Willamette, Clackamas, and Aquifer Storage and Recovery) has been completed. All of the sources appear to be viable sources for inclusion in the scenarios to be evaluated during the integration phase of the plan.

- A broad range of Conservation technologies has been evaluated and grouped into demand reduction programs for indoor and outdoor uses in the residential and non-residential (commercial, industrial, and institutional) sectors. Three levels of demand reduction programs have been prepared. This work will be refined during March and incorporated into the water supply scenarios for evaluation.

- An environmental task force has reviewed and provided valuable input toward the environmental analysis of the source options.

- Characterization of the existing supply systems has continued to ensure that water demands and the current supply system are adequately linked in the integration phase to accurately identify needs for future supply programs, sources, or interconnections. Two assumptions for additional supply have been made, one for the expansion of the Barney (Trask) Reservoir and another for some expansions to existing systems on the Clackamas River.

- Transmission alternatives are being prepared for inclusion in the scenarios which will be presented in the preliminary regional water supply plan discussion document.

- Non-potable water use has been evaluated and meetings has been held with the wastewater providers to ensure that this source is considered in the plan.

- A host of public and stakeholder involvement activies have been completed. Input from these activities has contributed to the formulation of policy objectives for the plan. These policy objectives have driven the development of evaluation criteria with which to evaluate the demand management and supply alternatives and scenarios. (The policy objectives are attached)

- A computer model called IRPLanner has been developed to allow regional and subregional scenarios to be created and evaluated. The scenario formulation process beginning now will be an integral part of the preliminary plan (scheduled for completion in July) and will assist in the formulation of the final plan (scheduled for adoption by the Participants by the end of 1995.

- Participating water provider entities continue to cooperatively work toward the mutual goal of developing the long-range Regional Water Supply Plan. Metro has joined the effort as a participant and will be an important player in adopting a regional water supply plan that supports the 2040 decisionmaking.

SUMMARY OF CONSERVATION SAVINGS

RESIDENTIAL PROGRAMS

	MGD Saved Year 2025	MGD Saved Year 2050	Target Market
Level 1 - Education & Workshops			
Residential Education	3.26	4.32	All residential customers
Residential Customer Landscaping Workshops	0.17	0.31	Existing home relandscapes
Trade Ally Landscaping Workshops - Res. Portion	0.82	1.74	New landscaping & irrig. equip.
Subtotal Level 1	4.25	6.37	
Level 2 - Technical Assistance & Incentives			
Residential Audits	0.40	0.40	Existing customers - top 20%
Appliance Tagging and Incentives	1.69	2.98	New & replacement clotheswashers
Residential Outdoor Incentives	4.99	12.89	New & replacement landscaping & irrig. equip.
Subtotal Level 2	7.08	16.27	
Level 3 - Retrofit & Regulation			
Residential ULFT Rebate	2.09	-	Retrofit of existing inefficient toilets
Residential Landscaping Ordinance	6.95	18.91	New landscaping and irrigation systems

CI&I PROGRAMS

	MGD Saved Year 2025	MGD Saved Year 2050	Target Market
Level 1 - Education & Workshops			
Commercial Plumbing & Appliances Educ.	0.35	0.45	All CI&I customers
HVAC Workshops	0.45	0.45	Existing CI&I
CI&I Outdoor Education	0.34	0.44	All CI&I customers
CI&I Watering Practices Workshop	0.14	0.14	All CI&I customers & trade allies
Trade Ally Landscaping Workshops - CI&I Portion	0.31	0.93	New landscaping and irrigation equipment
Subtotal Level 1	1.59	2.41	
Level 2 - Technical Assistance & Incentives			
CI&I Indoor Audits	0.24	0.24	Existing customers - top 20%
CI&I Outdoor Audits	0.73	0.73	Existing customers - top 20%
Large Landscape Audits	0.96	0.96	Existing large landscapes
HVAC Incentives	1.16	1.63	New and replacment HVAC equipment
Industrial Process Technical Assistnance & Incentives	1.65	2.25	New, replacement, & existing indust. process
CI&I Outdoor Incentives	3.01	8.03	New landscaping and irrigation equipment
Subtotal Level 2	7.75	13.84	
Level 3 - Retrofit & Regulation			
CI&I ULFT Direct Install and Incentives	2.00	-	Retrofit of existing inefficient toilets
Single Pass Cooling	0.28	0.28	Retrofit of existing single pass systems
CI&I Landscaping Ordinance	4.42	12.32	New landscaping and irrigation systems
CI&I ULFT Regulation	3.38	4.52	

GRAND TOTALS

LEVELS 1 & 2	20.67	38.88
% of Average Regional MGD Seasonal Demand*	8%	11%
LEVELS 1 & 2 W/ CI&I ULFT REG AND SINGLE PASS:	24.33	43.68
% of Average Regional MGD Seasonal Demand*	9%	12%
LEVELS 1, 2, & 3 W/O ORDINANCES	28.42	43.68
% of Average Regional MGD Seasonal Demand*	11%	12%
LEVELS 1, 2, & 3 W/ ORDINANCES	31.79	53.99
% of Average Regional MGD Seasonal Demand*	12%	15%

*Figures used are average MGD price net seasonal demand in the medium scenario for the years 2025 (268 MGD) and 2050 (350 MGD) .

Regional Water Supply Plan - Policy Objectives

- Used to help design integrated water resource scenarios.
- Provide a foundation for criteria with which to evaluate options and/or scenarios.
- Capture the diverse set of values and priorities in the region -- will help show *tradeoffs*.
- Some policy objectives may be complementary (e.g., maximize efficiency and environmental protection), while some may "compete" or "conflict" (e.g., minimize cost and maximize reliability).
- There is overlap between some objectives (e.g., reliability, flexibility, impacts of catastrophic events -- and the role of transmission).
- Each objective has one or more evaluation criterion.
- Policy objectives have been reviewed by participant decision making bodies.

Policy Objectives

Efficient Use of Water

- Maximize the efficient use of water resources, taking into account the potential for conservation, availability of supplies, practicality, and relative cost-effectiveness of the options.
- Make best use of available supplies before developing new ones.

Reliability

- Minimize the frequency of water shortages of any magnitude and duration.
- Ensure the ability to manage the duration and magnitude of shortages (e.g., through the operation of raw water storage facilities or through access to alternative sources of water).

Water Quality

- Meet or exceed all current and future federal and state water quality standards for finished water.
- Maximize the ability to protect water quality in the future, including the ability to use watershed-protection based approaches.
- Utilize sources with highest raw water quality.
- Maximize the ability to deal with aesthetic factors, such as taste, color, hardness, and odor.
- Ensure the ability to mix water sources across the region.

Impacts of Catastrophic Events

- Minimize the magnitude, frequency, and duration of service interruptions due to natural or human caused catastrophes, such as earthquakes, landslides, volcanic eruption, floods, spills, fires, sabotage, etc.

Economic Costs

- Minimize the economic impact of capital and operating costs of new water resources on customers.
- Assure the ability to relate the rate impacts associated with new water resources to the benefits gained within the region on an equitable basis over time.

Public Acceptability

- Maximize the acceptability of regional water resource strategies by meeting the needs of the public at large.
- Maximize the acceptability of regional water resource strategies by meeting the needs of stakeholders.
- Maximize the acceptability of regional water resource strategies by meeting the needs of elected officials, including the state legislature and Metro.

Institutional arrangements

- Ensure that feasible institutional arrangements exist or can be developed to implement the selected resource strategy(ies).

Environmental Impacts

- Minimize the impact of water resource development on the natural and human environments.

Growth

- Be consistent with Metro's regional growth strategy and local land use plans.

Flexibility to Deal with Future Uncertainty

- Maximize the ability to anticipate and respond to unforeseen future events or changes in forecasted trends.

Ease of Implementation

- Maximize the ability to address local, state, and federal legislative and regulatory requirements in a timely manner.

Operational Flexibility

- Maximize operational flexibility to best meet the needs of the region, including the ability to move water around the region and to rely, as necessary, on backup sources.