STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 92-1610 FOR THE PURPOSE OF ESTABLISHING THE TPAC TRANSPORTATION DEMAND MANAGEMENT SUBCOMMITTEE

Date: April 22, 1992 Presented by: Andrew Cotugno

PROPOSED ACTION

Adopt Resolution No. 92-1610 establishing a TPAC Transportation Demand Management (TDM) Subcommittee; outline general subcommittee duties and responsibilities; and establish general subcommittee membership and meeting guidelines. This resolution and establishment of the subcommittee respond to recent federal, state and regional actions which have numerous TDM or TDM-related planning and program requirements.

TPAC has reviewed this TDM Subcommittee structure and recommends approval of Resolution No. 92-1610.

FACTUAL BACKGROUND AND ANALYSIS

Background of Regional TDM Activities

Recent action at the federal, state and regional level calls for a number of policy, planning and programming requirements which relate either directly or indirectly to TDM. These actions and their inherent requirements or milestones are summarized below. Substantial TPAC/JPACT involvement and coordination will be necessary in order to address these respective requirements and milestones.

1. Federal Actions:

   . Clean Air Act Amendments of 1990. The Portland metropolitan area is designated as a "non-attainment" area for both ozone and carbon monoxide (CO). Attainment deadlines for the area are November 1993 for ozone and November 1995 for CO. Based on recent analyses, the area will meet the deadlines. However, in conjunction with applying for attainment, the region must submit an approved "maintenance plan" which identifies appropriate "transportation control measures" (TCMs) intended to maintain air quality within federal standards. Most TCMs are TDM-related. The TCMs and the maintenance plan will require regional consensus and approval through the TPAC/JPACT process.

   . Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. This act has two major areas of TDM implication. First, the funding programs provide more flexibility in their distribution. Congestion Mitigation/Air Quality, STP

and NHS funds are available for TDM and transit projects. The programming of such funds for TDM actions will require regional consensus and approval. Second, ISTEA requires urban areas to develop a Congestion Management Program. The program will likely include TDM measures and again will require regional approval.

2. State Actions:

. State Transportation Rule 12. The Rule establishes goals related to the reduction of single-occupant automobile use through improved transportation and land use efficiencies. Requirements related to per capita VMT reductions will require substantial consideration of TDM strategies (see Regional Activities below).

. Oregon Transportation Plan (OTP). Echoing Rule 12, the draft Policy Element of the OTP calls for balanced multi-modal passenger transportation systems in urban areas. The systems are to be consistent with Rule 12 goals for reducing reliance on the single-occupant automobile.

. Governor's Task Force on Automobile Emissions in the Portland Area. The Task Force was established by the 1991 Legislature and is examining emission reduction strategies in order to ensure air quality in the Portland region. The work is being coordinated with regional activities identified below. Results of the Task Force will be forwarded to the 1993 Legislature. Ultimately, specific emission strategies may be incorporated into the air quality maintenance plan and possibly the Congestion Management Plan and RTP.

. ODOT TDM Work Group. ODOT hired staff in the fall of 1990 to establish state project development and funding guidelines related to TDM activities which primarily provide for better efficiencies on the state highway system. The Work Group is responsible for developing TDM project recommendations for consideration in ODOT's Six-Year Program. The Work Group consists of representatives of local jurisdictions, Metro, ODOT, Tri-Met, LCDC and the Department of Energy. It is the intention of this resolution to transform the Work Group into the TPAC TDM Subcommittee and charge them with the responsibility of advising TPAC on significant and appropriate regional TDM activities.

3. Regional Actions:

. RUGGO/Region 2040. The Regional Urban Growth Goals and Objectives also call for a regional transportation system which reduces reliance on the single-occupant automobile in order to improve air quality, reduce energy consumption and minimize system costs and environmental impacts. The

Region 2040 study will incorporate TDM strategies as part of each of its transportation/land use scenarios.

- Regional Transportation Plan (RTP). The RTP calls for a balanced transportation system which includes strategies for transit, highways/arterials and TDM. To achieve this balance and to meet Rule 12 requirements, updates to the RTP will likely include a significant number of additional TDM recommendations.

- Metro TDM Study. The Metro TDM study will expand on the work of the Governor's Task Force to identify specifically appropriate TDM strategies for the region. Recommendations of the study will be forwarded for adoption into the RTP.

In addition to the above activities, periodic TDM opportunities may arise related to funding. An example is the FHWA/FTA Operation Action Program related to urban mobility. The program seeks innovative methods to address mobility. The majority of methods fall under the TDM category.

TPAC TDM Subcommittee

As mentioned, each of the above activities will require review and possibly formal action through TPAC/JPACT and the Metro Council. Ancillary to each are any number of studies and other planning activities which will require regional review and coordination. Finally, many if not all will have planning and programming implications for local jurisdictions and may require local adoption.

To assist TPAC in the review and development of regional TDM-related activities, it is recommended that the ODOT TDM Working Group for the Portland should be restructured and assigned as the TPAC TDM Subcommittee. The subcommittee's activities and structure would be as follows:

Purpose: The TPAC TDM Subcommittee would be responsible for the initial development, evaluation, review and recommendations of regional TDM planning, programming and implementation activities. The subcommittee would report to and develop recommendations for TPAC consideration. Where appropriate, recommendations will be forwarded for JPACT review and adoption.

Participants: The subcommittee is recommended to include representatives from the agencies currently represented on the ODOT TDM Working Group: ODOT; Tri-Met; Metro; Washington, Clackamas and Multnomah Counties; City of Portland; Oregon Department of Energy, DLCD; and DEQ. In addition, one citizen member, one bicycle advocacy member, one representative from the other cities, one business representative and a representative from the Clark County Strategic Planning Group should also participate. Selection of the committee is the responsibility of the participating jurisdiction or agency and appointments shall be made by

TPAC. Each jurisdiction should appoint a representative and an alternate. Jurisdictions and agencies are free to substitute members dependent upon issues and required expertise.

To keep the subcommittee at a manageable size, non-represented local jurisdictions should be apprised monthly of subcommittee activities through their respective county coordinating committee.

Meetings: The subcommittee is recommended to meet monthly on the second Thursday at 1:30 p.m. The day and time best provides for the subcommittee to receive input from both TPAC and JPACT and allows sufficient time to prepare for upcoming TPAC/JPACT meetings.

The subcommittee will be chaired by Metro and Metro will be responsible for agendas and meeting reports. ODOT, Metro and Tri-Met will act as a regional TDM management team in order to coordinate upcoming TDM actions and requirements and ensure their placement on appropriate agendas. Agenda items may also be recommended by the subcommittee or directed by either TPAC or JPACT. All meetings are open to the public consistent with Oregon's open public meeting laws.

The subcommittee is essentially considered a working group similar to a technical advisory committee. However, where appropriate, the chair may invoke Robert's Rules of Order to ensure completion of agenda items or establish subcommittee votes on contentious issues.

Duties: The TDM Subcommittee will be responsible for identification of regional TDM issues related, but not limited, to any of the federal, state and regional actions identified in this report. In general, the subcommittee will not be substituted for regular project-related technical advisory committee activities.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends approval of Resolution No. 92-1610.

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF ESTABLISHING THE TPAC TRANSPORTATION DEMAND MANAGEMENT SUBCOMMITTEE	RESOLUTION NO. 92-1610 Introduced by Councilor Jim Gardner

WHEREAS, The Joint Policy Advisory Committee on Transportation (JPACT) and the Transportation Policy Alternatives Committee (TPAC) will be addressing a number of Transportation Demand Management policy, program, and project activities over the coming years as a result of federal, state and local actions; and

WHEREAS, The TDM activities are 1) promoted through the Clean Air Act Amendments of 1990, the Intermodal Surface Transportation Efficiency Act of 1991, the State Transportation Rule 12, the draft Policy Element of the Oregon Transportation Plan, the adoption of the Regional Urban Growth Goals and Objectives (RUGGO) and the adopted Regional Transportation Plan (RTP); and 2) are being examined through the Governor's Task Force on Automobile Emissions in the Portland Area, the Region 2040 study and the 1992 update of the RTP; and

WHEREAS, The TDM activities require substantial background analysis, study and associated effort leading to regional coordination and consensus; and

WHEREAS, The associated work and effort are in addition to the current duties, responsibilities and activities of both JPACT and TPAC; now, therefore,

BE IT RESOLVED,

That the Council of the Metropolitan Service District adopts the following recommendations:

1. That a TPAC TDM Subcommittee be appointed by TPAC for the purpose of being responsible for the initial development, evaluation and recommendations related to the region's TDM planning, programming and implementation activities, in particular, to those federal, state and regional actions identified above in this resolution.

2. That the TPAC TDM Subcommittee would report to and develop recommendations for TPAC consideration. Where appropriate, recommendations will be forwarded to JPACT and the Metro Council for review and adoption.

3. That the TPAC TDM Subcommittee include representatives of Metro; ODOT; Tri-Met; Washington, Clackamas and Multnomah Counties; City of Portland; Oregon Department of Energy; DLCD; DEQ; one citizen member; one bicycle/pedestrian advocacy member; one representative from the other cities; one business representative; and a representative from the Clark County Strategic Planning Group.

4. That the TPAC TDM Subcommittee be chaired by Metro; that meetings be held monthly (unless otherwise noted); that Metro, through consultation with TPAC, JPACT and the subcommittee, be responsible for meeting agendas; and that Metro keep regular meeting reports.

5. That establishment of the TPAC TDM Subcommittee be effective immediately upon adoption of this resolution.

ADOPTED by the Council of the Metropolitan Service District this _____ day of _____, 1992.

_____
Jim Gardner, Presiding Officer

92-1610.RES/5-5-92

STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 92-1617 FOR THE PURPOSE OF ADOPTING A POSITION ON HIGHWAY BRIDGE REPLACEMENT FUNDS

Date: May 6, 1992 Presented by: Andrew Cotugno

PROPOSED ACTION

Resolution No. 92-1617 adopts a regional position on Highway Bridge Replacement (HBR) funds as follows:

1. Request that ODOT defer programming of HBR funds in years 1995, 1996, 1997 and 1998 in the upcoming adoption of the Six-Year Transportation Improvement Program in order to allow consideration of alternative allocation procedures.

2. Request that the ODOT/AOC/LOC-sponsored Roads Finance Study acknowledge the cost of rehabilitation and replacement of the Willamette River bridges as a need to be reflected in the study.

3. Request that the Roads Finance Study evaluate the adequacy of the HBR program to meet the Willamette River bridge needs and other state and local bridge replacement and rehabilitation needs.

4. Request that the Oregon Transportation Commission work with the AOC/LOC Bridge Committee to consider policy options in developing a ranking system, criteria and process that addresses statewide bridge needs, including large unfunded local bridges.

5. Request that the Roads Finance Study recommend a funding solution through the HBR Program or other federal or state mechanisms to ensure adequate funding for the full range of statewide bridge needs, including:

   . State Highway High Cost Bridges
   . City/County High Cost Bridges
   . State Highway Routine Bridges
   . City/County Routine Bridges -- on the Federal Highway System
   . City/County Off-System Bridges

6. Request that ODOT, AOC and LOC defer amendment of the Interagency Agreement for administration of the HBR Program until a revised ranking system has been established.

7. Request that ODOT assist the Portland region in developing a bridge management system as required by ISTEA.

FACTUAL BACKGROUND AND ANALYSIS

1. The ISTEA of 1991 increased the Highway Bridge Replacement Program significantly, resulting in a funding increase for Oregon from $7.8 million in FY 1991 to $25 million in FY 1992. Despite this increase, the need for replacement or rehabilitation of the Willamette River bridges remains unfunded in the Draft Six-Year Program.

2. The Willamette River Bridges are high traffic volume bridges and, in many cases, high in transit ridership, bike and pedestrian traffic.

	Current ADT	Spring '90 Daily Transit Ridership
Sellwood	31,700 veh.	796
Hawthorne	27,000 veh.	12,154
Morrison	49,000 veh.	3,676
Burnside	38,000 veh.	7,182
Broadway	30,000 veh.	1,955
	175,700 veh.	25,763

In addition, because of their size, the fact that the Willamette River is a navigable stream, the high cost lift spans involved and the age of the structures, rehabilitation or replacement is very expensive as compared to conventional bridges:

Major Movable Bridge Replacement Cost = $1500/sq. ft.
Major Fixed Span Replacement Cost = $125/sq. ft.
Conventional Bridge Replacement Cost = $55/sq. ft.

As a result, the unmet 10-year Willamette River bridge needs are significant:

Various electrical, mechanical, structural, illumination, rehabilitation	$ 24 million
Commercial Sandblast and Paint.	43 "
Seismic Retrofit.	20 "
Sellwood Bridge Replacement	42 "
	$129 million

Bridge needs of this magnitude are atypical for any unit of local government in Oregon.

3. HBR funds are distributed to the states on the basis of each state's total bridge replacement/rehabilitation needs as a percentage of national bridge replacement/rehabilitation needs. The same unit costs for similar types of bridges nationwide are used in this calibration. The high cost of the Willamette River bridges are included in Oregon's needs and account for 11 percent of the statewide needs. As such, 11 percent of the total HBR funds allocated to Oregon are due to the needs identified for the Willamette River bridges. Simply allocating the Willamette River bridges 11 percent of the HBR funds over the six-year life of the ISTEA would

produce $16.8 million towards meeting the Willamette River bridge needs. The draft Six-Year Program envisions none of these funds being allocated to the Willamette River bridges.

4. Administration of HBR funds has historically been established through an interagency agreement between ODOT, AOC and LOC. By statute, at least 15 percent of the HBR system must be spent on bridges off the federal highway system. These are generally small bridges under jurisdiction of local governments. An additional 15-20 percent has been allocated to city/county bridges on the federal highway system with the remaining 65-70 percent programmed by ODOT on state highway system bridges. For the upcoming Six-Year Program update, ODOT proposes to allocate 15 percent off-system, 15 percent local on-system, and 70 percent ODOT.

   Over the past six years, the local on and off-system bridges have been ranked according to the following criteria:

Sufficiency Rating (on a 1-100 scale)	71.4 percent
Cost Factor	7.1 percent
Deficient Structure	14.3 percent
Historic Status	7.1 percent

   Using this system, the Willamette River bridges ranked in the top five in the overall local bridge needs. However, few of these bridges were funded due to the limited availability of funds and the desire to cap the dollar amount that would be allocated to any single jurisdiction.

   In the upcoming Six-Year Program, ODOT proposes to revise the ranking criteria as follows:

Sufficiency Rating (on a 1-100 scale)	25 percent
Cost Factor	20 percent
Jurisdiction Need (resources available per road mile)	20 percent
Load Capacity	35 percent

   Under this ranking system, the Willamette River bridges ranked poorly at numbers 37, 38, 43, 44 and 58 out of a possible 67 bridges. Due to these changes, it appears that once again, the Willamette River bridges would go unfunded for the next six years.

5. There is no apparent basis for establishing the split between state and local bridges. As proposed, the funding would be split: 70% ODOT/30% local, with no funds allocated to Multnomah County. Multnomah County earns 11 percent of the HBR funds allocated to the state. Additionally, there should be a comparison of the ranking of ODOT bridges versus local bridges to establish the split between state and local bridges.

RECOMMENDATION

1. Restrict programming of HBR funds in the upcoming Six-Year Program to the first two years in order to allow for development of a revised HBR allocation process.

2. Ensure that the "needs" analysis being compiled by the Oregon Roads Finance Study includes the high cost for replacement/ rehabilitation of Willamette River bridges.

3. Request that the Oregon Road Finance Study evaluation of needs versus revenues conduct an evaluation of the HBR Program to meet the Willamette River bridge and other statewide needs and to recommend a funding package designed to ensure a solution to meeting the needs of all critical statewide needs, including:

   . State Highway High Cost Bridges
   . City/County High Cost Bridges
   . State Highway Routine Bridges
   . City/County Routine Bridges -- on the Federal Highway System
   . City/County Off-System Bridges

   Ensure that no single category of bridge needs go unmet while the remaining categories are partially or fully met.

4. Request that the Oregon Transportation Commission work with the AOC/LOC Bridge Committee to consider policy implications involved in developing a revised bridge ranking system, criteria and process that meets the needs of all bridges statewide, including high cost local bridges.

5. Request that ODOT, AOC and LOC defer amendment to the interagency agreement dealing with the administration of HBR funds until the revised system described above is developed.

6. Request that ODOT assist the Portland region in developing a bridge management system as required by ISTEA.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends approval of Resolution No. 92-1617.

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF ADOPTING A POLICY ON HIGHWAY BRIDGE REPLACEMENT FUNDS	RESOLUTION NO. 92-1617 Introduced by Councilor Richard Devlin

WHEREAS, The Intermodal Surface Transportation Efficiency Act of 1991 increased the level of funding available for highway bridge replacement and rehabilitation (HBR); and

WHEREAS, The need for rehabilitation and repair of the Willamette River bridges account for 11 percent of the HBR funds allocated to the state of Oregon; and

WHEREAS, The cost of Willamette River bridge rehabilitation and replacement is 12 times that of conventional bridges due to the large size, age and movable design; and

WHEREAS, The Willamette River bridges are vital to mobility in the Portland metropolitan area; and

WHEREAS, the Willamette River bridge needs are not being met through the past and proposed administration of the HBR program; now, therefore,

BE IT RESOLVED,

That the Council of the Metropolitan Service District does hereby:

1. Request that ODOT defer programming of HBR funds in years 1995, 1996, 1997 and 1998 in the upcoming adoption of the Six-Year Transportation Improvement Program in order to allow consideration of alternative allocation procedures.

2. Request that the ODOT/AOC/LOC-sponsored Roads Finance Study acknowledge the cost of rehabilitation and replacement of

the Willamette River Bridges as a need to be reflected in the study.

3. Request that the Roads Finance Study evaluate the adequacy of the HBR Program to meet the Willamette River bridge needs and other state and local bridge replacement and rehabilitation needs.

4. Request that the Oregon Transportation Commission work with the AOC/LOC Bridge Committee to consider policy options in developing a ranking system, criteria and process that addresses statewide bridge needs, including large unfunded local bridges.

5. Request that the Roads Finance Study recommend a funding solution through the HBR Program or other federal or state mechanisms to ensure adequate funding for the full range of statewide bridge needs, including:

- State Highway High Cost Bridges
- City/County High Cost Bridges
- State Highway Routine Bridges
- City/County Routine Bridges -- on the Federal Highway System
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6. Request that ODOT, AOC and LOC defer amendment of the Interagency Agreement for administration of the HBR Program until a revised ranking system has been established.

7. Request that ODOT assist the Portland region in developing a bridge management system as required by ISTEA.

ADOPTED by the Council of the Metropolitan Service District this _____ day of _____, 1992.

_____
Jim Gardner, Presiding Officer

92-1617.RES
ACC:lmk/5-6-92

STAFF REPORT

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Date: May 6, 1992 Presented by: Andrew Cotugno

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4. Request that the Oregon Transportation Commission work with the AOC/LOC Bridge Committee to consider policy options in developing a ranking system, criteria and process that addresses statewide bridge needs, including large unfunded local bridges, that ensures a distribution of bridge funds to the Willamette River bridges at a level consistent with the funds received by the State of Oregon attributable to these bridges.

5. Request the Oregon Transportation Commission to consider the high cost of rehabilitating the Willamette River bridges compared with other local government bridges, and allow these large movable bridges to compete in the prioritization for the HBR allocation with similar high-cost bridges at the state level rather than competing in the HBR allocation for local governments.

6. Request that the Roads Finance Study recommend a funding solution through the HBR Program or other federal or state mechanisms to ensure adequate funding for the full range of statewide bridge needs, including:

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7. Request that ODOT, AOC and LOC defer amendment of the Interagency Agreement for administration of the HBR Program until a revised ranking system has been established.

8. Request that ODOT assist the Portland region in developing a bridge management system as required by ISTEA.

JPACT has reviewed this HBR position paper and recommends approval of Resolution No. 92-1617.

FACTUAL BACKGROUND AND ANALYSIS

1. The ISTEA of 1991 increased the Highway Bridge Replacement Program significantly, resulting in a funding increase for Oregon from $7.8 million in FY 1991 to $25 million in FY 1992. Despite this increase, the need for replacement or rehabilitation of the Willamette River bridges remains unfunded in the Draft Six-Year Program.

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	$129 million

Bridge needs of this magnitude are atypical for any unit of local government in Oregon.

3. HBR funds are distributed to the states on the basis of each state's total bridge replacement/rehabilitation needs as a percentage of national bridge replacement/rehabilitation needs. The same unit costs for similar types of bridges nationwide are used in this calibration. The high cost of the Willamette River bridges are included in Oregon's needs and account for 11 percent of the statewide needs. As such, 11 percent of the total HBR funds allocated to Oregon are due to the needs identified for the Willamette River bridges. Simply allocating the Willamette River bridges 11 percent of the HBR funds over the six-year life of the ISTEA would produce $16.8 million towards meeting the Willamette River bridge needs. The draft Six-Year Program envisions none of these funds being allocated to the Willamette River bridges.

4. Administration of HBR funds has historically been established through an interagency agreement between ODOT, AOC and LOC. By statute, at least 15 percent of the HBR system must be spent on bridges off the federal highway system. These are generally small bridges under jurisdiction of local governments. An additional 15-20 percent has been allocated to city/county bridges on the federal highway system with the remaining 65-70 percent programmed by ODOT on state highway system bridges. For the upcoming Six-Year Program update, ODOT proposes to allocate 15 percent off-system, 15 percent local on-system, and 70 percent ODOT.

   Over the past six years, the local on and off-system bridges have been ranked according to the following criteria:

Sufficiency Rating (on a 1-100 scale)	71.4 percent
Cost Factor	7.1 percent
Deficient Structure	14.3 percent
Historic Status	7.1 percent

   Using this system, the Willamette River bridges ranked in the top five in the overall local bridge needs. However, few of these bridges were funded due to the limited availability of funds and the desire to cap the dollar amount that would be allocated to any single jurisdiction.

   In the upcoming Six-Year Program, ODOT proposes to revise the ranking criteria as follows:

Sufficiency Rating (on a 1-100 scale)	25 percent
Cost Factor	20 percent
Jurisdiction Need (resources available per road mile)	20 percent
Load Capacity	35 percent

   Under this ranking system, the Willamette River bridges ranked poorly at numbers 37, 38, 43, 44 and 58 out of a possible 67 bridges. Due to these changes, it appears that

once again, the Willamette River bridges would go unfunded for the next six years.

5. There is no apparent basis for establishing the split between state and local bridges. As proposed, the funding would be split: 70% ODOT/30% local, with no funds allocated to Multnomah County. Multnomah County earns 11 percent of the HBR funds allocated to the state. Additionally, there should be a comparison of the ranking of ODOT bridges versus local bridges to establish the split between state and local bridges.

RECOMMENDATION

1. Restrict programming of HBR funds in the upcoming Six-Year Program to the first two years in order to allow for development of a revised HBR allocation process.

2. Ensure that the "needs" analysis being compiled by the Oregon Roads Finance Study includes the high cost for replacement/ rehabilitation of Willamette River bridges.

3. Request that the Oregon Road Finance Study evaluation of needs versus revenues conduct an evaluation of the HBR Program to meet the Willamette River bridge and other statewide needs and to recommend a funding package designed to ensure a solution to meeting the needs of all critical statewide needs, including:

   . State Highway High Cost Bridges
   . City/County High Cost Bridges
   . State Highway Routine Bridges
   . City/County Routine Bridges -- on the Federal Highway System
   . City/County Off-System Bridges

   Ensure that no single category of bridge needs go unmet while the remaining categories are partially or fully met.

4. Request that the Oregon Transportation Commission work with the AOC/LOC Bridge Committee to consider policy implications involved in developing a revised bridge ranking system, criteria and process that meets the needs of all bridges statewide, including high cost local bridges.

5. Request that ODOT, AOC and LOC defer amendment to the interagency agreement dealing with the administration of HBR funds until the revised system described above is developed.

6. Request that ODOT assist the Portland region in developing a bridge management system as required by ISTEA.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends approval of Resolution No. 92-1617.

BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF ADOPTING A POLICY ON HIGHWAY BRIDGE REPLACEMENT FUNDS	RESOLUTION NO. 92-1617 Introduced by Councilor Richard Devlin

WHEREAS, The Intermodal Surface Transportation Efficiency Act of 1991 increased the level of funding available for highway bridge replacement and rehabilitation (HBR); and

WHEREAS, The need for rehabilitation and repair of the Willamette River bridges account for 11 percent of the HBR funds allocated to the state of Oregon; and

WHEREAS, The cost of Willamette River bridge rehabilitation and replacement is 12 times that of conventional bridges due to the large size, age and movable design; and

WHEREAS, The Willamette River bridges are vital to mobility in the Portland metropolitan area; and

WHEREAS, the Willamette River bridge needs are not being met through the past and proposed administration of the HBR program; now, therefore,

BE IT RESOLVED,

That the Council of the Metropolitan Service District does hereby:

1. Request that ODOT defer programming of HBR funds in years 1995, 1996, 1997 and 1998 in the upcoming adoption of the Six-Year Transportation Improvement Program in order to allow consideration of alternative allocation procedures.

2. Request that the ODOT/AOC/LOC-sponsored Roads Finance Study acknowledge the cost of rehabilitation and replacement of

the Willamette River Bridges as a need to be reflected in the study.

3. Request that the Roads Finance Study evaluate the adequacy of the HBR Program to meet the Willamette River bridge needs and other state and local bridge replacement and rehabilitation needs.

4. Request that the Oregon Transportation Commission work with the AOC/LOC Bridge Committee to consider policy options in developing a ranking system, criteria and process that addresses statewide bridge needs, including large unfunded local bridges, that ensures a distribution of bridge funds to the Willamette River bridges at a level consistent with the funds received by the State of Oregon attributable to these bridges.

5. Request the Oregon Transportation Commission to consider the high cost of rehabilitating the Willamette River bridges compared with other local government bridges, and allow these large movable bridges to compete in the prioritization for the HBR allocation with similar high-cost bridges at the state level rather than competing in the HBR allocation for local governments.

6. Request that the Roads Finance Study recommend a funding solution through the HBR Program or other federal or state mechanisms to ensure adequate funding for the full range of statewide bridge needs, including:

- State Highway High Cost Bridges
- City/County High Cost Bridges
- State Highway Routine Bridges
- City/County Routine Bridges -- on the Federal Highway System
- City/County Off-System Bridges

7. Request that ODOT, AOC and LOC defer amendment of the

Interagency Agreement for administration of the HBR Program until a revised ranking system has been established.

8. Request that ODOT assist the Portland region in developing a bridge management system as required by ISTEA.

ADOPTED by the Council of the Metropolitan Service District this _____ day of _____, 1992.

_____
Jim Gardner, Presiding Officer

92-1617.RES
ACC:lmk/5-14-92

OREGON TRANSPORTATION PLAN

Public Review Draft

May 1992

Multimodal System Element

THE NEW OREGON TRAIL

Leading into the 21st Century

The purpose of the Oregon Transportation Plan is to develop a safe, convenient and efficient transportation system which promotes economic prosperity and livability for all Oregonians.

DRAFT

OREGON TRANSPORTATION PLAN
MULTIMODAL SYSTEM ELEMENT

Public Review Draft

Cambridge Systematics
in association with
David Evans Associates
Wilbur Smith Associates
Barney and Worth
Joseph R. Stowers

Oregon Department of Transportation
Strategic Planning Section

May 1992

To make comments and obtain additional copies of this plan, contact:

Dave Bishop, Transportation Plan Manager
Carolyn Gassaway, Transportation Analyst

Oregon Department of Transportation
Strategic Planning Section
Room 405, Transportation Building
Salem, OR 97310

Phone: (503) 373-7571
FAX: (503) 373-7194

Public comments on this document are due by Monday, July 1, 1992.

PREFACE

The **Oregon Transportation Plan (OTP)**, including the Policy Element and the Multimodal System Element, is intended to meet the requirements of ORS 184.618(1):

> *As its primary duty, the [Transportation] Commission shall develop and maintain a state transportation policy and a comprehensive, long-range plan for a multimodal transportation system for the state which encompasses economic efficiency, orderly economic development, safety and environmental quality. The plan shall include, but not be limited to aviation, highways, mass transit, pipelines, ports, rails and waterways.*

In addition, the OTP is intended to meet the requirements of the Land Conservation and Development Commission (LCDC) Goal 12 Transportation Planning Rule and the federal Interstate Surface Transportation Efficiency Act (ISTEA) requirements for a state transportation plan.

The **Multimodal System Element** implements the goals and policies in the Policy Element by identifying a coordinated transportation system, a network of facilities and services for air, rail, highways, public transit, pipeline, marine transportation, bikeways and other modes to be developed over the next 20 years. The System Element includes an inventory of existing facilities and services, a base forecast of transportation trends, identification of corridors and transportation facilities of statewide function, a description of minimum levels of service, and an implementation strategy. This document summarizes the data that form the basis of the System Element; the Multimodal System Element Technical Report contains the basic data.

The **OTP Steering Committee,** made up of members of the Oregon Transportation Commission, the governor's office, state legislators and representatives of local governments, has been guiding the development of the System Element. After examining three alternative approaches to providing transportation facilities and services, the committee chose a preferred system. The committee is distributing this draft of the Multimodal System Element for public review. The review includes public meetings throughout the state from late May to mid-June.

The OTP Steering Committee will revise both the Policy and System Elements based on public comments. The Oregon Transportation Commission will hold hearings on both elements in August and expects to adopt them in September. Changes in transportation policies and financing requiring legislation will be introduced to the legislature in January 1993.

Public comments on this document are due by Monday, July 1, 1992.

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EXECUTIVE SUMMARY

Introduction

Oregon's transportation system continues to be crucial to the state's livability and development. Opportunities and challenges facing the state require a strong and efficient transportation system to serve the needs of commerce and personal mobility.

Oregon's population is expected to grow faster than the nation's for most of the next 40 years. According to forecasts by the Oregon Department of Transportation (ODOT), Oregon's population is projected to increase from 2.8 million in 1990 to 3.8 million in 2012. After that Oregon's growth rate will slow, reflecting national trends. Most of this growth is projected to take place in the Willamette Valley, especially in its suburban areas; the Valley's population densities will approach those of more urban states.

At the same time, the population in eastern Oregon will also increase. Growth pockets on the coast and in central and southern Oregon will probably lead growth outside of the Willamette Valley.

Increased demands for transportation services will be most prevalent in the Willamette Valley where congestion will become an increasing problem, especially in the Portland metropolitan area. Air quality and energy conservation will be important concerns as auto emissions and congestion increase. New forms of land development will be required to avoid the type of urban sprawl that has reduced the livability of many American cities and limited opportunities for public transit, bicycling, and walking.

As the state's economy develops more diversity, high value manufacturing and services will be important industries along with wood products, agriculture and tourism. Links to international and national markets must be developed in order to take advantage of the new economic trends.

Rural areas will increasingly need access to services and markets. Links to rural areas must be maintained and enhanced in order to serve both those areas and the economy of regions outside the Willamette Valley.

New technology should help make travel more efficient. Intelligent Vehicle Highway Systems (IVHS) will allow traffic to flow more efficiently, while high speed rail may have the potential to divert many trips from air. But the state also needs to improve linkages between transportation and land use so that each supports the other.

In anticipation of these challenges, Oregonians have set bold new directions for the state's future transportation system through the Oregon Benchmarks, the Land Conservation and Development Commission's (LCDC) Transportation Planning Rule, and the goals and policies developed in the Oregon Transportation Plan's (OTP) Policy Element. These form the basis for the Multimodal System Element.

The Goals of the Oregon Transportation Plan

> *The purpose of the Oregon Transportation Plan is to develop a safe, convenient and efficient transportation system which promotes economic prosperity and livability for all Oregonians.*

The Transportation Commission drafted this purpose statement during development of the Policy Element of the Transportation Plan. The Policy Element also established four goals for Oregon's future transportation system which were assumed explicitly to encompass the Oregon Benchmarks and the requirements of LCDC Goal 12: Transportation.

Goal 1. System Characteristics: To enhance Oregon's comparative economic advantage and quality of life by the provision of a transportation system with the following characteristics:

- Balance
- Efficiency
- Accessibility
- Environmental Responsibility
- Connectivity among Places
- Connectivity among Modes and Carriers
- Safety
- Financial Stability

Goal 2. Livability: To develop a multimodal transportation system that provides access to the entire state, supports acknowledged comprehensive land use plans, is sensitive to regional differences, and supports livability in urban and rural areas.

Goal 3. Economic Development: To promote the expansion and diversity of Oregon's economy through the efficient and effective movement of goods, services, and passengers in a safe, energy efficient, and environmentally sound manner.

Goal 4. Implementation: To implement the Transportation Plan by creating a stable, but flexible financing system, by using good management practices, by supporting transportation research and technology, and by working cooperatively with regional and local governments, the private sector, and citizens.

The Role of the Multimodal System Element

The recommended Multimodal System Element presented in this document meets the goals of the Policy Element in eight ways:

1. It identifies a multimodal system including air, rail, auto, truck, bus, bicycle, pedestrian and marine transportation, telecommunications, and pipelines to be implemented within the next 20 years.

2. It establishes minimum levels of service to be achieved by each mode of transportation.

3. It identifies other major improvements beyond minimum levels of service.

4. It identifies the transportation corridors and facilities which serve statewide and interstate functions.

5. It identifies transportation system and facility management processes that must be put into place, including local transportation demand management and financing principles.

6. It identifies land use policies that must be put into effect to achieve the goals of the transportation plan.

7. It identifies local, state, and federal roles in implementing the plan and sets planning and performance criteria for modal implementation plans and local and regional transportation plans.

8. It estimates the financial requirements to implement the plan.

The Alternatives

One way to develop a transportation plan is to envision the facilities and services which would be in place if the plan were implemented. The System Element does this for the next 20 years. Because of the length of time required to implement transportation projects and changes in technologies, the System Element also envisions those major issues and projects which may be necessary in the next 20 to 40 years.

To place the possibilities in perspective, the Steering Committee examined three alternatives: (1) an alternative with funding that does not increase with inflation, (2) an alternative that contains current funding with increases for inflation, and (3) an alternative that emphasizes economic development and livability. Five maps summarize the major transportation system characteristics of the three alternatives.

Existing 1992 (Map 1) illustrates the existing transportation system. The basic structure of the transportation system is already in place and the Preferred Plan builds on that structure.

A **Funding Decline - Alternative 1** would not expand and improve the system illustrated on Map 1. The following consequences would result:

- No expansion of current service levels since efforts would be limited to preservation of existing infrastructure;
- Increased traffic congestion;
- Decline in intercity bus, rail, specialized transit, aviation, marine transportation, and pipeline services;
- Some increased transit ridership in the Portland metropolitan area where traffic congestion would significantly increase and a decline in ridership in other areas due to lack of funding;
- No improvements at intermodal passenger and freight facilities;
- Increased vehicle miles traveled (VMT) and person trip generation at a lower rate than the base case (the Continuation of Current Programs alternative).

2012 Continuation of Current Programs - Alternative 2 (Map 2) shows how the system would look if existing transportation programs at state and local levels were continued without any change in emphasis or without major funding enhancements. This is referred to as the base case. Under this alternative there would be:

- Unmet minimum levels of service standards for highways, transit, rail, aviation, marine transportation, and pipelines;
- Limited expansion of state highway capacity;
- Growth in transit ridership and intercity passenger patronage at the same rate as population growth but a reduced number of intercity bus routes;
- Limited number of new citywide transit systems established, such as in Bend;
- Enhanced air service in Astoria, Newport, and Roseburg;
- Scenic byways along the entire length of US 101 and the Columbia Gorge;

- New specialized elderly and disadvantaged transit services;
- Increased VMT per capita between 0.3 percent per capita in metropolitan areas and 1.5 percent per capita statewide;
- Little change in ridesharing as a percent of work trips and average trip length; dispersal of new jobs to suburban areas would be offset by increased congestion and more compact suburban development;
- Continuation of the 1 percent program for bicycle and pedestrian facilities;
- Designation of Corvallis/Albany as a new metropolitan planning area.

Minimum Levels of Service - Plus Preferred Transportation System - Alternative 3 (Map 3) shows how the transportation system would look with full implementation of the economic development and livability alternative. Under this alternative, it is expected there should be by 2012:

- A transportation system that helps maximize economic opportunities and quality of life, as measured by the Oregon Benchmarks;
- Hourly intercity passenger service established in the Willamette Valley along I-5 between Eugene and Portland;
- A sevenfold increase in the use of telecommunications over 1990 use;
- High occupancy vehicle (HOV) lanes and peak period congestion pricing established on freeways and arterials in metropolitan areas;
- Intelligent Vehicle Highway System (IVHS) networks in metropolitan areas and on I-5 and I-84;
- Increased walking and bicycle trips to represent 5 percent of all person trips, and transit to double from the base case forecast in metro areas;
- Intercity bus or commuter bus service available to cities of over 2,500 population;
- Urban transit service available in communities over 25,000 population;
- Intermodal passenger terminals established in Portland, Salem, Eugene, Medford, and Bend;
- Enhanced rural commercial air service, particularly to Baker City and the La Grande area;

- International port improvements and maintained rail service on the lower Columbia River and Coos Bay;
- Improved intermodal hub freight facilities in Portland, Eugene, Klamath Falls and Umatilla and in Idaho near Ontario;
- Additional major highway freight corridors on non-Access Oregon Highways;
- Additions to the statewide functional highway system;
- Natural gas pipelines developed to Coos Bay and Tillamook to help industrial development and make alternative transportation fuel available;
- Full implementation of the LCDC Transportation Rule;
- Establishment of a Willamette Valley Transportation System Coordination Area.

Willamette Valley Detail (Map 4) provides more detail for Alternative 3 as it affects the Valley.

Long-Range Transportation Possibilities (Map 5) illustrates a number of possible future developments worthy of discussion, but that are either too far in the future or too uncertain to be included in this plan in a meaningful way. These possibilities include:

- High-speed rail service in the Willamette Valley with connections to Seattle;
- A Valley interurban rail service which is being investigated as a way of serving travel needs on the west side of the Willamette Valley;
- A Klamath Falls intermodal air freight hub;
- A new international airport in the Willamette Valley which could be needed if Portland International Airport reaches capacity;
- A tourism highway between Grants Pass/Medford and Gold Beach.

The OTP Steering Committee selected the Preferred Plan (Alternative 3) for public discussion. Development of the plan will require cooperation and implementation by federal, state, regional, and local governments and private providers. Jurisdictional roles and the financing program for the plan are still being formulated. The Transportation Commission will adopt a specific financing program in November 1992.

DEVELOPMENT OF THE PREFERRED PLAN

PLANNING FRAMEWORK

The Multimodal System Element is built upon the goals, policies and actions of the Transportation Plan Policy Element, the Oregon Benchmarks, the LCDC Goal 12 Transportation Planning Rule, population and economic forecasts and an examination of alternative approaches to the development of the transportation system.

The design of the Multimodal System Element is best understood by a more detailed explanation of the four goals of the Oregon Transportation Plan.

Oregon Transportation Plan Goals

GOAL 1 - SYSTEM CHARACTERISTICS: To enhance Oregon's comparative economic advantage and quality of life by the provision of a transportation system with the following characteristics:

- **Balance**
- **Efficiency**
- **Accessibility**
- **Environmental Responsibility**
- **Connectivity among Places**
- **Connectivity among Modes and Carriers**
- **Safety**
- **Financial Stability**

Balance: The transportation system must be designed and developed so that people have transportation choices going from place to place. In urban areas, people should be able to choose to commute, for example, by carpool, public transit or bicycle. Freight shippers need competitive services to hold down rates and encourage innovation.

Efficiency: The system must be efficient. Transportation agencies need to make decisions such as whether to add lanes to freeways or to build light rail lines based on their full costs, including the costs to the environment and community.

Accessibility: Transportation services must be accessible to all potential users, including the young, the elderly, and the disabled. Public transportation and transportation for special groups, like the elderly, must be coordinated to provide more effective service.

Environmental Responsibility: The system must be environmentally responsible. Vehicle emission standards and efforts to reduce the vehicle miles traveled per capita should improve air quality and reduce energy consumption.

Connectivity: Statewide transportation corridors must provide access for people and goods to all areas of the state, nation, and world. People and goods must be able to shift easily from transit or truck, to rail, to ship, or plane to take advantage of the most efficient mode.

Safety: Safety must be improved through better transportation facility design, increased law enforcement and better education for drivers of all types of vehicles.

Financial Stability: The transportation system must have financial stability and give priority to funding those transportation needs identified in state, regional, and local transportation system plans.

GOAL 2 - LIVABILITY: To develop a multimodal transportation system that provides access to the entire state, supports acknowledged comprehensive land use plans, is sensitive to regional differences, and supports livability in urban and rural areas.

The state must define and assure appropriate minimum levels of transportation service to provide access to all parts of the state. In rural communities, bus services, highways, and bicycle routes need improvement.

Oregon's transportation system must support statewide land use goals and regional, city, and county land use plans. Transportation facilities and services should support development of compact urban areas. Land use developments need to be designed so people can live, work, and shop in the same area. Land use patterns should encourage walking, bicycling, and the use of transit. Access controls on intercity routes should be used to reduce congestion.

Scenic vistas and aesthetic values that support our environmental quality and economic development need to be included in the design and improvement of transportation corridors.

GOAL 3 - ECONOMIC DEVELOPMENT: To promote the expansion and diversity of Oregon's economy through the efficient and effective movement of goods, services and passengers in a safe, energy efficient and environmentally sound manner.

To foster economic development, people and goods must be able to travel by the most efficient means possible. One mode must be connected with others through intermodal hubs which allow goods to move from truck to rail to ship or plane.

Adequate facilities for rail service, air freight, and marine transportation must be maintained. Transportation providers should be encouraged to work together to expand the capacity of Oregon's freight and passenger industry and increase competitiveness in international trade. Transportation services for tourism should be identified and developed.

GOAL 4 - IMPLEMENTATION: To implement the Transportation Plan by creating a stable, but flexible financing system by using good management practices, by supporting transportation research and technology, and by working cooperatively with regional and local governments, the private sector, and citizens.

Transportation financing must be both stable and flexible. Those who use and benefit from the transportation system should pay for it. The finance system must provide equity among alternative transportation modes, state, regional, and local jurisdictions, all regions of the state, and individuals and businesses.

Implementation policies recognize that the transportation system must be managed so that steps are taken to ease the demands on the system before new facilities are constructed. This can be done by reducing peak period travel and improving the traffic flow through such means as ramp metering and incidence management. In the future, congestion pricing or toll systems may be an important element of urban freeway management.

The state should support the development of innovative management practices, new technologies, and other techniques that help carry out the implementation of the Transportation Plan.

Further refinement and implementation of the Transportation Plan will depend on the cooperation of federal, state, regional and local governments, the private sector, and the citizens of Oregon.

Oregon Benchmarks

The Oregon Progress Board created the Oregon Benchmarks to monitor progress in achieving the state's objectives in human resources, livability, and the economy. The 1991 Legislature adopted many of these objectives. Several of the Benchmarks have specific implications for the Multimodal System Plan and were included in the analysis and development of the plan. These are listed in Table 1. In some cases, the plan does not fully implement the Benchmark, but each was taken into account in the process.

TABLE 1
OREGON BENCHMARKS AFFECTING TRANSPORTATION

BENCHMARK	2010 TARGET
Urban Mobility: Percentage of Oregonians who commute to and from work during peak hours by means other than a single occupancy vehicle	60%*
Air Quality: Percentage of Oregonians living where the air meets government ambient air quality standards	100%
Livability Benchmarks	
Percentage of Oregonians who commute (one-way) within 30 minutes between where they live and where they work	88%
Percentage of miles of limited access highways in Oregon urban areas that are not heavily congested during peak hours	60%
Transit hours per capita per year in Oregon metropolitan areas	1.7 hours
Economic Prosperity Benchmarks	
Percentage of Access Oregon Highways built to handle traffic at a steady 55 mile-per-hour rate	90%
Percentage of Oregonians living in communities with daily scheduled intercity passenger bus, van, or rail service	No target set
Percentage of Oregonians living within 50 miles of an airport with daily scheduled air passenger service	75%
Number of United States, Canadian and Mexican metropolitan areas of over one million population served by non-stop flights to and from any Oregon commercial airport	26
Number of international cities of over one million population (outside of Canada and Mexico) served by direct and non-stop air service to and from any Oregon commercial airport	12
Backlog of city, county, and state roads and bridges in need of repair and preservation	5%
Percentage of the 50 largest ports outside the United States served with direct service from the Port of Portland	80%

* Analysis carried out as a part of the OTP indicates this benchmark is probably not achievable.

LCDC Goal 12 Transportation Rule

The Goal 12 Transportation Rule also contains an extremely important requirement for metropolitan area transportation. That requirement is to reduce per capita vehicle miles of travel in each metropolitan area by 10 percent in the next 20 years and 20 percent in the next 30 years, and to rely on alternative modes of transportation including public transit, bicycling and walking.

FORECASTS

To estimate transportation trends over the next 20 years, planners forecast population and employment increases and estimated the increased use of major types of transportation.

The System Element is built on a statewide base forecast which could be allocated to counties and metropolitan areas. Each of the planning alternatives was initially developed and evaluated on this base forecast. However, recognizing that unforeseen changes can have profound impacts on decisions, two contingency forecasts were also developed. These are a super growth forecast, which predicts the impacts of unexpectedly high rates of population growth, and an eco-catastrophe forecast, which predicts the impact of an unforeseen environmental or economic catastrophe that severely constrains future growth and development.

Base Forecasts

ODOT's October 1991 report, "Demographic and Economic Forecasts 1990-2030," projects that population will increase in Oregon at a rate of 1.35 percent per year from 1990 to 2010 and employment will increase at 1.62 percent per year. The 1970-90 Oregon population growth rate was 1.55 per year. In the future, employment growth is expected to exceed the population growth rate by 20 percent because of the West Coast's generally favorable location (climate, natural resources, and access to rapidly growing Pacific Rim economies) and because of a continuing increase in the proportion of the population between ages 15 and 65 until about 2005. (See Appendix A for county projections.)

TABLE 2

U.S. AND OREGON POPULATION AND EMPLOYMENT (1970-2030)
(IN THOUSANDS)

	1970	1990	2010	2030	Rate 1970-1990	Rate 1990-2010	Rate 2010-2030
U.S. Population	**211,349**	**245,807**	**282,050**	**297,537**	**0.69%**	**0.92%**	**0.27%**
Ore. Population	2,092	2,847	3,725	3,933	1.55%	1.35%	0.27%
U.S. Employment	**75,957**	**129,229**	**155,776**	**150,776**	**2.44%**	**1.25%**	**-0.16%**
Ore. Employment	709	1,248	1,723	1,664	2.87%	1.62%	-0.17%

U.S. data are for 1973-1988 and 1988-2010 rather than 1970-1990 and 1990-2010.

Using the population and employment forecasts, planners estimated the amount of travel anticipated through existing plans. These base case forecasts are the result of review and adaption of existing ODOT forecasts included in the 1991 ODOT Highway Plan and in the 1989 ODOT Aviation Plan, Metro forecasts in the Regional Transportation Plan update of 1989, the Portland Metro forecasts prepared for 2010 since the 1989 Plan, and upon public transit agency forecasts and forecasts by other planning agencies. Table 3 summarizes base case forecasts for travel trends.

TABLE 3

TRANSPORTATION TRENDS BASE CASE FORECASTS

	1990 Estimate	Growth Rate/ Year	2010 Forecast
Highway Total	27 billion vmt**	1.7 to 2.5%	34 to 44 billion
Highway Metro	9 billion vmt**	1.7 to 2.9%	15 billion vmt
Transit Total	65 million/yr ***	2.6%	108 million/yr
Transit Metro	55 million/yr	2.9%	97 million/yr
Intercity Bus	0.66 million/yr	1.0%	0.81 million/yr
Amtrak	0.56 million/yr	1.0%	0.68 million/yr
Airplane	3.9 million/yr	5.2%	10.8 million/yr
Truck	1.1 billion vmt	2.5%	1.8 billion vmt
Rail	136 million tons	2.5%	223 million tons
Pipeline	62 million b/yr****	1.0%	76 million b/yr
Ports - Inland	11 million tons	2.5%	18 million tons
Ports - Export	21 million tons	2.5%	34 million tons
Ports - Import	3 million tons	5.0%	8 million tons

* Vehicle miles traveled
** Range of highway VMT based on Rule 12 constraints
*** Million passengers per year
**** Barrels per year

Super Growth

A more rapid rate of population growth in Oregon, such as 2.3 percent per year, would cause severe deficiencies in the capacity of the state's transportation system, particularly in the metropolitan areas. Unless denser residential patterns occur or infill development in the metropolitan areas takes place, new residents would be forced to move to areas outside the urban growth boundaries that are not well served by transportation modes other than the automobile and may not have adequate highway capacity. This would result in

longer trips by automobile and the need to widen highways and provide more access to the highway system.

On the other hand, a benefit of this high growth rate would be greater revenues to support transportation enhancements. If land use objectives could be maintained under the super growth forecast, additional resources that become available could be used to enhance transportation services. Higher densities in urban areas would create demands for more rapid shifts to public transportation options, and environmental and livability objectives would continue to be met.

Eco-Catastrophe

An eco-catastrophe could involve environmental and natural resource events that also would affect the state's economy. Or economic restrictions could affect environmental conditions and regulations.

These events could include:

- severe drought
- severe recession
- severe climate changes, such as global warming and ozone depletion
- a prolonged energy crisis

Any of these events would result in changes in demands for the transportation system. Clearly, limitations on personal mobility would result in people making fewer trips and shorter trips, or shifting to other modes for travel. Changes in the manner in which business is conducted, such as reduced demand for Oregon products or reduced output due to environmental considerations, would affect both freight movement and employee travel.

Environmental catastrophes such as severe drought and acid rain conditions could dramatically reduce the employment in and quantity and quality of products of the state's forestry, agriculture and fishing industries. An energy crisis, global warming or ozone depletion could result in restriction in the amount of fossil fuel used. If restrictions were made in Oregon, but not in other states, it might encourage businesses and residents to move to other states. Or if restrictions were made in other states but not in Oregon, it might result in greater highway demands.

A severe recession, changes in the demand for Oregon exports, and new freight equipment requirements (such as ships with deeper draft channel requirements) would influence employment in the state. These kinds of events could lead to a focus on new industries and a relaxing of the number and impact of environmental regulations.

ALTERNATIVE APPROACHES

In the process of determining the preferred level of service to carry out the Transportation Plan's goals and policies, the OTP Steering Committee examined three approaches to managing and improving Oregon's transportation system to the year 2012:

1. **Funding Decline** -- A plan which continues current funding levels without adjustments for inflation or new programs;

2. **Continuation of Current Programs** -- A plan which maintains current programs and increases revenues and expenditures to account for inflation; and

3. **Livability Approach** -- A plan which attempts to maximize the impacts of transportation investments and programs on both livability and economic development to achieve the OTP goals, Oregon Benchmarks and the Goal 12 Transportation Rule.

The three approaches result in different kinds and levels of economic development and livability. The first two approaches are proposals against which the preferred alternative may be evaluated. However, they also have some value in themselves because they provide a basis for development of contingencies if the preferred alternative cannot be fully implemented.

1. Funding Decline

Under this approach, the only expenditures are those needed to preserve the existing infrastructure and maintain, but not expand, current services.

This approach has reduced expenditures in comparison to continuation of current programs because real dollar expenditures on transportation are assumed to decline with inflation. Transportation modes not now receiving public funding would not receive public funding in the future.

This alternative does not contribute to improved air quality or improved availability of public transit, bicycle paths, and pedestrian walkways. Land uses can be controlled and development channeled although no supporting transportation investments, such as public transit, would be financially feasible. Increases in congestion, declines in infrastructure investment, declines in levels of service, and increases in operating costs would negatively affect economic growth.

Public transportation service levels cannot be expanded beyond current commitments. Amtrak ridership should grow with population, although no new services would be added. Air travel will likely grow with population. Intercity bus services are likely to continue to decline in both ridership and services.

Highway conditions would not deteriorate, but congestion would increase. No initiatives would be possible for improved intermodal facilities for passengers or freight.

2. **Continuation of Current Program Levels**

This alternative plan (Map 2) provides for a continuation of the same state and regional transportation programs as anticipated through 1995 through the entire 20-year period to 2010. Many planned projects at the state and regional levels require additional funding to be made available if the programs are to be carried out. Current revenue sources are assumed to be adjusted for inflation as time passes so the buying power of the revenue sources does not change. For sources such as gasoline taxes and weight-distance taxes, rates of taxation will have to be periodically adjusted in order to keep pace with inflation.

Highway pavement conditions would continue to improve slightly although levels of congestion will increase. Intercity rail ridership should grow with population, while intercity bus ridership would decline as intercity bus services continue to be eliminated (most corridors had only one or two trips per day in 1991). Ridership on urban transit and specialized elderly and handicapped services should grow about the same as highway travel. Air travel would grow more rapidly than other modes.

3. **Livability Approach**

Under this alternative plan (Map 3), transportation investments and programs would be oriented to the economic and livability goals of the OTP Policy Element, the LCDC Transportation Rule and the Oregon Benchmarks. This option is a consolidation of two options, one which maximizes economic development and one which maximizes land use and environmental benefits. These were combined because they cannot be approached separately.

This alternative depends heavily on the concept of minimum levels of service within each transportation mode to assure appropriate transportation alternatives to all areas of the state. Development of this alternative is described in detail in the section on the Preferred Plan.

Evaluation of the Alternatives

Table 4 compares the three alternatives (sketch plans) based on 13 criteria:

- Highway VMT
- Transit trips
- Telecommuting trips
- Private cost per year
- Public cost per year
- Total cost per year
- Economic efficiency
- Economic development
- Environment
- Land use
- Alternative modes and technologies
- Consistency with Oregon policies
- Safety

Table 4 clearly indicates that the Livability alternative is best in virtually all criteria. It provides positive benefits in terms of economic development and efficiency as well as the environment, land use and safety. Highway vehicle miles of travel (VMT) would increase the least under the Livability alternative because of the implementation of the LCDC Transportation Rule. This alternative will meet the 10 percent per capita reduction of VMT in the metropolitan areas required by the rule.

The total cost to the public of operating and using the transportation system is a very important factor in selecting the Preferred Plan. Traditionally, the public costs for providing the system have been the primary issue. But public costs amount to only 5 percent of the total cost of using the transportation system. Much more important are the private costs to the user including vehicle ownership, value of travel time, fees and fares. The provision of a poor quality transportation system will significantly raise the total costs to the users because of the value of time lost in increased congestion and the increased vehicle ownership and operation costs. (See Appendix B for more cost detail.)

TABLE 4
SUMMARY EVALUATION OF ALTERNATIVE APPROACHES

Criteria	1990	2010 Alternatives: Funding Decline	2010 Alternatives: Continue	2010 Alternatives: Livability Approach	Best Plan
Patronage					
Highway VMT*					
Urban	13,100	26,100	26,100	19,800	
Rural	13,900	19,300	19,300	19,300	
Total	27,000	44,400	44,400	39,100	Livability
Transit Trips*					
Urban	64.7	109	108	212	Livability
Intercity	1.2	1.4	1.6	3.0	Livability
Telecommute Trips*	11.1	38.2	39.4	74.9	Livability
Cost Per Year **					
Private	$18.8	$33.4	$32.6	$31.6	Livability
Public	$1.2	$1.1	$1.2	$1.7	Funding Decline
Total Cost	$20.0	$34.5	$33.8	$33.3	Livability
Other Criteria					
Economic Efficiency		Worse than 1990	Same as 1990	Better than 1990	Livability
Economic Development		Worse than 1990	Same as 1990	Better than 1990	Livability
Environment		Negative	Negative	Positive	Livability
Land Use		Neutral	Neutral	Positive	Livability
Alternative Modes/ Technologies		Neutral	Neutral	Positive	Livability
Consistent With Oregon Policies		Not	Not	Yes	Livability
Safety		Worse than 1990	Same as 1990	Better than 1990	Livability
SUMMARY		Worse than 1990	Same as 1990	Better than 1990	Livability

*Millions
**Billions of dollars

ASSUMPTIONS

The Preferred Plan incorporates certain fundamental assumptions about the future. While the plan is not totally dependent on these assumptions for its implementation, and while it would be a valid approach to transportation planning even without these assumptions, the effectiveness of the plan would be limited if these assumptions were not realized.

1. Regional and local governments will continue to contain development within established urban growth boundaries.

2. Urban areas will use compact and mixed use development patterns to enhance livability and preserve open space. These patterns will also support transit and other alternatives to the automobile.

3. The transportation system will achieve the transportation-related economic and livability standards of the Oregon Benchmarks.

4. State, regional and local governments will cooperate to achieve the vehicle miles traveled reduction standard in the LCDC Transportation Rule.

5. In rural areas personal transportation will continue to be the only alternative available for most purposes.

6. Telecommunications will be developed so that it provides a significant alternative to making transportation trips.

7. The price for transportation services can include a wider variety of costs leading to expanded alternatives to the single occupant vehicle.

8. Most transportation services, other than public transit, will be provided by the private sector.

DESCRIPTION OF THE PREFERRED PLAN

The Livability Approach or the Preferred Plan is comprehensive in its approach. It describes service levels for transportation modes, land use coordination needs, jurisdictional responsibilities, and pricing and investment strategies.

It identifies a multimodal system including air, rail, auto, truck, bus, bicycle, pedestrian and marine transportation, telecommunications, and pipelines to be implemented within the next 20 years. It establishes minimum levels of service to be achieved by each of these transportation modes and identifies other major improvements needed beyond the minimum levels.

The Preferred Plan relies on transportation system and facility management processes, including demand management and transportation pricing that reflects usage. It also depends on land use policies to carry out transportation plan goals.

To help define the responsibilities of state, regional and local jurisdictions, the plan identifies transportation corridors and facilities which serve statewide and interstate functions, and it sets transportation planning and performance requirements for local, regional and state implementation of the plan. Finally, it describes the financial investments needed to implement the plan.

MINIMUM LEVELS OF SERVICE

Minimum levels of service standards describe the performance for each mode that must be achieved in order to meet the goals of the Oregon Transportation Plan for balance and accessibility. Achievement of these minimum levels of service would accomplish the following:

1. Interconnect the various passenger and freight modes to allow travelers and shippers to move between modes and take advantage of the benefits of each.

2. Connect the various areas of the state by linking each community to the nearest Oregon city with a larger population and economy and by connecting areas outside of the Willamette Valley to the Valley.

3. Connect all areas of the state to the national and international transportation system for both passengers and freight.

4. Provide alternatives to private passenger cars in each local area and region of the state.

The minimum levels of service provide performance objectives to apply to the state, regional, and local transportation systems. These performance objectives apply to overall system performance, intermodal facilities, and modal facilities and systems. They describe the system that is expected to be in place within the next 20 years.

Statewide Intercity Passenger Services

Specialized transportation services, airport, and intercity common carrier services must be planned as an integrated system to provide accessibility between different communities. Minimum levels of service for intercity passenger services are defined in terms of required minimum connectivity between various parts of the state.

Minimum levels of multimodal intercity passenger service are set at the following levels:

- Hourly intercity passenger services should be available to major cities along I-5 in the Willamette Valley.
- Market areas over 50,00 in population and over 70 miles from Portland should have at least three minimum round trip connections to Portland available per day via intercity passenger modes *(e.g., Astoria, Newport, Eugene, North Bend, Sweet Home, Redmond, Medford, Roseburg, Klamath Falls, Pendleton).*
- East-west and north-south connections should be provided based on travel density in Oregon's interstate corridors to connect to places outside the state.
- Local public transit services and elderly and disadvantaged service providers should connect with intercity passenger terminals.
- Intercity passenger terminals should be subject to public control in order to assure open access to all intercity carriers *(all of the state, but especially at main transfer locations including Portland, Eugene, Medford, Bend).*
- To the extent possible, direct interconnections should be available between intercity bus, air, rail, airport limousine services, and local transit services *(e.g., Portland, Eugene, North Bend, Medford, Klamath Falls, Redmond, Pendleton).*
- Services shall be provided in compliance with the Americans with Disabilities Act (ADA) requirements for all modes and transfer facilities.

Intercity bus minimum levels of services

- Intercity passenger service should be available for an incorporated city or groups of cities within five miles of one another having a combined population of over 2,500, and located 20 miles or more from the nearest Oregon city with a larger population and economy. Services should allow a round trip to be made within a day *(e.g., Astoria-Portland, Tillamook-Portland, Newport-Corvallis, Brookings-Coos Bay, Lakeview-Klamath Falls, Burns-Bend, John Day/Canyon City-Bend, Enterprise/Joseph-La Grande).*

- Local transit and elderly and disadvantaged services should be coordinated with intercity bus services.

- Bus passenger terminals should be publicly controlled to ensure all carriers have access to the terminals under open access terms *(e.g., Portland, Eugene, North Bend, Medford, Klamath Falls, Redmond, Pendleton).*

Minimum Levels of Rail Passenger Services

The Oregon Rail Passenger Policy and Plan will identify a set of staged improvements for rail passenger service in the Willamette Valley and will identify potential future opportunities for rail passenger development in other parts of the state.

- Intercity rail service through Oregon should be provided with an on-time reliability which allows connections to be made by Oregon boarding and embarking passengers with less than 30 minutes of delay time at every station.

- Rail passenger services from Eugene to Portland should be provided consistent with the results of the Oregon Rail Passenger Policy and Plan.

- Advanced intercity passenger services should be developed within Oregon after technologies and cost requirements have been demonstrated and if favorable levels of federal or other outside financial support are provided for Oregon services.

- Local transit services should be coordinated with intercity rail services to provide for timely and convenient connections *(e.g., Portland, Salem, Corvallis/Albany, Eugene, North Bend, Medford, Bend, Klamath Falls).*

Intercity Air Passenger and Freight Service Minimum Levels of Services

The minimum levels of service for commercial airports have been defined as

the availability of an airport with commercial service where the population is greater than 50,000 and the distance to the nearest other commercial air service is greater than 70 miles. This standard has generally been met within the state, but leaves some more sparsely populated areas without commercial air service. These areas should have access to air taxi services.

- Air service connections between Portland, or other West Coast hubs, and other areas of Oregon should be provided whenever commercially viable (three round trip planes per day of 19 passengers as a minimum measure of commercial viability) or whenever intercity air connections are more economic than providing operating assistance to other modes *(e.g., Astoria, Eugene, Newport, North Bend, Roseburg, Redmond, Medford, Klamath Falls, Pendleton).*

- Basic commercial air service should be available to isolated urban areas. These areas are isolated because of topographic constraints, severe weather conditions, and distance from Portland. The areas which must have an airport service are areas with a population of more than 25,000, a central urban area of more than 15,000, and a location more than 50 miles from other commercial air services and more than 100 miles from a metropolitan area *(e.g., La Grande/Baker City).*

Statewide Freight Service

Freight intermodal and port minimum levels of services

- Connections to major port facilities should be available under open access terms to all major railroads and trucking lines in the nearby vicinity of maritime port terminals *(e.g., Astoria, Portland, Coos Bay).*

- Major intermodal hub facilities serve as transfer points from or to truck, air, rail, and marine transportation and should be identified and supported as a method for improving Oregon's access to national and international markets. Connections to major intermodal facilities should be available under open access terms. The service area for an intermodal hub is approximately 150 miles *(e.g., Portland, Eugene, Klamath Falls, Umatilla).*

- Ports and port systems handling substantial quantities of international and national freight (more than 3,000,000 tons) should have multimodal connections, be able to operate in the international marketplace and have access to rail freight service *(e.g., the lower Columbia River, Coos Bay).*

Highway Freight Minimum Levels of Services

Highway levels of service standards are defined in the Oregon Highway Plan for peak hours. In addition to peak hour level of service, standards are proposed to allow the movement of traffic on highways of statewide function.

- Highway freight accessing intermodal terminals or moving within Oregon should experience level of service C or better on Oregon highways during off-peak periods *(e.g., Portland, Eugene, Klamath Falls, Umatilla).*

- Highways which have a high percentage of trucks, provide regional freight access, and handle long-distance traffic to out-of-state destinations should be designated as primary freight corridors and incorporated into corridor plans and projects *(e.g., Hwy. 97 Madras to Biggs, Hwy. 20 Bend to Ontario).*

Rail freight minimum levels of service

- Branch rail lines within Oregon should be maintained to allow a minimum speed of operation of 25 miles per hour whenever upgrading can be achieved with a favorable benefit-cost ratio.

- Rail main lines within Oregon should provide convenient ramp, terminal and reload facilities for transfers from truck to rail for long haul movement of freight. High quality highway access should be provided to these sites *(main lines, Oregon Trunk, Siskiyou branch).*

- Priority rights of way should be preserved for potential public use or ownership when abandonment proceedings are initiated *(e.g., corridors where there are future alternative uses, especially the Willamette Valley).*

- Reload facilities should be encouraged and, if warranted, supported where they provide the most cost efficient and environmentally effective response to branchline abandonment.

- Open access should be provided to and from all reload facilities and to major ports *(lower Columbia River, Coos Bay, Portland, Eugene, Klamath Falls, Umatilla).*

Pipeline/natural gas minimum levels of service

- In order to make alternative fuel widely available to the transportation user and to support regional economic development opportunities, natural gas should be available every 100 to 150 miles on major

interstate/statewide transportation corridors throughout the state *(e.g., Tillamook, Coos Bay/North Bend).*

Interstate and Statewide Highways

- Minimum levels of service and minimum tolerable conditions for state highways are included in the Oregon Highway Plan.

- Intelligent Vehicle Highway Systems (IVHS) should be established on I-5, I-84 and within metropolitan areas to increase system capacity, improve motorist information and improve travel efficiency on interstate, statewide, regional and local highways.

- Highway system management techniques such as access management, transportation demand management (TDM) and congestion pricing shall have a substantial role in enabling the metropolitan areas to meet the LCDC Goal 12 Transportation Rule for reduction of per capita vehicle miles of travel.

Regional/Local Transit Service

Urban transit system minimum levels of service for metropolitan planning organization (MPO) areas of over one million population *(Portland)*

- Urban transit services should be increased to assure that transit has a substantial role in enabling the metropolitan areas to meet LCDC Goal 12 Transportation Rule requirements for reduction of per capita vehicle miles of travel.

- Urban transit services should be provided in all parts of the urbanized area.

- High capacity transit services with separate rights-of-way or priority treatments for transit vehicles should be provided in all interstate corridors and other highway corridors of statewide function in which level of service E or worse is experienced or anticipated.

- Service frequencies for all routes should be no less frequent than one half hour at peak periods.

- Service should be provided at no less than one hour frequencies for off-peak services on all routes, or a guaranteed ride home program should be available and publicized.

- Park and Ride facilities along major rail or busway corridors shall be provided to meet 100 percent of peak and off-peak demand for such facilities.

- Urban transit services should provide convenient connections to all intercity passenger modes and terminals.

- Service levels provided to transit-oriented developments should be sufficient to achieve the transit-related usage goals of the development.

- Urban areas of 2,500 population or more within 20 miles of the metropolitan central city should have at least peak hour transit service to the metropolitan area *(e.g., Newberg, Scappoose).*

Urban transit minimum levels of service in MPO areas of less than one million population *(Salem, Corvallis/Albany, Eugene, Medford)*

- Urban transit services should be increased to assure that transit has a substantial role in enabling the metropolitan areas to meet LCDC Goal 12 Transportation Rule requirements for reduction of per capita vehicle miles of travel.

- Urban transit services should be provided in all parts of the urbanized area.

- High quality transit services should be provided in all interstate corridors and other highway corridors of statewide function in which level of service E or worse is experienced or anticipated.

- Service frequencies for all routes should be no less frequent than one-half hour at peak periods.

- Service should be provided for off-peak mid-day services on all routes, or a guaranteed ride home program should be available and publicized.

- Park and Ride facilities along major rail or busway corridors should be provided to meet 100 percent of peak and off-peak demand for such facilities.

- Urban transit services should provide convenient connections to all intercity passenger modes and terminals.

- Urban areas of 2,500 population or more within 20 miles of the metropolitan central city should have at least peak hour transit service to the metropolitan area *(e.g., Cottage Grove, Lebanon, Mt. Angel, Silverton, Dallas, Monmouth, Stayton).*

Urban transit minimum levels of services for urban areas of over 25,000 persons *(e.g., McMinnville, Coos Bay/North Bend, Grants Pass, Bend, Klamath Falls)*

- Urban transit services should be available to the general public to provide a modal alternative to automobile travel.

Regional and Local Highways and Streets

Minimum levels of service and minimum tolerable conditions for local city and county roads are included in the Oregon Roads Finance Study. The minimum levels of service and minimum tolerable conditions vary based upon functional class, terrain, and traffic volume.

OTHER MAJOR PROJECTS AND PROGRAMS

Projects Included in the Plan

There are three additional improvements that would be necessary to achieve the plan which go beyond the minimum levels listed above. (See Maps 3 and 4.)

1. **Deepening the Columbia and Coos Bay channels**

   These projects will be necessary to preserve the competitiveness of Oregon ports for international transportation. The Corps of Engineers is undertaking a feasibility study to deepen the Columbia channel to 43 feet and has completed a feasibility study to deepen the Coos Bay channel to 36 feet.

2. **Implementation of Intelligent Vehicle Highway Systems (IVHS)**

   IVHS systems allow vehicles to exchange information about the road system and have the potential to greatly enhance the efficiency and safety of highways by giving drivers information necessary to select routes. They control vehicle operations in such a way as to maximize use of facilities while minimizing congestion. This capability will be particularly valuable on the interstate highways and in metropolitan areas. In metropolitan areas IVHS will also be critical to implementation of management and pricing strategies discussed below. IVHS is now in its infancy in terms of application, but should be implemented during the next 20 years.

3. **Expanded urban transit in metropolitan areas**

   The level of service prescribed for metropolitan areas in the minimum levels of service was that required to meet the accessibility and balance goals in the Policy Element for individual travelers. However, this level will not be sufficient to reduce the per capita VMT necessary to meet the LCDC Transportation Goal. This plan also envisions additional investments to meet that goal.

Additional Improvements

In addition to the improvements included the plan, there are five improvements still being considered which are either not developed completely enough to include in the plan or are too far in the future. (See Map 5.) These include:

1. **High speed rail**

   The Oregon Rail Passenger Policy and Plan is considering the potential for high-speed rail service in the Willamette Valley. The establishment of this service will depend on the potential for adequate ridership levels and ties north to Seattle and possibly to Vancouver, B.C.

2. **Willamette Valley interurban rail service**

   A Valley interurban rail service is being investigated as a way of serving travel needs on the west side of the Willamette Valley. With adequate ridership, such service could support community development and possibly reduce needs for highway improvement in the Valley.

3. **Klamath Falls intermodal freight airport hub**

   The Klamath Falls area has an opportunity for an intermodal freight airport. As the market develops, this facility could become a reality.

4. **New international airport in the Willamette Valley**

   Beyond 2012, a new international airport in the Willamette Valley could be needed if Portland International Airport reaches capacity. A new airport would enable Oregon to have an international hub that would provide major economic development opportunities, especially if other international airports in the Pacific Northwest also reach capacity. Oregon's land use system could be a major advantage in locating and preserving such a facility.

5. **Grants Pass/Medford and Gold Beach tourism highway**

   A tourism highway between Grants Pass/Medford and Gold Beach is worthy of discussion since Grants Pass/Medford is the only metropolitan area of this state which does not have direct access to a major coastal recreation area. But the development of such a highway would have to consider environmental issues.

SYSTEM MANAGEMENT AND PRICING

One of the basic concepts in the OTP is that managing the transportation system may be just as important as constructing and operating it. For example, demand management in the form of metered freeway ramps has already improved operation of freeways in the Portland metropolitan area.

The Preferred Plan creates incentives to choose the more efficient and environmentally responsible modes of transportation by using fees and managing the transportation system to encourage these choices. A rational pricing strategy for transportation services, including use of the highway system, would be developed to encourage patterns of travel and land use which are consistent with livability goals.

In the short term, a rational pricing strategy may involve incremental increases to Oregon's current highway and other user fees such as ramp metering, parking fees and charges for environmental costs such as vehicle emissions. Such a strategy should lead to higher fees for use of more congested highways and other facilities, particularly during peak periods--an approach known as congestion pricing. To have the desired effect of reducing travel, the user should directly feel these fees and pay out-of-pocket as much as possible. Revenues from such a pricing program should be applied to infrastructure preservation and alternative transportation improvements which foster economic growth and are consistent with the livability goals.

User fees are useful in managing the transportation system and are essential to the achievement of the LCDC Transportation Rule. That rule calls for a 20 percent per capita reduction in VMT in metropolitan areas over the next 30 years. Studies of transportation demand indicate that this cannot be achieved with public transportation and land use changes alone, but must be accompanied by some combination of peak period tolls on roads and parking charges.

To be effective in reducing VMT, the level of fees would have to be substantial. Estimates place the level of fees at $1,250 in new fees per vehicle annually or $.15 per mile in metro areas. Half of the increase could come from mileage congestion fees, and the remainder from employee parking and non-work parking charges. These fees could be phased in during the 20-year planning periods.

LAND USE COORDINATION

Full implementation of this plan requires close coordination between land use policy and transportation. The plan makes three fundamental assumptions with respect to land use policy. First, urban growth boundaries will be maintained in substantially their present positions for the next 20 years. If boundaries do not hold, then public transportation cannot be effective in serving the low density developments that will result and additional highway investments will be required to serve those living in areas that are outside existing urban growth boundaries.

Second, the plan calls for the development of mixed use, pedestrian friendly neighborhoods and commercial districts to reduce demands for automobile trips and increase the ability to provide effective transit services.

Third, the plan assumes that local land use plans can be effective in minimizing conflicts between transportation facilities and other development. Otherwise, major transportation systems, such as urban arterial highways, will not function at the projected levels of service and will require additional investment in capacity or mitigation of conflicts with residential and commercial developments.

Coordination of land use and transportation is a major goal of the LCDC Transportation Goal and will be included in the transportation planning and performance requirements being developed as a part of this plan.

CORRIDORS, FACILITIES AND SYSTEMS SERVING STATEWIDE AND INTERSTATE FUNCTIONS

The responsibility of different levels of government for transportation facilities and services within Oregon will differ by the type of function the service of facility performs. As a step toward establishing governmental responsibilities, transportation corridors, facilities, and systems must be defined according to the functions.

The transportation system of statewide function is determined by the importance of particular elements of the system in terms of

- connecting major cities or urban areas within or outside Oregon
- volumes of passengers and freight
- contribution to important environmental, land use, and development goals
- accessibility provided to regions of the state, other states, and nations

The corridors, facilities, and systems of interstate and statewide function form the backbone of Oregon's transportation system. They provide the framework for identifying state government concerns and responsibilities for the implementation of the Oregon Transportation Plan. While these transportation features are not necessarily owned and operated by the state, the state does have a special interest in their preservation because of their importance to the entire transportation system. Therefore, protection and development of these corridors, facilities and systems will be included in planning and performance criteria for state modal plans, and regional and local transportation plans.

Corridors serving statewide functions are defined as broad bands through which various modal links provide important connections for passenger or freight services. **Facilities** of statewide function are individual modal or multimodal terminals which, even by themselves, are of a sufficient level of importance to be of statewide function. **Systems** of statewide function are collections of links, services or terminals, which taken as a whole, are of statewide function even though individual corridors, facilities or services which make up the systems are not a statewide function.

Multimodal Corridors

The multimodal corridors of statewide function, which currently move people and goods by several modes, include the Columbia River corridor including I-84, the north-south I-5 corridor through the Willamette Valley, the north-south route east of the Cascades, and Access Oregon Highway corridors. Although some of these corridors are served only by highways today, they should be

analyzed as multimodal corridors in further planning and project development.

Highway Corridors and Systems

Highways connect Oregon with other states and places within the state. They provide for the movement of people and goods around the state. Highways of interstate and statewide levels of importance were identified in the 1991 Oregon Highway Plan. The highways identified as the interstate system, Access Oregon Highways, and statewide highways in the Highway Plan are considered of statewide function. However, the federal Intermodal Surface Transportation Efficiency Act requires reevaluation of these highway classifications.

Other state highways not classified as a statewide function are of importance to the state in terms of their conditions, levels of service, and access management. The Oregon Transportation Plan incorporates the minimum levels of service, minimum tolerable conditions, and access management policies presented in the Oregon Highway Plan.

The level of service and condition of major county and city street systems, including arterial and collector systems taken as a whole are of statewide function.

Urban and Intercity Passenger Corridors and Systems

Each of the metropolitan transit district systems, transit systems serving communities over 25,000 population, connecting providers, and paratransit services, taken as a whole, are of statewide significance.

The Amtrak services through Oregon are a statewide function. Future intercity rail service in Oregon will be a statewide function.

Each of Oregon's commercial air carrier service airports is a statewide function. Although the individual general aviation airports are not of statewide function, the performance of, and condition of, the system of general aviation airports in the state as a whole is a statewide function.

All intercity bus lines connecting places of 25,000 or more are a statewide function, and the system taken as a whole is a statewide function. In addition, intercity bus lines connecting places of 2,500 or more, which are 20 miles or more from intercity passenger services, are also a statewide function. The system of intercity services, including specialized van services for the elderly and disadvantaged as a whole is a statewide function.

Intercity passenger terminals serving as major connecting points for an individual mode or for intermodal connections taken as a whole are a statewide function.

The statewide bicycle route system is, as a whole, a statewide function.

Freight Systems and Services

Highways play a critical role for intermodal transfers, long distance, regional and local freight distribution.The highways classified as interstate and statewide levels of service in the 1991 Oregon Highway Plan are considered a statewide function.

Waterways are also important carriers of interstate and international freight. The lower Columbia River ports, the Columbia/Snake River system, and the Oregon International Port of Coos Bay are considered a statewide function. The intermodal connections to those ports, including connections between ocean going vessels, barges, railroads, and trucks are a statewide function. Other marine ports which provide statewide, interstate, or international transportation services are considered as a whole to be a statewide function.

Approximately four locations around Oregon should be selected to act as major intermodal transfer locations. These major non-marine intermodal transfer facilities are a statewide function.

The mainline rail lines through Oregon (the Burlington Northern, Southern Pacific, and Union Pacific), connecting lines (Oregon Trunk and Siskiyou branch), and rail access to statewide function marine facilities (lower Columbia River and Coos Bay) are each a statewide function. Although individual rail branch lines are not a statewide function, the services provided by branch lines as a whole are a statewide function; the state has an interest in assuring the connections served by rail branchlines continue to be served without adverse environmental consequences.

The major oil and natural gas pipelines traversing Oregon are a statewide function.

Regional and Local Corridors and Facilities

Corridors, facilities and systems which are not of statewide or interstate function are primarily the concern and responsibility of regional and local governments and are highly important to the achievement of regional and local transportation objectives. Therefore, the state of Oregon is also interested in the achievement of performance objectives for transportation facilities and services of regional and local function.

TRANSPORTATION PLANNING AND PERFORMANCE REQUIREMENTS

The planning and performance requirements provide a structure for further transportation planning and programming for state, regional and local agencies. They are a combination of requirements established in the

- LCDC Goal 12 Transportation Planning Rule
- Oregon Benchmarks
- federal Intermodal Surface Transportation Efficiency Act (ISTEA)
- Oregon Transportation Plan (OTP)
  - goals, policies and actions
  - minimum levels of service

The State's Responsibilities

To carry out the Policy and System Elements, ODOT will develop modal and intermodal plans and support statewide minimum levels of service. The planning process will include identifying opportunities to use alternative modes and evaluating tradeoffs between particular modes and other modes and transportation system management.

Preparation of a transportation system plan for the Willamette Valley in cooperation with local governments is currently under discussion. A permanent coordinating committee may be required to implement a Willamette Valley plan.

The state will take a more active role regarding facilities and systems that have statewide and interstate functions such as intercity passenger services, intermodal freight hubs, and intraurban highways.

Regional and Local Responsibilities

Regional and local governments are responsible for being consistent with the adopted parts of the Oregon Transportation Plan, for protecting statewide corridors and facilities, for implementing minimum levels of service, and for meeting other performance and planning criteria.

The Transportation Rule requires regional and local government transportation systems to be consistent with adopted elements of the state transportation system plan. For example, regional and local governments must carry out Oregon Transportation Plan policies such as

- Provide a transportation system that is accessible to all potential users;
- Provide a transportation system with connections between modes;
- Develop transportation system plans sufficient to accommodate planned development;
- Develop a system that is environmentally responsible;
- Promote transportation safety.

Requirements for planning and supporting minimum levels of service are being developed separately from this document. Proposed requirements would vary with the population level of the jurisdiction. Smaller jurisdictions would have fewer requirements than those with larger populations.

Jurisdictions under 2,500 in population would, for example, have to coordinate public bus services with transportation for the elderly and disadvantaged. In addition, jurisdictions with urban areas between 2,500 and 25,000 population would have to reduce conflicts at busy railroad crossings and rail yard areas. Jurisdictions with urban areas over 25,000 in population would have such additional requirements as

- Making urban transit services available to the general public;
- Identifying and supporting intermodal hub facilities and terminals so that goods and people can move easily from one mode or carrier to another.

Jurisdictions within metropolitan planning organizations (MPOs) would also be expected to have high quality urban transit services and park and ride facilities and develop congestion pricing programs. The MPOs (Portland, Salem, Eugene and Medford) must meet ISTEA planning requirements in addition to the more specific state requirements. When the MPOs meet the state criteria, the state will adopt the MPO plan and improvement strategy. To measure progress toward meeting state planning objectives, the state would require the MPOs to provide performance audits.

While this Multimodal System Element is being reviewed at public meetings, a discussion paper listing these and other planning requirements will be reviewed with state, regional and local agencies and the public. **For a copy of "Discussion Paper: Transportation Planning and Performance Requirements," write Dave Bishop or Carolyn Gassaway, ODOT Strategic Planning, Room 405, Transportation Building, Salem, OR 97310 or phone 373-7571.**

INVESTMENT REQUIREMENTS

According to preliminary needs estimates, implementation of the Preferred Plan will require an additional $9.6 billion in funding of state and local transportation over the next 20 years.

Table 5 compares continuation of existing program levels with the Preferred Plan and presents the estimated additional dollars necessary to implement the plan. Almost 77 percent of the total dollars in the Preferred Plan are for roads, streets, and highways. Much of this amount is to maintain the existing infrastructure. However, less than 58 percent of the additional dollars will go for roads, streets, and highways because there will be major new investments in railroads (passenger and freight), marine ports, aviation, intercity bus and, especially, transit. This will be a major change in state direction and responsibility for the development and funding of the Oregon transportation system

These estimates are based on preliminary funding assumptions which were made in order to describe, develop, and evaluate the alternative plans. Major improvements in these estimates will be possible as the results of the Oregon Roads Finance Study, Oregon Rail Passenger Policy and Plan, and transit needs studies become available.

TABLE 5
COMPARISON OF PLAN ALTERNATIVES
(MILLIONS OF 1991 DOLLARS)

Criteria	20 Year Continuation Program Levels	20 Year Preferred Plan	Additional Cost to Implement Preferred Plan: 20 Year	Additional Cost to Implement Preferred Plan: Annual
Highways*	$20,300	$25,880	$5,580	$279
Railroad**				
Capital	N/A	400	400	20
Operating	N/A	220	220	11
Ports (Capital)***	N/A	720	720	36
Aviation				
Passenger	N/A	83	83	4
Intercity Bus				
(Operating)	0	120	120	6
Transit****				
Operating	2,516	3,828	1,312	66
Capital	1,200	2,400	1,200	60
Pipelines	0	?	?	?
TOTAL	N/A	$33,651	$9,635	$482

Note: Federal revenues will be major portion of most modes' funds.
N/A = Not available or minimal amount.

* Highway needs will be refined by Roads Finance Study.

** Railroad needs are from preliminary results of the Oregon Rail Passenger Policy and Plan and rail freight needs estimates in 1993-8 Preliminary T.I.P.

*** Extrapolation of estimates in 1989 report "Adopting Oregon's Ports to the Future."

**** Transit needs include "Tri-Met Strategic Plan and extrapolation of estimates from 1993-98 Transportation Improvement Program.

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Wilbur Smith Associates
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Staff:
Mark Ford
Dave Bishop
Paul Norris
Carolyn Gassaway

APPENDIX A
POPULATION AND EMPLOYMENT FORECASTS BY COUNTY

Demographic and economic changes among counties occur at different rates and are of differing absolute magnitudes. The table presents county projections of population and employment from 1990 to 2012. It depicts the wide diversity among counties with regard to the various rates of socioeconomic change. County population projections in 2012 range from a high of 711,385 for Multnomah County to a low of 1,638 for Gilliam County. Employment levels range from a high of 485,842 for Multnomah County to a low of 383 for Wheeler County.

Alphabetical County Population and Employment (1990-2012)

	Population Change				Employment Change			
COUNTY	1990	2000	2012	% Change	1990	2000	2012	% Change
Baker	15,300	16,132	16,953	10.8%	4,691	5,387	6,010	28.1%
Benton	71,200	79,269	88,286	24.0%	31,316	37,977	44,902	43.4%
Clackamas	279,500	340,181	410,702	46.9%	87,680	107,073	132,025	50.6%
Clatsop	33,500	36,090	38,349	14.5%	14,726	17,280	19,493	32.4%
Columbia	37,700	42,628	48,147	27.7%	9,554	11,768	14,110	47.7%
Coos	60,100	57,971	56,674	-5.7%	22,037	23,154	24,030	9.0%
Crook	14,100	14,734	15,318	8.6%	5,107	5,814	6,418	25.7%
Curry	19,400	21,705	24,492	26.2%	5,670	6,909	8,277	46.0%
Deschutes	75,600	89,162	113,534	50.2%	30,689	39,424	53,292	73.7%
Douglas (C)	7,066	6,816	6,663	-5.7%	2,894	3,066	3,202	10.6%
Douglas (NC)	87,583	94,193	101,368	15.7%	34,252	40,450	46,515	35.8%
Gilliam	1,750	1,670	1,558	-11.0%	415	433	429	3.2%
Grant	7,900	8,330	8,753	10.8%	2,701	3,102	3,460	28.1%
Harney	7,100	7,485	7,866	10.8%	2,618	3,007	3,354	28.1%
Hood River	16,800	19,171	22,149	31.8%	7,668	9,530	11,691	52.5%
Jackson	146,400	165,420	188,890	29.0%	53,770	66,178	80,223	49.2%
Jefferson	13,700	14,999	16,488	20.4%	4,743	5,657	6,601	39.2%
Josephine	62,800	72,583	85,163	35.6%	19,511	24,562	30,594	56.8%
Klamath	57,800	59,744	61,305	6.1%	21,396	24,089	26,242	22.6%
Lake	7,200	7,807	8,986	24.8%	2,775	3,277	4,006	44.4%
Lane (C)	13,094	15,474	18,387	40.4%	5,978	7,675	9,658	61.6%
Lane (NC)	269,818	303,375	344,374	27.6%	115,916	141,609	170,242	46.9%
Lincoln	38,900	45,970	54,624	40.4%	15,422	19,851	25,040	62.4%
Linn	91,000	98,647	107,175	17.8%	33,138	39,128	45,129	36.2%
Malheur	26,000	27,413	28,808	10.8%	10,411	11,957	13,338	28.1%
Marion	229,500	253,398	270,831	18.0%	97,772	117,588	133,420	36.5%
Morrow	7,650	8,392	9,168	19.8%	3,218	3,845	4,460	38.6%
Multnomah	583,500	641,744	686,075	17.6%	394,009	448,693	508,766	29.1%
Polk	49,700	54,875	58,651	18.0%	11,470	13,795	15,652	36.5%
Sherman	1,950	1,861	1,734	-11.1%	588	611	606	3.0%
Tillamook	21,500	24,311	27,456	27.7%	6,679	8,225	9,864	47.7%
Umatilla	59,000	64,785	71,479	21.2%	21,948	26,251	30,748	40.1%
Union	23,600	25,915	28,593	21.2%	9,262	11,078	12,976	40.1%
Wallowa	6,950	7,624	8,327	19.8%	2,307	2,757	3,195	38.5%
Wasco	21,700	21,656	21,884	0.8%	7,555	8,096	8,684	14.9%
Washington	313,000	396,342	501,795	60.3%	126,562	165,957	222,877	76.1%
Wheeler	1,400	1,536	1,678	19.9%	243	290	336	38.4%
Yamhill	65,600	77,285	89,862	37.0%	21,409	27,473	33,913	58.4%
State	2,846,316	3,226,691	3,652,546	28.3%	1,248,100	1,493,015	1,773,782	42.1%

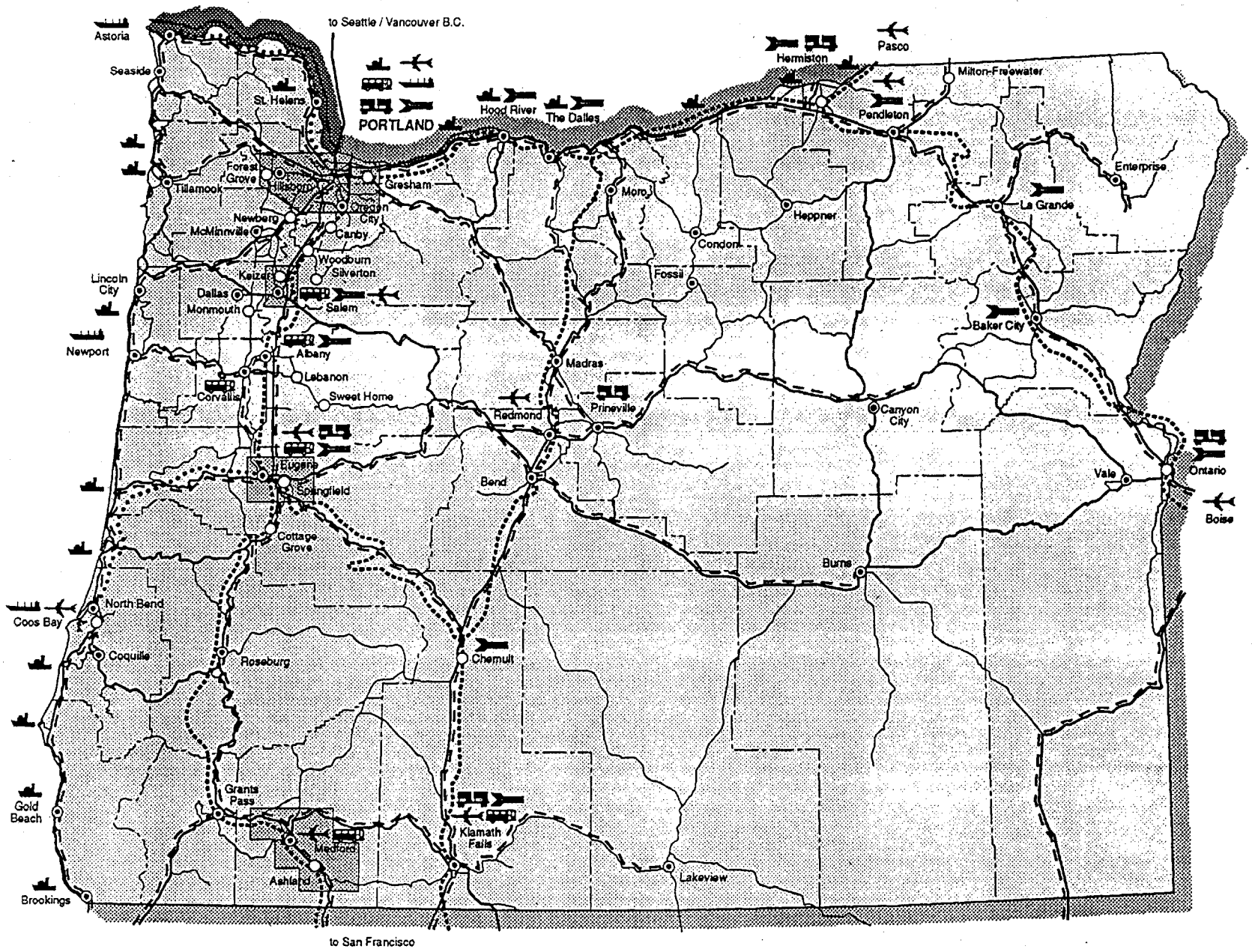
APPENDIX B
OPERATING AND TIME COSTS OF ALTERNATIVE APPROACHES
(BILLIONS OF DOLLARS)

Criteria	1990	2010 Alternatives: Funding Decline	2010 Alternatives: Continue	2010 Alternatives: Livability Approach
METROPOLITAN AREAS				
Highway Costs				
Out-of-Pocket	$1.23	$2.11	$2.11	$1.66
Ownership	$4.77	$8.19	$8.19	$6.80
Travel Time	$4.31	$9.66	$8.97	$6.39
Fees	$0.22	$0.38	$0.63	$3.47
Subtotal	$10.53	$20.34	$19.90	$18.32
Transit Costs				
Operating Costs	$0.10	$0.17	$0.17	$0.33
Travel Time	$0.28	$0.49	$0.48	$0.95
Subtotal	$0.38	$0.66	$0.65	$1.28
Total	$10.90	$21.00	$20.55	$19.59
RURAL AREAS				
Highway Costs				
Mileage	$5.035	$7.900	$7.900	$7.900
Time	$2.729	$4.282	$4.282	$4.282
Benefits	$0.000	$0.000	($0.385)	($0.771)
Fees	$0.076	$0.119	$0.198	$0.356
Subtotal	$7.840	$12.301	$11.994	$11.767
Intercity Bus Costs				
Fares	$0.007	$0.007	$0.008	$0.020
Time	$0.013	$0.014	$0.016	$0.032
Subsidy	$0.000	$0.000	$0.000	$0.006
Subtotal	$0.020	$0.021	$0.024	$0.058
Intercity Rail Costs				
Fares	$0.017	$0.018	$0.021	$0.053
Time	$0.033	$0.035	$0.041	$0.082
Subsidy	$0.000	$0.000	$0.000	$0.011
Subtotal	$0.050	$0.053	$0.062	$0.145
Total	$7.909	$12.375	$12.080	$11.970
STATE TOTAL COSTS	$18.812	$33.372	$32.632	$31.563
Savings *	$0.000	$0.000	$0.740	$1.809

*Compared to Funding Decline

Numbers may not add up due to rounding.

MAP 1
OREGON TRANSPORTATION SYSTEM
EXISTING 1992



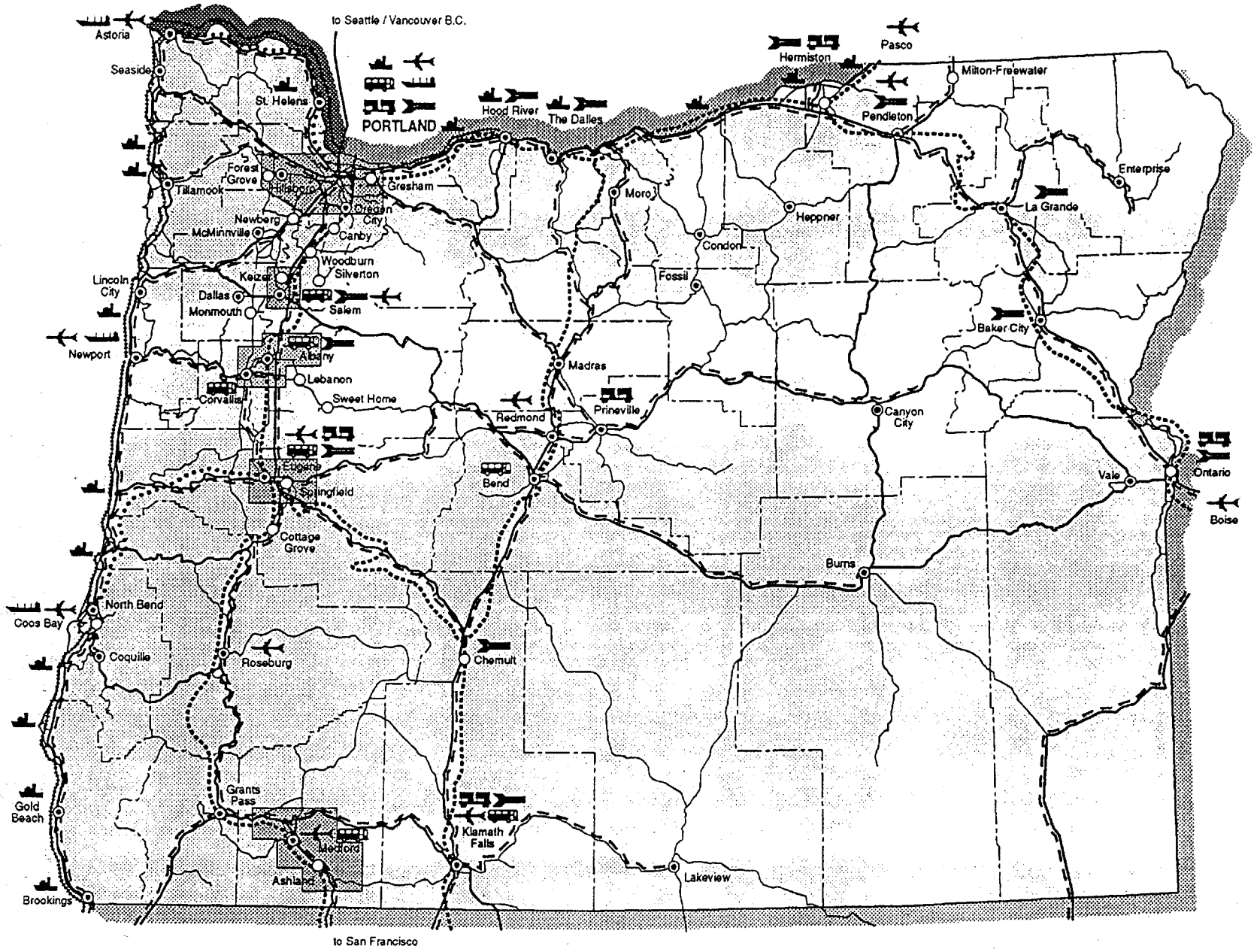
MAJOR TRANSPORTATION FACILITIES

- HIGHWAY INTERSTATE / STATEWIDE
- TRANSIT SERVICE (+ 25,000 population)
- METROPOLITAN AREA
- Intercity Bus
- MAJOR RAIL LINES
- Amtrak Stops
- Intermodal - Freight
- Rail - Port Access
- DEEP DRAFT WATERWAY
- Ocean Port
- Inland Waterway
- Port Facility
- AIR CARRIER SERVICE

*Not shown on map:
STATEWIDE BIKEWAY SYSTEM
TELECOMMUNICATION IMPROVEMENTS

MAP 2

OREGON TRANSPORTATION PLAN
2012 CONTINUATION OF EXISTING PROGRAMS
(ALTERNATIVE 2)



*Red indicates changes in system.

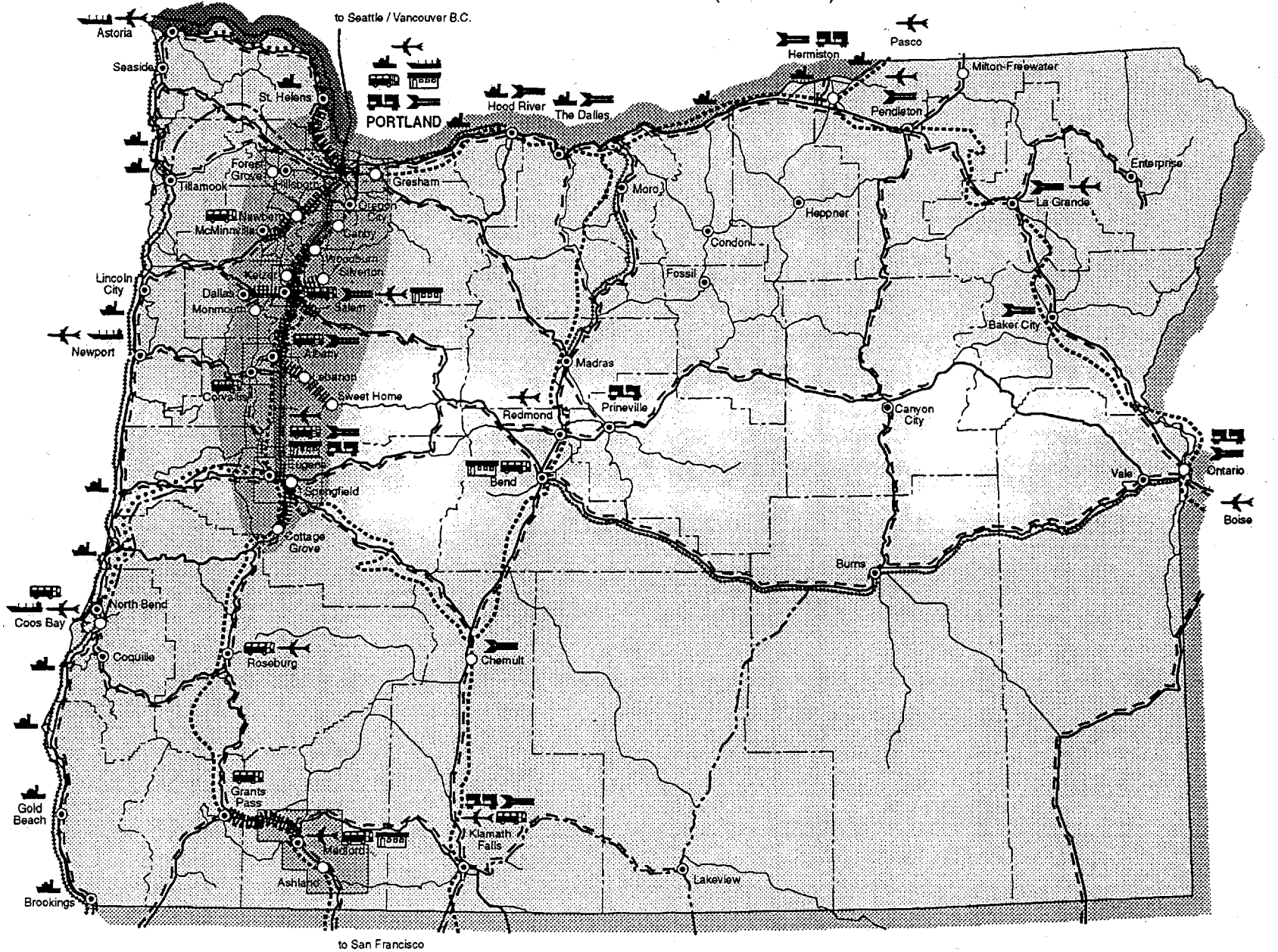
MAJOR TRANSPORTATION FACILITIES

- HIGHWAY INTERSTATE / STATEWIDE
- Scenic Byway
- TRANSIT SERVICE (+ 25,000 population)
- METROPOLITAN AREA
- Intercity Bus
- MAJOR RAIL LINES
- Amtrak Stops
- Intermodal - Freight
- Rail - Port Access
- DEEP DRAFT WATERWAY
- Ocean Port
- Inland Waterway
- Port Facility
- AIR CARRIER SERVICE

*Not shown on map:
STATEWIDE BIKEWAY SYSTEM
TELECOMMUNICATION IMPROVEMENTS

MAP 3

OREGON TRANSPORTATION SYSTEM
PREFERRED TRANSPORTATION SYSTEM
BY THE YEAR 2012
(ALTERNATIVE 3)



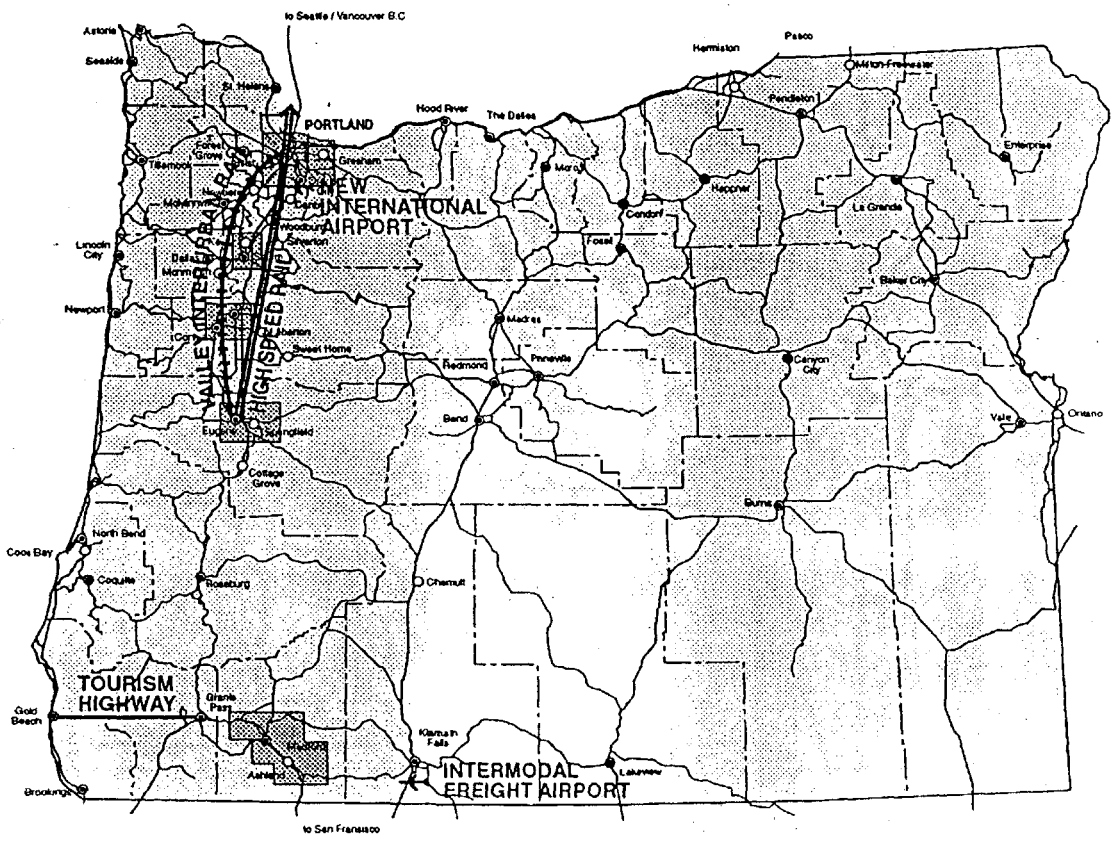
*Red indicates changes in system.

MAJOR TRANSPORTATION FACILITIES

- HIGHWAY INTERSTATE / STATEWIDE
- New Statewide
- Scenic Byway
- Highway Freight Corridor
- NHS Highways
- TRANSIT SERVICE (+ 25,000 population)
- Willamette Valley Trans. Coor. Area
- Hourly Intercity Service
- Commuter Transit Service
- Intercity Bus
- Intercity Passenger Terminal
- MAJOR RAIL LINES
- Amtrak Stops
- Intermodal - Freight
- Rail - Port Access
- DEEP DRAFT WATERWAY
- Ocean Port
- Inland Waterway
- Port Facility
- Channel Improvements
- AIR CARRIER SERVICE
- NATURAL GAS PIPELINE
- METROPOLITAN AREA

*Not shown on map:
STATEWIDE BIKEWAY SYSTEM
TELECOMMUNICATION IMPROVEMENTS

MAP 5
LONG - RANGE
TRANSPORTATION POSSIBILITIES



*Red indicates cha
in system.

Map 4

Willamette Valley Detail
Preferred Transportation Plan
(Alternative 3)

(Map 4 unavailable at this time)

CALENDAR OF EVENTS

OREGON TRANSPORTATION PLAN (OTP)

Principles: The OTP System Element is to be completed before a specific legislative financial proposal is approved and released

1992	POLICY ELEMENT	SYSTEM ELEMENT
February	•Evaluate Public Comments on Draft Policies	•Define System of Statewide Significance
	•Urban Mobility Committee Final Policy Recommendations	•Define Minimum Levels of Service
March	•Rural Freight, Safety Committees Final Policy Recommendations	•Evaluate System Alternative
April	•OTC Review of Policy Policy Committees Final Recommendations •Revise Policy Draft	•Receive Draft Report •Approve Report for Public Review
May		•Begin Statewide Public Review Meetings on System Element
June		•Complete Statewide Public Review Meetings
July	•Revise Policy Element	•Evaluate Public Comments •Revise System Element
August	OTC Formal Public Hearings on Oregon Transportation Plan: Policy and System Elements	
September	•OTC Adoption of Plan •Sept. 18 - Transportation Symposium - Showcase Plan - Discussion of Financing Issues	
October	Continue Development of Finance Package	
November	OTC Adoption of Legislative Package	

Proposed JPACT actions

→ June: Adopt OTP Comments

→ July: Adopt Resolution

COMMITTEE MEETING TITLE JPACT

DATE 5/14/92

NAME	AFFILIATION
Earl Blumenauer	City of Portland
Les White	C-TRAN
Steve Greenwood	DEQ
LARRY COLE	CITIES OF WASHINGTON COUNTY
Bob Post	TRI-MET
Don Forbes	ODOT
Jim Gardner	Metro
Gerry Smith	WSDOT
BOB LIDDELL	Cities of CLACKAMAS C
Marjorie D. Schmunk	Cities of Mult. County
ROY ROGERS	WASHINGTON CTY.
Susan McClain	Metro
Ed Lindquist	Clackamas Co.
Maurice Henderson	Multnomah County
RICHARD DEVLIN	METRO
DAVE WILLIAMS	ODOT
John Kirk	ODOT
TOD SANDOZ	CLACKAMAS COUNTY
Dan Adams	ODOT
KIM CHIN	C-TRAN
Mark Landers	C-TRAN
Rick Root	Beaverton
GB ARRINGTON	TRI-MET

COMMITTEE MEETING TITLE JPACT

DATE 5/14/92

NAME	AFFILIATION
Craig J Tomnicki	Cities of Clackamas Co.
Earl Ryder	Metro
Cathy Thomas	Metro
STEVE DOTTERRER	City of Portland
David Jahsene	Mult Co
Kathy Busse	Mult Co
Keith Ahola	WSDOT
Molly O'Reilly	Citizen member TPAC
Ted Spence	ODOT
Jim Edmonds	BTA
Howard Harris	DEQ
Mike Thorne	Port of Portland