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Subject: Environmental Defense Comments to NEPA task force

The attached comments to the NEPA task force (NEPA TF ED Transp Comment09_2002.doc) were submitted online by Environmental Defense Transportation Director, Michael Replogle. The attachments to the comments were not transmitted successfully. I will be sending the attachments to Environmental Defense's comments over several emails (due to their large file size). A hard copy of the comments and a CD of the attachments will be put in overnight mail.

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(See attached file: NEPA TF ED Transp Comment09_2002.doc) (See attached file: Attachment4-Induced Demand Models.doc) (See attached file: Envision Utah.htm) (See attached file: Final_ATL_B&BComments05_02_2002.doc) (See attached file: Hales EPWTestimony Streamlining withAttachments.doc) (See attached file: Johnston[1].ppt)


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ENVIRONMENTAL DEFENSE
finding the ways that work

1875 Connecticut Ave NW Suite 600
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September 23, 2002

NEPA Task Force
P.O. Box 221150
Salt Lake City, UT 84122

Dear Sirs and Madames:

On behalf of the 300,000 members of Environmental Defense, a not-for-profit advocacy group, we submit the following comments offering recommendations for the better administration of one of our nation's core environmental laws, the National Environmental Policy Act (NEPA), as it is applied to transportation project reviews.

NEPA has for three decades helped to assure for the public and local elected officials the right-to-know about the effects of major federal agency decisions before final action and has offered the affected public a say in those decisions. We have joined with other groups in expressing our concerns about recent actions by the Administration that seek to undermine the application of NEPA to many federal actions with serious environmental consequences, such as offshore oil drilling and logging in the national forests. We hope that the work of the NEPA Task Force will help improve NEPA as a tool to produce less controversial decisions that more effectively advance environmental stewardship and protection of public health, livable communities, and environmental justice.

In these comments, we especially want to draw attention of the NEPA Task Force to best practice examples that offer effective models for progress in NEPA administration and environmental stewardship, to spotlight current practices and proposals that threaten to undermine such progress, and to highlight key areas where performance must be improved to comply with the law.

Especially in the transportation arena, we believe there are many benefits to be gained from better integration of the transportation planning and NEPA project review process. But it is vital that this integration be founded on the adoption of best-practice analysis methods to consider secondary, indirect, cumulative, and distributive impacts and the expansion of effective opportunities for informed, continuous, meaningful involvement of all stakeholders in planning and decision-making. We encourage greater opportunities and requirements for agencies to use programmatic and tiered analysis

and performance-based planning and program monitoring to facilitate such more effectively integrated approaches to planning, decision-making, and ongoing environmental management.

I. Oregon: A Cluster of Best Practices Case Studies

Oregon offers a number of the best practices that we most strongly commend to the NEPA Task Force for closer examination as national models:

A. LUTRAQ: Model for Public Involvement, Improving Analysis Methods, and Considering Reasonable Alternatives in a NEPA Review. The "Making the Land Use Transportation Land Use Connection", or LUTRAQ initiative was launched by environmental and civic activists in 1988 following their legal challenge to a decision by Oregon Department of Transportation to build the Western Bypass freeway around the west side of metropolitan Portland. The group 1000 Friends of Oregon, a land use planning advocacy group, initiated their own alternative transportation planning process, ultimately enlisting support from foundations, regional and state planning and transportation agencies, U.S. EPA, and the Federal Highway Administration. Through a collaborative process with outside consultants, government agencies, and stakeholders, the metropolitan planning agency's computer transportation analysis models were upgraded to enhance their sensitivity to pedestrian friendliness and transit accessibility impacts on travel behavior. The enhanced analysis tools were used to evaluate a transit-oriented development transportation-land use scenario for the west side of Portland. Stakeholders helped shape alternatives and consider impacts of various alternatives through an extensive public outreach program.

Ultimately, Oregon DOT adopted the LUTRAQ alternative, which included new light rail lines, minor local road improvements, pedestrian and bicycle enhancements, and changes to local zoning, as the preferred option in their 1995 *Western Bypass Study Alternatives Analysis*. ODOT decided against construction of the Western Bypass freeway because it would produce much more sprawl and pollution. The transit oriented development strategy was shown to produce better overall environmental and transportation system performance with improved travel options. Selected chapters from the LUTRAQ study reports are attached. This provides an outstanding example for Tasks A, B, C, and D.

B. Portland 2040 Plan: Integrated Regional Planning and Performance Monitoring.

LUTRAQ helped lay the foundation for the development of the 2040 Growth Concept, which was initiated by the Portland regional government, Metro, in 1990. The Metro charter for growth management was affirmed by the region's voters in 1992. The Growth Concept was adopted by Metro in 1995. It was further articulated as the 2040 Regional Framework Plan in 1997, and reaffirms the region's commitment to managed transit-oriented mixed-use growth and open space protection. This integrated land use, transportation, and natural resource plan for the Portland region provides an outstanding U.S. example of programmatic evaluation of alternatives for their impacts, with outstanding use of public involvement strategies. A summary of this

Concept and Framework, as well as the full Framework Plan adopted in 1997, is attached. This provides lessons for Tasks A, B, C, and D.

C. Oregon Transportation Planning Rule: Performance-Oriented Interagency Coordination Framework. LUTRAQ also helped inform policy development by the Oregon Land Conservation and Development Department, including its Transportation Planning Rule, which helps integrate land use, transportation, and natural resource planning at the state, regional, and local level. A copy of that Planning Rule is attached to these comments. This provides lessons for Tasks A, B, C, and D.

D. Oregon: Statewide Conservation Planning GIS. Oregon, along with Florida and Massachusetts, have developed comprehensive statewide GIS-based inventories of sensitive habitat, ecosystems, and other protected resource elements to facilitate more effective ongoing environmental system management, early avoidance of impacts in the planning and project development project, and effective monitoring of environmental stewardship and system performance. Similar inventories should be developed for all the states and could deliver similar benefits at a modest cost.

E. Oregon Travel Model Improvement Program: Assuring Timely Progress On Integrated Transportation-Land Use-Economic Models for Policy and Project Planning. The Oregon Department of Transportation works closely with jurisdictions throughout the state to develop state-of-the-art transportation and land use models. These models integrate transportation, land use and economics to provide a reliable way to forecast and evaluate policy and future growth. The Oregon Model Improvement Program was developed to build interactive and integrated technical tools, create a forum to address modeling issues and guide research through a cooperative effort of local, state and federal agencies, and to conduct education and outreach for information sharing and understanding. See <http://www.odot.state.or.us/tddtpau/3symposium.html>, and the attached papers from a recent symposium organized by ODOT, for more information on best planning and analysis practices in this area.

F. An Oregon Perspective on Environmental Reviews: Helping Advance Good Projects. The attached testimony, offered on September 19, 2002, by transportation and housing project developer and former Portland City Transportation Commissioner Charlie Hales to the Senate Environment and Public Works Committee, provides a valuable perspective on NEPA administration. When NEPA is applied by agencies that strive to take seriously the law's requirements for informed public involvement in decision-making and effective consideration of alternatives, good projects get built without excess delay, with broader consensus, and better performance. As Mr. Hales noted,

My community's experience shows that the best way to "streamline NEPA" is to go through the planning process right the first time and only once. We have made a sustained commitment to comprehensive land use and transportation planning. We work collaboratively to integrate the requirements and address

the concerns of federal and state regulatory agencies in our plans and projects. We then ask those agencies to sign off early on purpose and need. We base our project priorities on the plans. We are thrifty in our expenditure of public monies. We build transportation projects on time and on budget. And our transit projects in particular outperform their projections.

It is not my experience that environmental groups and NIMBY's (not-in-my-back yard neighborhood groups) will exploit environmental review and tie needed projects up for years. If there is any place in America where this should be true, it is Portland, Oregon. Our state is loaded with environmentalists (remember the book "Ecotopia"?), and our city is populated with neighborhood activists. In fact, Portland actually goes so far as to provide funding and staff support for neighborhood associations and gives them a free land use appeal right for discretionary land use decisions. Some might expect this to be a recipe for paralysis.

Yet the contrary is true. In the ten years I served as a Portland City Commissioner and as Portland's representative to the MPO for our region, we built dozens of major highway, transit, sewer, and water projects, and other major facilities. In almost no case...allow me to repeat that...in almost no case have projects been held up by appeals, litigation or multiple trips through the NEPA process or through state or local review. I'm proud of that track record; I believe that I made good decisions. I must admit, though, that I was not infallible. Some appeals are meritorious; they are part of the checks and balances system, and their scrutiny accomplishes a legitimate purpose of these laws: avoiding bad projects, or reshaping them to be good ones.

Similarly, in ten years of rapid growth and dramatic change in the built landscape of my city, only citizen blocked a handful of private development projects in Portland or neighborhood appeals. This paradox is explained by the fact that we have taken the coordination, public involvement and alternatives analysis goals of NEPA and TEA-21 to heart. We plan, we work for consensus, and we follow our plans. We are a case study that demonstrates that good administrative practice gets good treatment under the federal requirements. We demonstrate that even in a city with Endangered Species swimming through its downtown, federal and state agencies can reach agreement and construction of public works and private development can continue apace.

Environmental review does not need to hold up projects or add significantly to their costs. If my community's citizens are "green," they are also "tight." Oregonians are frugal, and expect frugality in public expenditure. In my experience, this expectation is more likely to be met with a truly good faith effort to follow these planning and alternatives analysis requirements. To borrow a popular phrase, planning is expensive and time-consuming, but not compared to the alternative.

These laws and regulations don't foster internecine warfare among public agencies; done right, environmental review reduces interagency conflict. The Oregon DOT, like most state DOTs, is still primarily a road and highway organization. The ODOT staff has, however, incorporated this planning-based approach in their work. They, in return, expect counties and municipalities to work collaboratively with them; for example, we are transitioning some former state highways located in urban areas into locally-managed streets. These projects don't require environmental review, but the cooperative working relationships forged in environmental review makes these other "win-win" agreements possible.

Environmental review requirements, well integrated and well administered, help assure that good projects are advanced with public support, avoiding adverse impacts and mitigating unavoidable impacts. This translates into public acceptance and smoother permitting. While there are opportunities for better administration of such reviews, changes in law are not generally needed to make this happen. Indeed, efforts to expedite project delivery are likely to fail and work against sound decision-making if they set arbitrary time limits, curtail public and judicial review, limit consideration of alternatives and determinations of project purpose and need, or allow use of project segmentation and analysis models insensitive to induced traffic and other indirect impacts. Such approaches are likely to spur increased conflict and reduced public support for transportation funding and programs.

It's not possible to mandate cooperation, consensus and trust. Trying to push projects forward by the means I just listed will fail because in a complex environment like the design and permitting of a major public works project, cooperation, consensus and trust are necessities, not niceties. Likewise, it's not possible to measure a transportation project's success on transportation or engineering terms alone, so evaluation measures, if the Committee pursues them, should evaluate a project's affect on a community's goals and plans. Land use results - i.e. the places where Americans live their lives - are not a "secondary effect."

...If you take the commonsense planning, coordination and public involvement requirements of these federal policies seriously, they don't get in your way. If you are committed to the spirit of these laws, the particulars are relatively unimportant. And as a local or state official, your time is much better spent in genuine consensus-building and integrated planning than in complaining about the regulations or defending against citizen suits. Our experience is that if citizens participate in the planning process and have a clear buy-in and responsibility for commitment, there are few suits. The plan is the community's plan. I should also emphasize that one does not need to adopt Portland's approach, or anyone else's; a community is free to plan its own future, not imitate anyone else's approach in order to get these beneficial results.

I'm not simply saying that if one plans, coordinates and communicates, the federal regulatory requirements are not so bad. The results can be better than that. A community which first, engages in real, comprehensive, and sustained land use planning, and which makes infrastructure decisions consistent with that plan, and conducts a genuine and genuinely open process of alternative analysis not only gets through the environmental review process with a minimum of difficulty; the people of this community own the results of the planning process and get to live in a better place.

That is the opportunity that environmental review offers to states and localities.

The NEPA Task Force, and those working at transportation agencies to enhance project delivery and environmental stewardship, should study closely these and other lessons from Oregon's best practices and the perspectives embodied in Mr. Hales attached testimony. Such a review can provide lessons for Tasks A, B, C, and D.

II. Key Areas for Attention in Improving Transportation NEPA Analysis

We would identify several key areas to which the NEPA Task Force and transportation agencies promoting enhanced environmental stewardship should give attention:

A. Project Segmentation, Use of Excessively Constrained Study Area Definitions Leads to Inadequate Consideration of Integrated Transportation/Land Use Alternatives. In too many cases, large highway projects are being segmented into smaller pieces for separate impact analysis, ignoring the cumulative effects of the larger set of investments on land use, travel behavior, pollution, and natural resource systems. This is an issue the must be considered when thinking about more effective use of programmatic reviews, categorical exclusions, and adaptive management, monitoring, and evaluation plans.

Better environmental stewardship could be a product of a tiered NEPA process that undertook relatively fewer but far more comprehensive reviews of highway projects, with more effective consideration of secondary, indirect and cumulative impacts, such as induced land use and travel effects, using state-of-the-art analysis tools. Combining a number of smaller corridor-level NEPA studies of proposed road expansions into a larger sub-regional or regional NEPA analyses of alternative transportation investments, management and pricing strategies, and growth management plans could reveal a much wider array of effective demand management, transit investment, system management, and partial build scenarios that could avoid major adverse impacts that typically result from major highway system expansion schemes.

Such approaches can provide effective tiered analysis to inform later corridor level evaluations of detailed project-level alignment alternatives and mitigation strategies. With care, products of state-of-the-art planning practices with exemplary public involvement should be usable in partial satisfaction of NEPA requirements.

Oregon has pioneered many of these state-of-the-art planning practices and public involvement initiatives in the U.S., with examples such as the LUTRAQ study of the Western Bypass around Portland and the Portland 2040 Plan initiatives, discussed above, with attached documentary examples. Other regions, such as the Salt Lake City area, have also begun to take steps toward this end, exemplified in the Envision Utah process, which is documented in two attachments to these comments, providing another excellent example of integrated comprehensive evaluation of alternative transportation and land use scenarios that could support an effective first tier NEPA review for major transportation investments.

B. NEPA Analysis Relies on Inadequate Conformity Process for Air Quality

Impact Analysis. It is common practice for NEPA analyses of major highway projects to completely avoid a regional air quality impact analysis of the proposed action and meaningful alternatives to that action, claiming that because the project is drawn from a conforming transportation plan its air quality impacts are of no consequence. Yet the same conformity analyses are routinely based on inadequate computer models insensitive to induced traffic and land use impacts and the analyses frequently assume that the transportation investment will have no impact on land use patterns. Because of long delays in meeting requirements for adoption of State Implementation Plans for air quality and added delays in designating non-attainment areas under the new National Ambient Air Quality Standards, the motor vehicle emission budgets to which conformity is being demonstrated are often clearly inadequate to protect public health. When environmental advocates question these problems, they are routinely met with the rejoinder from the road building lobby and transportation agencies that "cleaner technology will solve these problems, so don't worry about it."

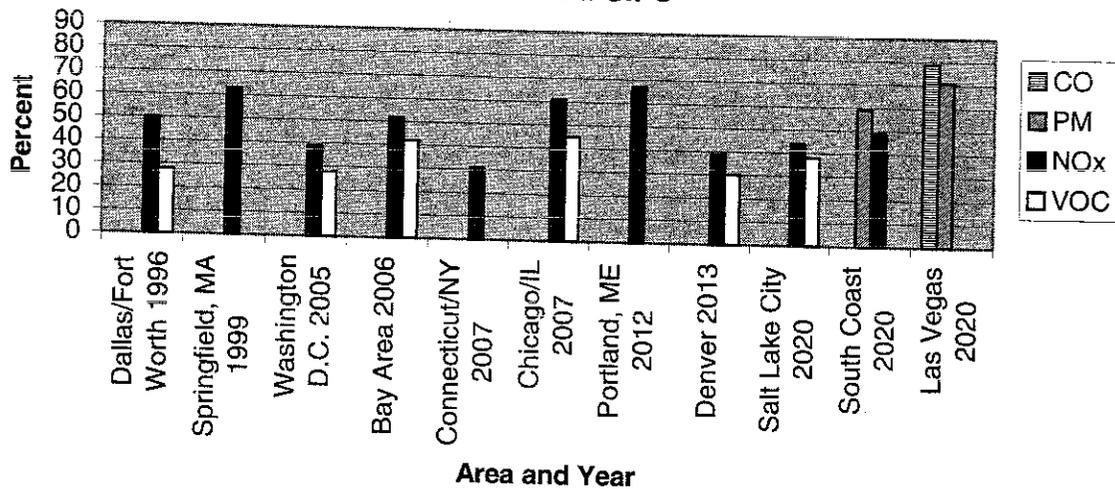
Satisfying NEPA's requirements demands more than such assurances. It requires sound technical analysis of not just localized CO hot spots, but also thorough routine evaluation of the short and longer term impacts of major projects on land use, regional air quality, and air toxics which cause cancer and other health problems.

For even with significantly cleaner cars and truck technologies, Smart Growth strategies offer the promise of avoiding - at essentially no cost - as much as one-quarter of the potential motor vehicle emissions in 2020, thus helping to achieve more timely attainment at less cost. If Smart Growth strategies are ignored in NEPA analyses and sprawl and highway building advance without any accountability for impacts on emissions, society will need to invest billions of dollars more in pollution abatement technologies to clean up mobile and non-mobile sources so we can achieve healthful air quality.

The amount of motor vehicle pollution emitted per mile driven has fallen by more than 90 percent since 1970, but today motor vehicles still account for a major share of pollution - from one fourth to three fourths of the NOx and VOC emissions - in most non-attainment areas. Adopted or submitted SIPs show that in the attainment year and in future years going out as far as 2020, motor vehicle emissions are expected to continue to account for a large share of emissions in many metropolitan areas, as

Graph 1 shows. For example, despite adoption of cleaner technologies, motor vehicles are estimated to account for 28 percent of VOC and 39 percent of NOx emissions in Washington, DC (in 2005), 31 percent of NOx emissions in Connecticut/NY (in 2007), 45 percent of VOC and 61 percent of NOx emissions in Chicago/Illinois (in 2007), 67 percent of NOx emissions for Portland, Maine (in 2012), 30 percent of VOC and 39 percent of NOx emissions in Denver (in 2013), 79 percent of CO emissions and 71 percent of PM emissions in Las Vegas (in 2020), and 38 percent of VOC and 44 percent of NOx emissions in Salt Lake City (in 2020). And despite the fact that California leads the nation in adopting cleaner vehicles and fuels, the Bay Area expects motor vehicles to contribute 42 percent of VOC emissions and 52 percent of NOx emissions (in 2006), and the South Coast non-attainment area expects motor vehicles to contribute 59 percent of PM emissions and 49 percent of NOx emissions (in 2020).

Graph 1: Share of Selected Criteria Pollutants from highway sources by year and area from adopted or submitted SIPs



The magnitude of emission reductions needed to reach healthful air quality is considerably greater than that now identified through submitted and approved SIPs. EPA's recent posting of maps of estimated effects of the proposed "Clean Skies" initiative (<http://www.epa.gov/clearskies/maps.pdf>) shows that adopted and proposed measures are together inadequate to bring many of the nation's largest metropolitan areas into full attainment of the NAAQS even by 2020. Significant further emission controls will be needed also to deal with hazardous air pollutants, greenhouse gas emissions, and other environmental pollution, even with the cleaner motor vehicles produced under the Tier II and heavy-duty diesel engine rules.

A conservative estimate is that Smart Growth and related demand management and pricing strategies have the potential to reduce traffic growth and emissions over the time frame of 20-year regional transportation plans by at least 15 to 25 percent compared to forecast trends in most metropolitan areas. Over the shorter time frame of a two-year TIP conformity cycle or the several years prior to reaching ozone

attainment deadlines, many regions could accomplish reductions in traffic growth and related pollution well of several percent a year relative to trends with a concerted effort combining Smart Growth, pricing, and demand management strategies. NEPA analyses need to consider a full array of such strategies when evaluating major proposals for transportation infrastructure investment.

The effectiveness of Smart Growth strategies in reducing traffic and pollution is also closely linked to how comprehensively these strategies are implemented. Effective Smart Growth means transit-oriented (not just transit proximate) development that is attractive for walking and cycling, includes a vibrant mix of land uses for various income groups, and highly attractive non-automobile access to other parts of the metropolitan area. It includes pricing policies and incentives that favor transit, walking, bicycling, and alternatives to driving while curbing subsidies for driving. Even in slow growth areas, Smart Growth transportation pricing and urban design incentives, such as Commuter Choice programs where employers pay for transit benefits and offer cash-in-lieu-of-parking benefits can produce substantial shifts in travel behavior and pollution reductions in the span of a year or two, with concerted marketing, promotions, demonstrations, and incentives for rapid adoption of Smart Growth changes.

C. Models Insensitive to Induced Traffic and Land Use, Urban Design, and Pricing Underestimates Adverse Impacts of Road Expansion Alternatives. Recent research has shown induced traffic and land use changes to be of great importance in predicting future system performance, traffic levels, congestion, pollution, and effects on health, safety, and community livability. But most regional agencies and states use analysis tools that seriously underestimate or even ignore these effects. As a result, they underestimate the traffic growth, pollution, and sprawl accompanying highway system expansion.

Alternatives that more efficiently manage traffic growth and support compact livable communities are often not considered in NEPA reviews and face little prospect for adoption when evaluated using transportation analysis models that have no sensitivity to key attributes of these strategies, such as the walkability of communities. This often leads to ongoing conflict over the adequacy of the project evaluation and undermines the legitimacy of the project decision-making process, leading to lack of local consensus, financing problems, litigation, and at times, reversals of decisions after expenditure of significant resources on politically unviable investment strategies.

An attached paper, *Induced Demand and Regional Transportation Models: Summary of Recent Studies and Application to Evaluate a Regional Transportation Planning Model*, by Norm Marshall, provides a very brief summary of the recent literature on induced traffic, concluding that for every 10% increase in lane miles of road capacity, the research suggests that properly sensitive traffic models should show an 8% increase in vehicle miles traveled (i.e., an elasticity of 0.8, with the typical range varying from 0.3 to 1.0 or more). It is a straightforward matter to test and evaluate these models for their adequacy, but most NEPA analyses make use of regional travel models that have not been evaluated for their adequacy in reflecting induced traffic.

A recent analysis by the Metropolitan Washington Transportation Planning Board showed that by deferring 100 lane miles of highway expansion projects in 2002 - a 0.5% reduction in lane-miles of road capacity - Virginia *saves* \$800 million in capital costs while *cutting* NOx emissions by more than 1%, or nearly 2 tons per day, and reducing vehicle miles of traffic by 0.6%. This illustrates how the very expensive expansion of new highways typically produces a growth in air pollution emissions by spurring more traffic, rather than a reduction in emissions as often claimed by the road lobby. It illustrates how reducing expenditures on new roads is often the most cost-effective emission reduction strategy, because it avoids generating both costs and air pollution.

Some areas, like Oregon, some regions of California, and various regions in Europe, are moving towards adoption of best practice methods to evaluate induced traffic and land use effects of transportation investments in regional and statewide planning, as discussed below. Attached powerpoint presentations by Dr. Robert Johnson of University of California Davis and Dr. Michael Wegener of the University of Dortmund, provide further information about some of these methods.

Transportation agencies should be required by DOT and EPA to promptly upgrade their computer models to effectively consider air quality, induced traffic, and fully-up-to-date planning factors for NEPA analysis, air quality planning, and transportation conformity analysis. EPA and DOT should promptly issue long-promised additional model guidance and regulations to assure that non-attainment areas properly account for induce land use and traffic effects in conformity analysis and SIP transportation modeling. EPA and DOT should establish best-practice planning model standards and to require timely action by MPOs and other agencies to meet these standards for conformity and SIP planning. A recent report (U.S. General Accounting Office, *Environmental Protection: Federal Incentives Could Help Promote Land Use That Protects Air and Water Quality*, Washington, DC, October 2001, GAO-02-12, page 95) notes that, "DOT and EPA efforts to improve travel-demand-forecasting models may help MPOs and communities determine the effects of transportation improvements on congestion and air quality. However...these efforts currently do not call for integrating land use or environmental components into the travel demand model...Without such integrated models, communities cannot consider the likely effects that their transportation decisions will have on land use, future growth and development, and air quality." U.S. GAO-02-12, op. cite, page 95.

D. Inadequate Attention to Distribution of Benefits and Burdens of

Transportation. For US DOT and most major transportation project implementing agencies to comply with Title VI of the Civil Rights Act, NEPA, and numerous executive orders on environmental justice, transportation project environmental reviews and the regional and state transportation planning process must consider the distribution of benefits and burdens of transportation decisions on minorities and other protected groups, seek to mitigate those impacts, and justify the business necessity of any adverse

disparate impacts. This has been acknowledged in recent guidance from the US DOT, which states:

US DOT, state transportation agencies, metropolitan planning organizations, and recipients of federal transportation funds must take additional actions to assure that approvals of metropolitan and state transportation plans, programs, and projects fully comply with Title VI of the 1964 Civil Rights Act (42 U.S.C. 2000d-1) and related regulations, the President's Executive Order on Environmental Justice, the U.S. DOT Order, and the FHWA Order.

Title VI states that "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Title VI bars intentional discrimination as well as disparate impact discrimination (i.e., a neutral policy or practice that has a disparate impact on protected groups).

The Environmental Justice (EJ) Orders further amplify Title VI by providing that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

Increasingly, concerns for compliance with provisions of Title VI and the EJ Orders have been raised by citizens and advocacy groups with regard to broad patterns of transportation investment and impact considered in metropolitan and statewide planning. While Title VI and EJ concerns have most often been raised during project development, it is important to recognize that the law applies equally to the processes and products of planning. The appropriate time for FTA and FHWA to ensure compliance with Title VI is during the planning certification reviews conducted for Transportation Management Areas (TMAs) and through the statewide planning finding rendered at approval of the Statewide Transportation Improvement Program (STIP).

This guidance was further articulated in draft US DOT regulations on NEPA and planning that were withdrawn from further consideration by the Administration on September 19, 2002. We urge the Administration to reaffirm and strengthen that federal commitment to assuring that environmental justice is adequately considered in the transportation planning and NEPA process. Most regional and state transportation planning fails to pay much attention to the analysis or consideration of such adverse impacts and many basic transportation related data collection systems are poorly designed to accomplish tasks and the same weaknesses afflict most project-level NEPA analysis.

The inadequacy of existing data, analysis, and planning to meet these Title VI obligations has been made quite apparent through the recent Atlanta Transportation Benefits and Burdens study carried out by US DOT, Georgia DOT, and the Atlanta Regional Commission, which is concluding its work in fall 2002. A copy of a letter dated April 25, 2002 from 10 environmental justice groups, environmental and civil rights groups, and Rep. John Lewis to the Federal Highway Administration concerning the draft final report for this study is attached. We hope that the NEPA Task Force will consider its recommendations, including the following, which are relevant to the adequacy of adaptive monitoring, management, and evaluation plans related to NEPA (Tasks A, B, C, D of the Task Force):

- U.S. DOT should monitor progress in improving analysis and in reducing disparate impacts through the planning certification process and in considering state and regional transportation plan and program approvals. Areas of concern include adequacy of Metropolitan Planning Organization (MPO) data collection, data analysis, data integration, transportation network and analysis zone coding, peak and off-peak transit service representation in transportation models, land activity and zoning data, non-work travel behavior, and consideration of pedestrian environment factors. Improvements to these are needed to assure timely evaluation of accessibility of protected populations to jobs and public facilities, including education and health services, grocery stores, places of worship, and other opportunities. Improved analysis of these factors should be required in the next Atlanta regional transportation plan and program, along with initiatives that assure timely progress to provide equal access for all to jobs and public facilities, without undue time and cost burdens, including for those without cars.
- U.S. DOT should issue guidance and recommendations for specific actions to assure better data collection and analysis of non-work travel and travel costs as a part of demonstrating Title VI compliance. It should promote the use of econometric data and Bureau of Economic Analysis U.S. Commerce Department county-level data to evaluate household travel costs.
- U.S. DOT should recommend new guidance and regulations to require state and local agencies to report exact locations of projects to better track spending and its effects, and analysis of who uses the transportation facilities and services that are provided.
- US DOT should consider additional steps that might promote development of uniform land use and zoning data bases to facilitate the analysis of housing types, employment locations, and occupancy information to support analysis of transportation benefits and burdens.

E. NEPA Analysis of Air Toxics and Induced Traffic Needed to Protect Health.
The Federal Highway Administration (FHWA) has refused to give adequate consideration to the effects of air toxics exposures and health impacts caused by highway system expansion despite strong new evidence linking these factors. NEPA

and other law requires FHWA to take steps to comprehend, avoid, and mitigate these impacts as part of the transportation project review and approval process.

Travel demand and growth management strategies, pricing incentives, and other actions related to the operation, management, investment in transportation systems and related community systems can often provide very cost-effective approaches to reduce exposure of communities to air toxics and the cancer and other health risks associated with these exposures. Indeed, expansion of highways where unacceptably high air toxic exposure problems already exist will likely increase the scope of the problem by inducing traffic growth and exposures to air toxics. Cleaner technology and better fuels are not the only or best way to reduce most of these health risks, although these are an important part of the solution. While a reduction in cancer risk from 1990 to 1997 is documented in the Multiple Air Toxics Exposure Study (MATES-II) issued by the South Coast Air Quality Management District, the cancer risk in 1997 is many times higher than the level at which EPA and FHWA are required to take actions to safeguard public health from such documented risks.

Diesel emissions are indeed the largest source of toxic air pollutants emitted from mobile sources and the EPA heavy duty diesel rule will eventually reduce those emissions substantially. But because of the long-delayed timeframe for implementation of the heavy-duty diesel rule and the very long lifetime of diesel engine equipment, barring major new pollution control initiatives, it will take decades to achieve the substantial emission reductions required to protect public health from toxic air pollutants from these motor vehicles. While technology and fuels will do a lot to reduce these risks, public health will be best protected by a program that combines such initiatives with better strategies to manage the demand and use patterns of motor vehicles – both diesel and non-diesel – and to manage exposure of the public to these emissions. This must include consideration of how changes in transportation investments – such as highway expansions – will affect the amount of traffic emitting toxic air pollutants, and whether alternative investments might better satisfy mobility objectives while avoiding or mitigating these adverse health impacts. As the example in Washington, DC, cited above shows, reducing highway system expansions can – at least at times – produce both cost savings and substantial reductions in pollution. There are many ways to better manage the system to minimize air toxics while meeting mobility needs, including promotion of faster adoption of cleaner technologies and alternative transportation investment and management strategies. But FHWA is refusing to face core issues related to health impact assessment in its project approval and transportation plan and program approval process.

The health risks from transportation related air toxics remaining after the emission reductions of the last decade far exceed federal criteria for unacceptable health risks, and will continue to be unacceptably high even if further reductions in per-vehicle emissions are achieved in the foreseeable future. The future risks expected due to the traffic volume anticipated in many major highway corridors are not acceptable to the families who are exposed to toxic emissions. Furthermore, proper consideration of strategies that serve mobility needs without increasing single occupant vehicle travel

can minimize these risks. FHWA has not given adequate consideration of these harmful health effects and the alternatives that could mitigate them in its process for reviewing and approving transportation plans, programs, highway funding agreements, and project environmental and design documentation.

The National Environmental Policy Act (NEPA), 42 U.S.C. § 4321 *et seq.*, requires a review of the harmful effects of exposure to these motor vehicle pollutants generated by highways. FHWA has violated both NEPA and the requirements imposed by 23 USC §109(a) and (h) and 23 CFR §771.105 to assess and mitigate the adverse effects of air pollution from highway projects in a number of cases, such as the proposed widening of US 95 in Las Vegas.

It is not acceptable to dismiss the substantial cancer risks that are exacerbated by highway expansions simply because cleaner technologies are likely to be introduced into the marketplace at some future time without considering the health impacts on several generations of children and adults who we know will be harmed by these effects in the decades prior to these cleaner technologies coming into wider use. The evidence of serious health risks is compelling. California's South Coast Air Quality Management District published a study entitled Multiple Air Toxics Exposure Study (MATES-II) in March 2000. In February 2000, the Journal of the Air and Waste Management Association published a study entitled "Distance Weighted Traffic Density in Proximity to Home is a Risk Factor for Leukemia and Other Childhood Cancers" (JAWMA Study). But FHWA routinely fails to even attempt to estimate the concentrations of toxic vehicular emissions likely to result from vehicle travel in high volume traffic corridors proposed for major expansion, or to assess the health risks of public exposure to pollutant concentrations identified by these recent scientific studies as the source of elevated cancer risks and rates. Not performing such an assessment is arbitrary and capricious and inconsistent with NEPA.

EPA has listed 21 toxic air contaminants from mobile sources, including diesel particulate and diesel exhaust organic gases. The EPA concluded that "[t]he current EPA position is that diesel exhaust is a likely human lung carcinogen and that this cancer hazard exists for occupational and environmental levels of exposure." 65 Fed. Reg. 35, 446 (June 2, 2000). The EPA premised this position on findings by the World Health Organization, National Institute for Occupational Safety and Health, and International Agency for Research on Cancer. *Id.* Other federal health agencies have listed diesel emissions as containing carcinogens. The National Toxicology Program at NEIHS on May 15, 2000, two months before your letter, listed diesel particulate as a "known human carcinogen." EPA has published a list of "Mobile Source Air Toxics (MSAT)" which "includes various volatile organic compounds (VOCs) and metals, as well as diesel particulate matter and diesel exhaust organic gases (collectively DPM + DEOG)." 66 FR 17,229 (March 29, 2001). This list clearly defines the hazardous air pollutants from motor vehicles that FHWA should consider in assessing the health effects of air toxic emissions from the major highway expansion projects.

In refusing to prepare environmental analyses, FHWA has cited evidence that toxic emissions from individual automobiles and overall emissions in urban areas had declined from 1990-97. FHWA has failed to explain, however, why this decline justifies a refusal to consider the public health significance of ongoing cancer risks identified in studies that relied on monitored ambient concentrations of toxic contaminants near major highways and other information gathered after 1997. Indeed, the toxic pollutant concentrations reported in MATES-II reflect lower per-vehicle emissions than are occurring in most states, because California vehicles are subject to stricter emission standards.

FHWA's response to environmental critics does not address the information showing that the health risks remaining after the emission reductions of the last decade far exceed federal criteria for unacceptable health risks, and will continue to be unacceptably high even if further reductions in per-vehicle emissions are achieved in the foreseeable future. The future risks expected due to the traffic volume anticipated in the US-95 Las Vegas corridor and many other areas of the nation subject to highway expansion are not acceptable to the families who are exposed to toxic emissions. Furthermore, proper consideration of strategies that serve mobility needs without increasing single occupant vehicle travel can minimize these risks. Congress should reaffirm FHWA's obligation to consider as part of project reviews these harmful health effects and the alternatives that could mitigate them.

Emissions per vehicle mile traveled are not relevant to assessing the magnitude of the public health risk associated with motor vehicle emissions. The key issue is total emissions from highway corridors and the impacts total emissions are expected to have on the health of nearby populations. When highway expansion increases the vehicle-carrying capacity of the highway it induces additional traffic volumes, which in turn will contribute to increased total emissions from the highway and exposure to higher concentrations in the ambient air of hazardous pollutants in nearby neighborhoods. Risks to human health increase in proportion to human exposure to pollutants in the ambient air, not emissions per vehicle. These increased exposures create significant public health hazards that must be addressed in environmental reviews, the regional planning process, and the air quality conformity process.

At least one reasonable estimate of the cancer risk attributable to diesel emissions is the estimate developed by the California environmental agencies presented in the MATES-II study. Even if a careful review of the evidence suggests a better estimate of the cancer risk is only one-half or one-quarter of the risk estimated by California, the risk would still be very high.

Estimates that regional concentrations of criteria pollutants may improve are simply not relevant to assessing the likely public health impacts of toxic contaminants from motor vehicles. The regional modeling assessments performed to satisfy the "conformity" requirements of the CAA address only the direct emissions of CO, PM-10 and ozone precursors from motor vehicles. These pollutants are subject to emissions limitations established by EPA for new motor vehicles, and are expected to

decline in the future because future vehicles are required to meet more stringent emissions standards. But no such standards have been established for toxic air contaminants. There is no basis for assuming that comparable reductions will be achieved for toxic air contaminants. Even if emissions from future vehicles are reduced, that reduction would not obviate the need to assess future emissions levels and whether total emissions in a heavily trafficked corridor will cause or contribute to unacceptable health hazards.

In considering whether technology clean up vs. demand management and improved transportation system planning should be preferred strategies for avoiding or mitigating health impacts of transportation, it is vital to consider the health costs of highways. The Department of Transportation has estimated the national aggregate health costs of criteria air pollutants from highways at \$40 to \$68 billion per year. Table 9, Addendum to the 1997 Federal Highway Cost Allocation Study Final Report, U.S. Dep't of Transportation, Federal Highway Administration (May 2000). The methodology developed in the Addendum to the Highway Cost Allocation Study to estimate the costs of adverse health effects from air pollution provides a basis for estimating the adverse health effects, and costs, attributable to emissions from specific highway corridors. The Addendum assessed only the health effects attributable to pre-1997 criteria pollutants, and did not include the health effects attributable to toxic air contaminants emitted from motor vehicles. If FHWA intends to justify highway expansions by comparing the value of increased travel against the costs of providing that capacity, a fair assessment of the health costs to the community must be part of the calculus. In addition, that kind of cost-benefit calculus must be applied to both the highway option and reasonably available alternatives that can reduce or mitigate the adverse impacts on health.

Recent studies have significantly improved understanding of the linkage between vehicle emissions and the risk and incidence of cancer among people living near major highways. The MATES-II and JAWMA studies demonstrate that projects like the US-95 expansion in Las Vegas will increase cancer risks among exposed populations, a highly significant impact on the human environment that warrants environmental impact review. The most important new information derived from these studies is 1) the magnitude of the cancer risk caused by motor vehicle emissions from a highway corridor of the size of the US-95 project, and 2) the demonstrated increased incidence of cancer among children exposed to higher traffic volumes.

It has been known for nearly two decades that motor vehicles emit toxic pollutants that include known or suspected carcinogens. What had not been firmly established by sound scientific research prior to the MATES-II results is that these pollutants reach concentrations in the ambient air in the vicinity of heavily traveled highways that present cancer risks of *at least 1 in 1,000 to 1 in 650*, i.e., levels far greater than the threshold for mitigation established by EPA's cancer risk policy and federal agency policies generally.

EPA's cancer risk policy requires that pollutants be reduced when risks exceed 1 in 10,000 for the maximally exposed individual. These high cancer risks for nearby residents, and even higher risks for those living adjacent to roadways, far exceed the risk levels adopted by EPA and Congress in setting national health standards, and are unacceptable to the residents of these neighborhoods. EPA has summarized the consensus cancer risk policy of federal agencies as requiring careful assessment of measures to reduce cancer risks when the population risk is greater than 1 in 1 million.

Where the entire U.S. population is exposed to a chemical classified as a probable human carcinogen, the agency consensus appears to be that risks less than 1 in 1 million generally can be found acceptable without consideration of other factors while risks greater than that level require further analysis as to their acceptability.

56 Fed. Reg. 7757 (February 25, 1991). On the other hand, EPA and other federal agencies have generally acted to reduce cancer risks greater than 1 in 10,000. Here, the evidence from MATES-II shows that communities near corridors such as US-95 with traffic volumes in excess of 220,000 vehicles per day will be exposed to cancer risks well above 1 in 10,000.

The MATES-II study derived its estimates of community cancer risks from ambient air monitoring of toxic pollutants in 12 residential neighborhoods during 1998 and 1999. MATES-II also included regional toxic emission data for the Los Angeles Basin and a computer modeling program to estimate exposures for areas of the region where monitors were not located. The conclusions of the MATES-II study are startling: the regional average risk of cancer for residents of the Basin is 1400 in one million (1 cancer for each 714 residents), and 90% of this heightened cancer risk is attributable to air pollution from mobile sources. (MATES-II at ES-3).

MATES-II determined that exposure to diesel particulate emissions and other toxics from mobile sources combine to cause 90% of the elevated risks. *Id.* at E-3. Areas with concentrated traffic suffered from increased risks of cancer above the regional average. *Id.* at ES-5. The study found that the highest cancer risk is in neighborhoods nearest highways where modeled risks were as high as 5800 in one million, meaning that one person out of 170 is likely to suffer cancer. *Id.* at Fig. 5-3a, p. 5-10.

The JAWMA study of cancer rates in Denver, also published in 2000, is consistent with the MATES-II findings. That study focused on rates of childhood leukemia among children under 12 living very near highways (within 750 feet). The study found that children with leukemia were 12 times more likely to live close to highways than children without leukemia, and concluded that a "strong association" exists between proximity to high traffic streets and childhood leukemia. JAWMA Study at 2. The study built on established research connecting childhood cancers to benzene and other volatile organic compounds found in automobile emissions. *Id.*

Both the MATES-II and JAWMA studies have broad applicability. While MATES-II examined the L.A. Basin specifically, the general findings establish a clear link between automobile emissions and cancer risk. Even if the relative magnitude of emissions of cancer causing agents differs somewhat between locales, the underlying conclusion remains irrefutable: highways are the largest source of carcinogens emitted into the ambient air in the urban environments, and the pollutant concentrations are highest in neighborhoods near highways. The size of the cancer risk is proportional to daily traffic loads in the corridor. When traffic loads are known, approximations of ambient concentrations of mobile source toxics can be made for neighborhoods located next to highways in other states by comparing the daily traffic loads on those highways with the daily traffic loads on highways for which emissions are modeled in the MATES-II study.

Except for diesel particulate, these risk estimates are derived from well-established risk factors that have been the subject of intensive scrutiny for many years. Although the MATES-II cancer risks are derived from risk factors adopted by the California environmental agencies, those factors do not differ significantly from those reported by EPA. See *Integrated Risk Information System* (EPA, Cincinnati, OH)[<http://www.epa.gov/iris>]. In addition, these risk estimates are *not* for the maximally exposed individual living adjacent to heavily traveled highway corridors, but rather for regional populations. Nearby neighborhood exposures are substantially higher, and may be as much as an order of magnitude higher for the maximally exposed individuals.

With regard to diesel particulate, the cancer risks in MATES-II are estimated based on unit risk factors adopted by California, but not yet by EPA. "The current EPA position is that diesel exhaust is a likely human lung carcinogen and that this cancer hazard exists for occupational and environmental levels of exposure." 65 FR 35,446 (June 2, 2000). This characterization of DPM as a carcinogen is supported by the National Institute for Occupational Safety and Health (NIOSH), the International Agency for Research on Cancer, and the World Health Organization (WHO). *Id.* The National Toxicology Program at NEIHS on May 15, 2000, also listed diesel particulate as a "known human carcinogen." Although a risk factor for DPM has not yet been adopted by a federal agency, more than enough data has been accumulated from numerous epidemiological studies to allow a risk factor to be determined for risk assessment purposes. Further, California's more stringent emissions standards mean that other jurisdictions, like Las Vegas, may suffer from higher concentrations of toxic emissions from mobile sources.

The JAWMA study emphasized the relationship between proximity to highways and childhood cancers. As such, this study has broad application. Nothing in the study indicates that the areas examined were in any way exceptional. Based on the findings in the JAWMA study, one would predict higher rates of childhood leukemia among those living near major highways such as the expanded US-95 in Las Vegas.

In response to this new information, Sierra Club and local civic and environmental interests have sought action by FHWA to assure a Supplemental Environmental Impact Study (SEIS) for the US-95 corridor expansion project in Las Vegas. Similar issues are presented in other corridors around the country where extremely high traffic volumes would be increased by road expansions in an area close to thousands of residents. But FHWA has refused to consider the issues being raised by environmental and health groups.

A significant purpose of an EIS is the involvement and education of the public that the process entails. The United States Supreme Court has held that SEISs are necessary to ensure that this purpose is furthered. Marsh, 490 U.S. at 371 (1989). The cancer studies raise an issue that clearly warrants such public involvement. The US-95 expansion may look dramatically different to residents alerted to the heretofore unconsidered link between highways and cancer. An SEIS would provide an opportunity to inform the public about the issue and the degree of risk involved. The public has an obvious, critical interest in providing input on this issue.

Public involvement in the consideration of alternative modes of meeting travel demand in the US-95 corridor is critical. NEPA not only serves as a vehicle for informing the public of impacts, it also requires that alternatives be considered. Taken together with the requirement of 23 U.S.C. §109(h) to mitigate the adverse impacts of air pollution from highways, an SEIS should identify the alternatives that can mitigate or eliminate the cancer risk while at the same time meeting the mobility needs of people who live and work in the US-95 corridor or other similar corridors around the U.S.

Federal law requires assessment, reporting, and mitigation of health risks attributable to highway projects. FHWA's failure to assess the adverse health effects, the costs of these health effects, and the alternative transportation facilities and/or services that could prevent or minimize the adverse effects of the project violates NEPA, section 109 of the federal transportation code and the Department of Transportation's ("DOT") environmental regulation at 23 CFR §771.105.

The United States Supreme Court has affirmed the position adopted by the Council on Environmental Quality (CEQ) that the purpose of the National Environmental Protection Act would be thwarted without an SEIS requirement. 40 C.F.R. § 1502.9(c); Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 370 (1989). Accordingly, CEQ regulations implementing NEPA impose a duty on federal agencies to prepare an SEIS when "[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed actions or its impacts." 40 C.F.R. § 1502.9(c)(ii). As noted above, the CEQ defines "significantly" according to context and intensity. Context includes effects on society generally and the locality in particular, and intensity includes the magnitude of the impacts on public health and the nature of the risks. 40 C.F.R. § 1508.27.

When deciding whether to prepare an SEIS, the agency must apply a “rule of reason,” while taking a “hard look” at new information. Marsh, 490 U.S. at 373-74. In weighing the value of new information, the agency must make the decision according to the same NEPA guidelines governing the decision whether to prepare an EIS in the first instance. Id. If new information shows that the proposed action will affect the environment in “a significant manner or to a significant extent not already considered, a supplemental EIS must be prepared.” Id. When new scientific data raise environmental concerns that have not been addressed in a previous EIS, an SEIS is required. Portland Audubon Society v. Babbitt, 998 F.2d 705, 708 (9th Cir. 1993). New concerns that require an SEIS can be either quantitative or qualitative. Environmental Defense Fund. v. Marsh, 651 F.2d 983, 996 (5th Cir. 1981).

In addition to NEPA, federal highway law requires the consideration of the adverse effects of air pollution prior to approval of the plans and specifications for a highway, 23 U.S.C §109(a), and the adoption of measures that “eliminate or minimize” the adverse effects of “air pollution.” 23 U.S.C. §109(h).

In a case challenging DOT’s approval of a highway project without assessing its impact on air pollution, the court in D.C. Federation of Civic Associations v. Volpe, 459 F.2d 1231 (D.C. Cir. 1971), held that 23 U.S.C. § 109(a) required such an analysis:

We can find no basis in the statute’s language or purpose for the conclusion that certain hazards are, as a matter of law, immaterial to the Secretary’s evaluation of a project’s safety. The District Court would surely agree that Congress did not intend to permit construction of a bridge in a situation, however rare, where air pollution would be a significant threat to safety. It does not follow, of course, that air pollution will be a significant hazard in all-or even any-highway projects. And the District Court apparently concluded that no extraordinary dangers are likely to arise from the Three Sisters Bridge. Still, the gathering and evaluation of evidence on potential pollution hazards is the responsibility of the Secretary of Transportation, and he undertook no study of the problem.

DOT’s approval of the highway bridge was remanded.

Federal highway law goes beyond NEPA by requiring that the decision to approve a highway be –

“made in the best overall public interest taking into consideration the need for fast, safe and efficient transportation, public services, and the costs of eliminating or minimizing such adverse effects and the following: (1) air, noise, and water pollution; (2) destruction or disruption of man-made and natural resources, aesthetic values, community cohesion and the availability of public facilities and services; (3) adverse employment effects, and tax and property value losses; (4) injurious displacement of people, businesses and farms; and (5) disruption of desirable community and regional growth. Such guidelines shall

apply to all proposed projects with respect to which plans, specifications, and estimates are approved by the Secretary after the issuance of such guidelines.”

23 USC §109(h). At a minimum, this provision requires DOT to determine the costs of eliminating or minimizing the adverse health effects attributable to air pollution, and then requiring mitigation in the “best overall public interest.”

DOT’s 1987 regulations implementing this requirement and NEPA provide that the analyses required by §109(a) and (h) are to be performed as part of the NEPA review

of the project. 23 CFR Part 771. Thus because both §109(a) and (h) require an analysis of the adverse effects of air pollution and the costs of eliminating or minimizing such effects, a supplemental EIS is required.

Section 109(h) also requires DOT to “eliminate or minimize” the adverse effects attributable to a new or expanded highway. This provision is implemented through DOT regulations in 23 CFR §771.105, but has not been applied by FHWA with regard to the adverse health effects associated with toxic and fine particle air pollutants emitted from this highway project. DOT’s regulation adopts as --

the policy of the [Federal Highway] Administration that:

(b) Alternative courses of action be evaluated and decisions be made in the best overall public interest based upon a balanced consideration of the need for safe and efficient transportation; of the social, economic, and environmental impacts of the proposed transportation improvement; and of national, State, and local environmental protection goals.

(c) Public involvement and a systematic interdisciplinary approach be essential parts of the development process for proposed actions.

(d) Measures necessary to mitigate adverse impacts be incorporated into the action. Measures necessary to mitigate adverse impacts are eligible for Federal funding when the Administration determines that:

(1) The impacts for which the mitigation is proposed actually result from the Administration action; and

(2) The proposed mitigation represents a reasonable public expenditure after considering the impacts of the action and the benefits of the proposed mitigation measures. In making this determination, the Administration will consider, among other factors, the extent to which the proposed measures would assist in complying with a Federal statute, Executive Order, or Administration regulation or policy.

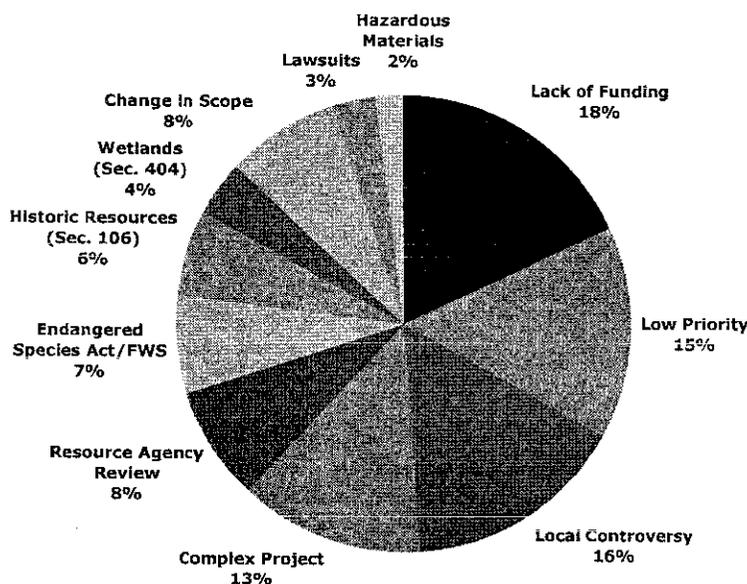
On its face, paragraph (d) requires that measures necessary to mitigate the adverse health effects of hazardous air pollutants and fine particles be incorporated into the plans and specifications for the project. Subparagraphs (1) and (2) then establish criteria for determining whether the costs of mitigation are eligible for federal funding. The rule does not contemplate the approval of a project that would have significant

adverse effects on human health without requiring that those effects be mitigated. The project must either include measures to eliminate long-term human exposure to the levels of hazardous air contaminants that are associated with significant risks of adverse health effects, or alternatives must be developed that can prevent these adverse health effects. None of these requirements of DOT's rule have been addressed in the review of the US-95 project in Las Vegas, for example.

For all of the above reasons, less highway construction and more programs to reduce vehicle travel should indeed be evaluated through the planning and project review process to appraise their capacity to avoid or mitigate adverse health risks caused by transportation related air toxics emissions. While cleaner technology and better fuels are an important part of the solution, they are not the only way or necessarily the best way to reduce most of these risks. We urge the NEPA Task Force to promote steps that will enhance the capacity of the NEPA process to consider these vital matters.

III. Principles for Enhancing Project Delivery

In an effort to accelerate transportation project delivery, some have suggested short-changing the environmental review process by eliminating public participation and imposing deadlines on participating agencies. However, recent data shown in Graph 2 below tell us that well over half (62%) of delayed projects are stalled due to lack of funding, local support and project complexity – not environmental review. New research by the Surface Transportation Policy Project provides more details on this and is attached.



For the 2% of projects that require an EIS, 69% of all delay was due to non-EIS-related factors.

More expedient project delivery – and better projects -- can best be realized through more sensible planning, early stakeholder involvement and simply taking advantage of

existing programs. Better administration of current environmental laws by state and federal agencies and project sponsors is the key to success, not changes to law. More than a dozen environmental, planning, historic preservation, and transportation advocacy groups have recently proposed the following principles that can help foster success:

- A. Planning** -- Transportation planning which considers communities and protected resources such as public parks, wildlife habitat, historic sites and scenic areas will produce better projects that are less likely to incur opposition and delay. Integrate existing resource protection efforts into transportation planning to ensure future projects will avert impacts. Taking protected resources into account at the beginning, and planning accordingly will both protect resources and facilitate project approvals. Effective policy would support efforts to develop, harmonize, and coordinate state and local transportation, environmental, resource and land use planning.
- B. Involvement** -- Involve the affected community early, substantively and continuously throughout the planning and project review process. Since so much delay is attributed to local controversy and lack of support, it makes sense to design projects with significant public participation in order to build support and improve acceptance. Promote more public involvement in transportation plans.
- C. Coordination** -- Mandate better coordination among participating agencies. Direct state DOTs to work collaboratively with state and federal resource agencies, municipalities and other interested parties to develop environmentally sound transportation projects and plans. States can ensure participation by employing TEA-21's under-utilized §1309(e), which authorizes compensation for resource agencies' increased transportation project review workload.
- D. Classification** -- Properly classify projects for environmental review. Too often, problems in project reviews arise because transportation agencies seek to waive appropriate environmental review for a complex project with multiple impacts by classifying it as a Categorical Exclusion or Environmental Assessment. This often causes later legal or regulatory delay as critics seek to challenge a flawed administrative process.
- E. Alternatives and Impacts** -- Effectively consider a wide variety of alternatives, as well as secondary, induced and cumulative impacts in project planning, design and review. The best process engages stakeholders in identifying partial build alternatives, travel demand management strategies, alternative investments, and other approaches to avoid or mitigate negative impacts. Build consensus for action by addressing broader stakeholder concerns, rather than imposing narrowly focused objectives on the community. Many delays, especially for controversial projects, arise when agencies have failed to effectively consider impacts on specific populations or neighborhoods, or the

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effects of transportation infrastructure projects on land use, travel behavior and public health.

In conclusion, we hope the NEPA Task Force will make every effort to promote environmental stewardship in transportation and other sectors as it seeks ways to enhance the performance of our nation's core environmental right-to-know law, NEPA.

Sincerely,

Michael Replogle
Transportation Director

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Subject: Additional Attachments Env Defense Comments to NEPA task force

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OR_LDCstategoals.pdf) (See attached file: streamliningdecoder3.doc) (See
attached file: Portland_2040FrameworkPlan.pdf) (See attached file: PORTLAND
METRO 2040 GROWTH CONCEPT summary.doc) (See attached file:

			
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Portland_2040FrameworkPlan.pdf	PORTLAND METRO 2040 GROWTH CONCEPT summary.doc		Wert-Sustainability[1].ppt

**The Oregon Administrative Rules contain OARs filed through August 15,
2002**

LAND CONSERVATION AND DEVELOPMENT DEPARTMENT

DIVISION 12

TRANSPORTATION PLANNING

660-012-0000

Purpose

The purpose of this Division is to implement Statewide Planning Goal 12 (Transportation) and promote the development of safe, convenient and economic transportation systems that are designed to reduce reliance on the automobile so that the air pollution, traffic and other livability problems faced by urban areas in other parts of the country might be avoided. It is also the purpose of this Division to explain how local governments and state agencies responsible for transportation planning demonstrate compliance with other statewide planning goals and to identify how transportation facilities are provided on rural lands consistent with the goals. The division sets requirements for coordination among affected levels of government for preparation, adoption, refinement, implementation and amendment of transportation system plans. Transportation system plans adopted pursuant to this Division fulfill the requirements for public facilities planning required under ORS 197.712(2)(e), Goal 11 and OAR Chapter 660, Division 11, as they relate to transportation facilities. Through measures designed to reduce reliance on the automobile, this division is also intended to assure that the planned transportation system supports a pattern of travel and land use in urban areas which will avoid the air pollution, traffic and livability problems faced by other areas of the country. This portion of the rule aims to improve the livability of urban areas by promoting changes in land use patterns and the transportation system that make it more convenient for people to walk, bicycle and use transit, and drive less to meet their daily needs. Changing land use and travel patterns will also complement state and local efforts to meet other objectives, including containing urban development, reducing the cost of public services, protecting farm and forest land, reducing air, water and noise pollution, conserving energy and reducing emissions of greenhouse gases that contribute to global climate change. The result of applying these portions of the rule will vary within urban areas. Some parts of urban areas, such as downtowns, pedestrian districts, transit-oriented developments and other mixed-use, pedestrian-friendly centers, will be highly convenient for a variety of modes, including walking, bicycling and transit, while others will be auto-oriented and include more modest measures to accommodate access and circulation by other modes. The rules in this Division are not intended to make local government

determinations "land use decisions" under ORS 197.015(10). The rules recognize, however, that, under existing statutory and case law, many determinations relating to the adoption and implementation of transportation plans will be land use decisions.

Stat. Auth.: ORS 183 & ORS 197.040

Stats. Implemented: ORS 195.025, ORS 197.015, ORS 197.040, ORS 197.230, ORS 197.245, ORS 197.712 & ORS 197.717

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91; LCDD 6-1998 f. & cert. ef. 10-30-98

660-012-0005

Definitions

For the purposes of this division, the definitions in ORS 197.015, the Statewide Planning Goals and OAR Chapter 660 shall apply. In addition the definitions listed below shall apply:

(1) "Access Management" means measures regulating access to streets, roads and highways from public roads and private driveways. Measures may include but are not limited to restrictions on the siting of interchanges, restrictions on the type and amount of access to roadways, and use of physical controls, such as signals and channelization including raised medians, to reduce impacts of approach road traffic on the main facility.

(2) "Accessway" means a walkway that provides pedestrian and or bicycle passage either between streets or from a street to a building or other destination such as a school, park, or transit stop. Accessways generally include a walkway and additional land on either side of the walkway, often in the form of an easement or right-of-way, to provide clearance and separation between the walkway and adjacent uses. Accessways through parking lots are generally physically separated from adjacent vehicle parking or parallel vehicle traffic by curbs or similar devices and include landscaping, trees and lighting. Where accessways cross driveways, they are generally raised, paved or marked in a manner which provides convenient access for pedestrians.

(3) "Affected Local Government" means a city, county or metropolitan service district that is directly impacted by a proposed transportation facility or improvement.

(4) At or near a major transit stop: "At" means a parcel or ownership which is adjacent to or includes a major transit stop generally including portions of such parcels or ownerships that are within 200 feet of a transit stop. "Near" generally means a parcel or ownership that is within 300 feet of a major transit stop. The term "generally" is intended to allow local governments through their plans and ordinances to adopt more specific definitions of these terms considering local needs and circumstances consistent with the overall objective and requirement to provide convenient pedestrian access to transit.

(5) "Committed Transportation Facilities" means those proposed transportation facilities and improvements which are consistent with the acknowledged comprehensive plan and

have approved funding for construction in a public facilities plan or the Six-Year Highway or Transportation Improvement Program.

(6) "Demand Management" means actions which are designed to change travel behavior in order to improve performance of transportation facilities and to reduce need for additional road capacity. Methods may include but are not limited to the use of alternative modes, ride-sharing and vanpool programs, and trip-reduction ordinances.

(7) "Local Street Standards" include but are not limited to standards for right-of-way, pavement width, travel lanes, parking lanes, curb turning radius, and accessways.

(8) "Major" means, in general, those facilities or developments which, considering the size of the urban or rural area and the range of size, capacity or service level of similar facilities or developments in the area, are either larger than average, serve more than neighborhood needs or have significant land use or traffic impacts on more than the immediate neighborhood:

(a) "Major" as it modifies transit corridors, stops, transfer stations and new transportation facilities means those facilities which are most important to the functioning of the system or which provide a high level, volume or frequency of service;

(b) "Major" as it modifies industrial, institutional and retail development means such developments which are larger than average, serve more than neighborhood needs or which have traffic impacts on more than the immediate neighborhood;

(c) Application of the term "major" will vary from area to area depending upon the scale of transportation improvements, transit facilities and development which occur in the area. A facility considered to be major in a smaller or less densely developed area may, because of the relative significance and impact of the facility or development, not be considered a major facility in a larger or more densely developed area with larger or more intense development or facilities.

(9) "Major transit stop" means:

(a) Existing and planned light rail stations and transit transfer stations, except for temporary facilities;

(b) Other planned stops designated as major transit stops in a transportation system plan and existing stops which:

(A) Have or are planned for an above average frequency of scheduled, fixed-route service when compared to region wide service. In urban areas of 1,000,000 or more population major transit stops are generally located along routes that have or are planned for 20 minute service during the peak hour; and

(B) Are located in a transit oriented development or within 1/4 mile of an area planned and zoned for:

- (i) Medium or high density residential development; or
- (ii) Intensive commercial or institutional uses within 1/4 mile of subsection (i); or
- (iii) Uses likely to generate a relatively high level of transit ridership.

(10) "Metropolitan Planning Organization (MPO)" means an organization located within the State of Oregon and designated by the Governor to coordinate transportation planning in an urbanized area of the state including such designations made subsequent to the adoption of this rule. The Longview-Kelso-Rainier MPO is not considered an MPO for the purposes of this rule.

(11) "ODOT" means the Oregon Department of Transportation.

(12) "Parking Spaces" means on and off street spaces designated for automobile parking in areas planned for industrial, commercial, institutional or public uses. The following are not considered parking spaces for the purposes of OAR 660-012-0045(5)(c): park and ride lots, handicapped parking, and parking spaces for carpools and vanpools.

(13) "Pedestrian connection" means a continuous, unobstructed, reasonably direct route between two points that is intended and suitable for pedestrian use. Pedestrian connections include but are not limited to sidewalks, walkways, accessways, stairways and pedestrian bridges. On developed parcels, pedestrian connections are generally hard surfaced. In parks and natural areas, pedestrian connections may be soft-surfaced pathways. On undeveloped parcels and parcels intended for redevelopment, pedestrian connections may also include rights of way or easements for future pedestrian improvements.

(14) "Pedestrian district" means a comprehensive plan designation or implementing land use regulations, such as an overlay zone, that establish requirements to provide a safe and convenient pedestrian environment in an area planned for a mix of uses likely to support a relatively high level of pedestrian activity. Such areas include but are not limited to:

- (a) Lands planned for a mix of commercial or institutional uses near lands planned for medium to high density housing; or
- (b) Areas with a concentration of employment and retail activity; and
- (c) Which have or could develop a network of streets and accessways which provide convenient pedestrian circulations.

(15) "Pedestrian plaza" means a small semi-enclosed area usually adjoining a sidewalk or a transit stop which provides a place for pedestrians to sit, stand or rest. They are usually

paved with concrete, pavers, bricks or similar material and include seating, pedestrian scale lighting and similar pedestrian improvements. Low walls or planters and landscaping are usually provided to create a semi-enclosed space and to buffer and separate the plaza from adjoining parking lots and vehicle maneuvering areas. Plazas are generally located at a transit stop, building entrance or an intersection and connect directly to adjacent sidewalks, walkways, transit stops and buildings entrance or an intersection and connect directly to adjacent sidewalks, walkways, transit stops and building. A plaza including 150-250 square feet would be considered "small."

(16) "Pedestrian scale" means site and building design elements that are dimensionally less than those intended to accommodate automobile traffic, flow and buffering. Examples include ornamental lighting of limited height; bricks, pavers or other modules of paving with small dimensions; a variety of planting and landscaping materials; arcades or awnings that reduce the height of walls; and signage and signpost details that can only be perceived from a short distance.

(17) "Planning Period" means the twenty-year period beginning with the date of adoption of a TSP to meet the requirements of this rule.

(18) "Preliminary Design" means an engineering design which specifies in detail the location and alignment of a planned transportation facility or improvement.

(19) "Reasonably direct" means either a route that does not deviate unnecessarily from a straight line or a route that does not involve a significant amount of out-of-direction travel for likely users.

(20) "Refinement Plan" means an amendment to the transportation system plan, which resolves, at a systems level, determinations on function, mode or general location which were deferred during transportation system planning because detailed information needed to make those determinations could not reasonably be obtained during that process.

(21) "Roads" means streets, roads and highways.

(22) "Rural community" means areas defined as resort communities and rural communities in accordance with OAR 660-022-0010(6) and (7). For the purposes of this division, the area need only meet the definitions contained in the Unincorporated Communities Rule although the area may not have been designated as an unincorporated community in accordance with OAR 660-022-0020.

(23) "Transit-Oriented Development (TOD)" means a mix of residential, retail and office uses and a supporting network of roads, bicycle and pedestrian ways focused on a major transit stop designed to support a high level of transit use. The key features of transit oriented development include:

(a) A mixed use center at the transit stop, oriented principally to transit riders and pedestrian and bicycle travel from the surrounding area;

- (b) High density of residential development proximate to the transit stop sufficient to support transit operation and neighborhood commercial uses within the TOD;
- (c) A network of roads, and bicycle and pedestrian paths to support high levels of pedestrian access within the TOD and high levels of transit use.
- (24) "Transportation Facilities" means any physical facility that moves or assist in the movement of people or goods including facilities identified in OAR 660-012-0020 but excluding electricity, sewage and water systems.
- (25) "Transportation System Management Measures" means techniques for increasing the efficiency, safety, capacity or level of service of a transportation facility without increasing its size. Examples include, but are not limited to, traffic signal improvements, traffic control devices including installing medians and parking removal, channelization, access management, ramp metering, and restriping of high occupancy vehicle (HOV) lanes.
- (26) "Transportation Needs" means estimates of the movement of people and goods consistent with acknowledged comprehensive plan and the requirements of this rule. Needs are typically based on projections of future travel demand resulting from a continuation of current trends as modified by policy objectives, including those expressed in Goal 12 and this rule, especially those for avoiding principal reliance on any one mode of transportation.
- (27) "Transportation Needs, Local" means needs for movement of people and goods within communities and portions of counties and the need to provide access to local destinations.
- (28) "Transportation Needs, Regional" means needs for movement of people and goods between and through communities and accessibility to regional destinations within a metropolitan area, county or associated group of counties.
- (29) "Transportation Needs, State" means needs for movement of people and goods between and through regions of the state and between the state and other states.
- (30) "Transportation Project Development" means implementing the transportation system plan (TSP) by determining the precise location, alignment, and preliminary design of improvements included in the TSP based on site-specific engineering and environmental studies.
- (31) "Transportation Service" means a service for moving people and goods, such as intercity bus service and passenger rail service.
- (32) "Transportation System Plan (TSP)" means a plan for one or more transportation facilities that are planned, developed, operated and maintained in a coordinated manner to

supply continuity of movement between modes, and within and between geographic and jurisdictional areas.

(33) "Urban Area" means lands within an urban growth boundary, two or more contiguous urban growth boundaries, and urban unincorporated communities as defined by OAR 660-022-0010(9). For the purposes of this division, the area need only meet the definition contained in the Unincorporated Communities Rule although the area may not have been designated as an unincorporated community in accordance with OAR 660-022-0020.

(34) "Urban Fringe" means:

(a) Areas outside the urban growth boundary that are within 5 miles of the urban growth boundary of an MPO area; and

(b) Areas outside the urban growth boundary within 2 miles of the urban growth boundary of an urban area containing a population greater than 25,000.

(35) "Walkway" means a hard surfaced area intended and suitable for use by pedestrians, including sidewalks and surfaced portions of accessways.

(36) Vehicle Miles of Travel (VMT): means automobile vehicle miles of travel. Automobiles, for purposes of this definition, include automobiles, light trucks, and other similar vehicles used for movement of people. The definition does not include buses, heavy trucks and trips that involve commercial movement of goods. VMT includes trips with an origin and a destination within the MPO boundary and excludes pass through trips (i.e., trips with a beginning and end point outside of the MPO) and external trips (i.e., trips with a beginning or end point outside of the MPO boundary). VMT is estimated prospectively through the use of metropolitan area transportation models.

(37) "Metropolitan area" means the local governments that are responsible for adopting local or regional transportation system plans within a metropolitan planning organization (MPO) boundary. This includes cities, counties, and, in the Portland Metropolitan area, Metro.

Stat. Auth.: ORS 183, ORS 197.040 & ORS 197.2456

Stats. Implemented: ORS 195.025, ORS 197.015, ORS 197.040, ORS 197.230, ORS 197.245, ORS 197.712 & ORS 197.717

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91; LCDC 3-1995, f. & cert. ef. 3-31-95; LCDC 4-1995, f. & cert. ef. 5-8-95; LCDD 6-1998, f. & cert. ef. 10-30-98

660-012-0010

Transportation Planning

(1) As described in this division, transportation planning shall be divided into two phases: transportation system planning and transportation project development. Transportation system planning establishes land use controls and a network of facilities and services to meet overall transportation needs. Transportation project development implements the TSP by determining the precise location, alignment, and preliminary design of improvements included in the TSP.

(2) It is not the purpose of this division to cause duplication of or to supplant existing applicable transportation plans and programs. Where all or part of an acknowledged comprehensive plan, TSP either of the local government or appropriate special district, capital improvement program, regional functional plan, or similar plan or combination of plans meets all or some of the requirements of this division, those plans or programs may be incorporated by reference into the TSP required by this division. Only those referenced portions of such documents shall be considered to be a part of the TSP and shall be subject to the administrative procedures of this division and ORS Chapter 197.

(3) It is not the purpose of this division to limit adoption or enforcement of measures to provide convenient bicycle and pedestrian circulation or convenient access to transit that are otherwise consistent with the requirements of this division.

Stat. Auth.: ORS 183, ORS 197.040 & ORS 197.245

Stats. Implemented: ORS 195.025, ORS 197.040, ORS 197.230, ORS 197.245, ORS 197.712 & ORS 197.717

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91; LCDC 4-1995, f. & cert. ef. 5-8-95

660-012-0015

Preparation and Coordination of Transportation System Plans

(1) ODOT shall prepare, adopt and amend a state TSP in accordance with ORS 184.618, its program for state agency coordination certified under ORS 197.180, and OAR 660-012-0030, 660-012-0035, 660-012-0050, 660-012-0065 and 660-012-0070. The state TSP shall identify a system of transportation facilities and services adequate to meet identified state transportation needs:

(a) The state TSP shall include the state transportation policy plan, modal systems plans and transportation facility plans as set forth in OAR 731, Division 15;

(b) State transportation project plans shall be compatible with acknowledged comprehensive plans as provided for in OAR 731, Division 15. Disagreements between ODOT and affected local governments shall be resolved in the manner established in that division.

(2) MPOs and counties shall prepare and amend regional TSPs in compliance with this division. MPOs shall prepare regional TSPs for facilities of regional significance within their jurisdiction. Counties shall prepare regional TSPs for all other areas and facilities:

- (a) Regional TSPs shall establish a system of transportation facilities and services adequate to meet identified regional transportation needs and shall be consistent with adopted elements of the state TSP;
- (b) Where elements of the state TSP have not been adopted, the MPO or county shall coordinate the preparation of the regional TSP with ODOT to assure that state transportation needs are accommodated;
- (c) Regional TSPs prepared by MPOs other than metropolitan service districts shall be adopted by the counties and cities within the jurisdiction of the MPO. Metropolitan service districts shall adopt a regional TSP for areas within their jurisdiction;
- (d) Regional TSPs prepared by counties shall be adopted by the county.
- (3) Cities and counties shall prepare, adopt and amend local TSPs for lands within their planning jurisdiction in compliance with this division:
- (a) Local TSPs shall establish a system of transportation facilities and services adequate to meet identified local transportation needs and shall be consistent with regional TSPs and adopted elements of the state TSP;
- (b) Where the regional TSP or elements of the state TSP have not been adopted, the city or county shall coordinate the preparation of the local TSP with the regional transportation planning body and ODOT to assure that regional and state transportation needs are accommodated.
- (4) Cities and counties shall adopt regional and local TSPs required by this division as part of their comprehensive plans. Transportation financing programs required by OAR 660-012-0040 may be adopted as a supporting document to the comprehensive plan.
- (5) The preparation of TSPs shall be coordinated with affected state and federal agencies, local governments, special districts, and private providers of transportation services.
- (6) Mass transit, transportation, airport and port districts shall participate in the development of TSPs for those transportation facilities and services they provide. These districts shall prepare and adopt plans for transportation facilities and services they provide. Such plans shall be consistent with and adequate to carry out relevant portions of applicable regional and local TSPs. Cooperative agreements executed under ORS 197.185(2) shall include the requirement that mass transit, transportation, airport and port districts adopt a plan consistent with the requirements of this section.
- (7) Where conflicts are identified between proposed regional TSPs and acknowledged comprehensive plans, representatives of affected local governments shall meet to discuss means to resolve the conflicts. These may include:

- (a) Changing the draft TSP to eliminate the conflicts; or
- (b) Amending acknowledged comprehensive plan provision to eliminate the conflicts;
- (c) For MPOs which are not metropolitan service districts, if conflicts persist between regional TSPs and acknowledged comprehensive plans after efforts to achieve compatibility, an affected local government may petition the Commission to resolve the dispute.

Stat. Auth.: ORS 183 & ORS 197.040

Stats. Implemented: ORS 184.618, ORS 195.025, ORS 197.040, ORS 197.180, ORS 197.230, ORS 197.245, ORS 197.712 & ORS 197.717

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91

660-012-0020

Elements of Transportation System Plans

- (1) A TSP shall establish a coordinated network of transportation facilities adequate to serve state, regional and local transportation needs.
- (2) The TSP shall include the following elements:
 - (a) A determination of transportation needs as provided in OAR 660-012-0030;
 - (b) A road plan for a system of arterials and collectors and standards for the layout of local streets and other important non-collector street connections. Functional classifications of roads in regional and local TSPs shall be consistent with functional classifications of roads in state and regional TSPs and shall provide for continuity between adjacent jurisdictions. The standards for the layout of local streets shall provide for safe and convenient bike and pedestrian circulation necessary to carry out OAR 660-012-0045(3)(b). New connections to arterials and state highways shall be consistent with designated access management categories. The intent of this requirement is to provide guidance on the spacing of future extensions and connections along existing and future streets which are needed to provide reasonably direct routes for bicycle and pedestrian travel. The standards for the layout of local streets shall address:
 - (A) Extensions of existing streets;
 - (B) Connections to existing or planned streets, including arterials and collectors; and
 - (C) Connections to neighborhood destinations.
 - (c) A public transportation plan which:

(A) Describes public transportation services for the transportation disadvantaged and identifies service inadequacies;

(B) Describes intercity bus and passenger rail service and identifies the location of terminals;

(C) For areas within an urban growth boundary which have public transit service, identifies existing and planned transit trunk routes, exclusive transit ways, terminals and major transfer stations, major transit stops, and park-and-ride stations. Designation of stop or station locations may allow for minor adjustments in the location of stops to provide for efficient transit or traffic operation or to provide convenient pedestrian access to adjacent or nearby uses.

(D) For areas within an urban area containing a population greater than 25,000 persons, not currently served by transit, evaluates the feasibility of developing a public transit system at buildout. Where a transit system is determined to be feasible, the plan shall meet the requirements of paragraph (2)(c)(C) of this rule.

(d) A bicycle and pedestrian plan for a network of bicycle and pedestrian routes throughout the planning area. The network and list of facility improvements shall be consistent with the requirements of ORS 366.514;

(e) An air, rail, water and pipeline transportation plan which identifies where public use airports, mainline and branchline railroads and railroad facilities, port facilities, and major regional pipelines and terminals are located or planned within the planning area. For airports, the planning area shall include all areas within airport imaginary surfaces and other areas covered by state or federal regulations;

(f) For areas within an urban area containing a population greater than 25,000 persons a plan for transportation system management and demand management;

(g) A parking plan in MPO areas as provided in OAR 660-012-0045(5)(c);

(h) Policies and land use regulations for implementing the TSP as provided in OAR 660-012-0045;

(i) For areas within an urban growth boundary containing a population greater than 2500 persons, a transportation financing program as provided in OAR 660-012-0040.

(3) Each element identified in subsections (2)(b)–(d) of this rule shall contain:

(a) An inventory and general assessment of existing and committed transportation facilities and services by function, type, capacity and condition:

(A) The transportation capacity analysis shall include information on:

- (i) The capacities of existing and committed facilities;
 - (ii) The degree to which those capacities have been reached or surpassed on existing facilities; and
 - (iii) The assumptions upon which these capacities are based.
- (B) For state and regional facilities, the transportation capacity analysis shall be consistent with standards of facility performance considered acceptable by the affected state or regional transportation agency;
- (C) The transportation facility condition analysis shall describe the general physical and operational condition of each transportation facility (e.g., very good, good, fair, poor, very poor).
- (b) A system of planned transportation facilities, services and major improvements. The system shall include a description of the type or functional classification of planned facilities and services and their planned capacities and levels of service;
- (c) A description of the location of planned facilities, services and major improvements, establishing the general corridor within which the facilities, services or improvements may be sited. This shall include a map showing the general location of proposed transportation improvements, a description of facility parameters such as minimum and maximum road right of way width and the number and size of lanes, and any other additional description that is appropriate;
- (d) Identification of the provider of each transportation facility or service.

Stat. Auth.: ORS 183, ORS 197.040 & ORS 197.245

Stats. Implemented: ORS 195.025, ORS 197.040, ORS 197.230, ORS 197.245, ORS 197.712 & ORS 197.717

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91; LCDC 4-1995, f. & cert. ef. 5-8-95

660-012-0025

Complying with the Goals in Preparing Transportation System Plans; Refinement Plans

- (1) Except as provided in section (3) of this rule, adoption of a TSP shall constitute the land use decision regarding the need for transportation facilities, services and major improvements and their function, mode, and general location.
- (2) Findings of compliance with applicable statewide planning goals and acknowledged comprehensive plan policies and land use regulations shall be developed in conjunction with the adoption of the TSP.

(3) A local government or MPO may defer decisions regarding function, general location and mode of a refinement plan if findings are adopted which:

(a) Identify the transportation need for which decisions regarding function, general location or mode are being deferred;

(b) Demonstrate why information required to make final determinations regarding function, general location, or mode cannot reasonably be made available within the time allowed for preparation of the TSP;

(c) Explain how deferral does not invalidate the assumptions upon which the TSP is based or preclude implementation of the remainder of the TSP;

(d) Describe the nature of the findings which will be needed to resolve issues deferred to a refinement plan; and

(e) Demonstrate that the refinement effort will be completed within three years or prior to initiation of the periodic review following adoption of the TSP.

(4) Where a Corridor Environmental Impact Statement (EIS) is prepared pursuant to the requirements of the National Environmental Policy Act of 1969, the development of the refinement plan shall be coordinated with the preparation of the Corridor EIS. The refinement plan shall be adopted prior to the issuance of the Final EIS.

Stat. Auth.: ORS 183 & ORS 197.040

Stats. Implemented: ORS 195.025, ORS 197.040, ORS 197.230, ORS 197.245, ORS 197.712 & ORS 197.717

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91

660-012-0030

Determination of Transportation Needs

(1) The TSP shall identify transportation needs relevant to the planning area and the scale of the transportation network being planned including:

(a) State, regional, and local transportation needs;

(b) Needs of the transportation disadvantaged;

(c) Needs for movement of goods and services to support industrial and commercial development planned for pursuant to OAR 660-009 and Goal 9 (Economic Development).

(2) Counties or MPOs preparing regional TSPs shall rely on the analysis of state transportation needs in adopted elements of the state TSP. Local governments preparing

local TSPs shall rely on the analyses of state and regional transportation needs in adopted elements of the state TSP and adopted regional TSPs.

(3) Within urban growth boundaries, the determination of local and regional transportation needs shall be based upon:

(a) Population and employment forecasts and distributions which are consistent with the acknowledged comprehensive plan, including those policies which implement Goal 14, including Goal 14's requirement to encourage urban development on urban lands prior to conversion of urbanizable lands. Forecasts and distributions shall be for 20 years and, if desired, for longer periods;

(b) Measures adopted pursuant to OAR 660-012-0045 to encourage reduced reliance on the automobile.

(4) In MPO areas, calculation of local and regional transportation needs also shall be based upon accomplishment of the requirement in OAR 660-012-0035(4) to reduce reliance on the automobile.

Stat. Auth.: ORS 183 & ORS 197.040

Stats. Implemented: ORS 195.025, ORS 197.040, ORS 197.230, ORS 197.245, ORS 197.712 & ORS 197.717

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91

660-012-0035

Evaluation and Selection of Transportation System Alternatives

(1) The TSP shall be based upon evaluation of potential impacts of system alternatives that can reasonably be expected to meet the identified transportation needs in a safe manner and at a reasonable cost with available technology. The following shall be evaluated as components of system alternatives:

(a) Improvements to existing facilities or services;

(b) New facilities and services, including different modes or combinations of modes that could reasonably meet identified transportation needs;

(c) Transportation system management measures;

(d) Demand management measures; and

(e) A no-build system alternative required by the National Environmental Policy Act of 1969 or other laws.

(2) Local governments in MPO areas of larger than 1,000,000 population shall, and other governments may also, evaluate alternative land use designations, densities, and design standards to meet local and regional transportation needs. Local governments preparing such a strategy shall consider:

(a) Increasing residential densities and establishing minimum residential densities within one quarter mile of transit lines, major regional employment areas, and major regional retail shopping areas;

(b) Increasing allowed densities in new commercial office and retail developments in designated community centers;

(c) Designating lands for neighborhood shopping centers within convenient walking and cycling distance of residential areas;

(d) Designating land uses to provide a better balance between jobs and housing considering:

(A) The total number of jobs and total of number of housing units expected in the area or subarea;

(B) The availability of affordable housing in the area or subarea; and

(C) Provision of housing opportunities in close proximity to employment areas.

(3) The following standards shall be used to evaluate and select alternatives:

(a) The transportation system shall support urban and rural development by providing types and levels of transportation facilities and services appropriate to serve the land uses identified in the acknowledged comprehensive plan;

(b) The transportation system shall be consistent with state and federal standards for protection of air, land and water quality including the State Implementation Plan under the Federal Clean Air Act and the State Water Quality Management Plan;

(c) The transportation system shall minimize adverse economic, social, environmental and energy consequences;

(d) The transportation system shall minimize conflicts and facilitate connections between modes of transportation;

(e) The transportation system shall avoid principal reliance on any one mode of transportation and shall reduce principal reliance on the automobile. In MPO areas this shall be accomplished by selecting transportation alternatives which meet the requirements in section (4) of this rule.

(4) In MPO areas, regional and local TSPs shall be designed to achieve the objectives listed in (a)-(c) below for reducing automobile vehicle miles traveled per capita for the MPO area. The VMT target and alternative standards are intended as means of measuring progress of metropolitan areas towards developing and implementing transportation systems and land use plans that reduce reliance on the automobile. It is anticipated that metropolitan areas will accomplish reduced reliance by changing land use patterns and transportation systems so that walking, cycling, and use of transit are highly convenient and so that, on balance, people need to and are likely to drive less than they do today:

(a) In MPO areas of less than 1 million population, a 5% reduction within 20 years of the adoption of a plan as required by OAR 660-012-0055(1);

(b) In MPO areas of more than 1 million population, 10% reduction within 20 years of adoption of a plan as required by OAR 660-012-0055(1); and

(c) Through subsequent planning efforts, an additional 5 percent reduction within 30 years of adoption of a plan as required by OAR 660-012-0055(1).

(5) The Commission may authorize metropolitan areas to use alternative standards in place of the VMT reduction standard in 0035(4) to demonstrate progress towards achieving reduced automobile reliance as provided for in this section:

(a) The Commission shall approve such alternative standards by order upon demonstration by the metropolitan area that:

(A) Achieving the alternative standard will result in a reduction in reliance on automobiles;

(B) Achieving the alternative standard will accomplish a significant increase in the availability or convenience of alternative modes of transportation;

(C) Achieving the alternative standard is likely to result in a significant increase in the share of trips made by alternative modes, including walking, bicycling, ridesharing and transit;

(D) VMT per capita is unlikely to increase by more than 5%; and

(E) The alternative standard is measurable and reasonably related to achieving the goal of reduced reliance on the automobile as described in OAR 660-012-0000.

(b) In reviewing proposed alternative standards for compliance with (a), the Commission shall give credit to regional and local plans, programs, and actions implemented since 1990 that have already contributed to achieving the objectives specified in (A)-(E) above;

(c) If a plan using an alternative standard, approved pursuant to this rule, is expected to result in an increase in VMT per capita, then the cities and counties in the metropolitan area shall prepare and adopt an integrated land use and transportation plan including the elements listed in (A)–(E) below. Such a plan shall be prepared in coordination with the MPO and shall be adopted within three years of the approval of the alternative standard:

(A) Changes to land use plan designations, densities, and design standards listed in 0035(2)(a)–(d);

(B) A transportation demand management plan that includes significant new transportation demand management measures;

(C) A public transit plan that includes a significant expansion in transit service;

(D) Policies to review and manage major roadway improvements to ensure that their effects are consistent with achieving the adopted strategy for reduced reliance on the automobile, including policies that provide for the following:

(i) An assessment of whether improvements would result in development or travel that is inconsistent with what is expected in the plan;

(ii) Consideration of alternative measures to meet transportation needs;

(iii) Adoption of measures to limit possible unintended effects on travel and land use patterns including access management, limitations on subsequent plan amendments, phasing of improvements. etc.

[For purposes of this section a "major roadway expansion" includes new arterial roads or streets and highways, the addition of travel lanes, and construction of interchanges to a limited access highway.]

(E) Plan and ordinance provisions that meet all other applicable requirements of this division.

(d) Alternative standards may include but are not limited to:

(A) Modal share of alternative modes, including walking, bicycling, and transit trips;

(B) Vehicle hours of travel per capita;

(C) Vehicle trips per capita;

(D) Measures of accessibility by alternative modes (i.e. walking, bicycling and transit); or

(E) The Oregon Benchmark for a reduction in peak hour commuting by single occupant vehicles.

(e) Metropolitan areas that receive approval of an alternative standard shall adopt TSP policies to evaluate progress towards achieving the alternative standard at regular intervals, including monitoring and reporting of VMT per capita.

(6) Regional TSPs shall specify measurable objectives for each of the following and demonstrate how the combination selected will accomplish the objectives in section (4) of this rule:

(a) An increase in the modal share of non-automobile vehicle trips (i.e., transit, bicycle, pedestrian); for example, a doubling of the modal share of non-automobile trips;

(b) An increase in average automobile occupancy (i.e., persons per vehicle) during; for example, an increase to an average of 1.5 persons per vehicle; and

(c) Where appropriate, a decrease in the number or length of automobile vehicle trips per capita due to demand management programs, rearranging of land uses or other means.

(7) Regional and local TSPs shall include interim benchmarks to assure satisfactory progress towards meeting the requirements of this section at five year intervals over the planning period. MPOs and local governments shall evaluate progress in meeting interim benchmarks at five year intervals from adoption of the regional and local TSPs. Where interim benchmarks are not met, the relevant TSP shall be amended to include new or additional efforts adequate to meet the requirements of this section.

(8) The Commission shall, at five-year intervals from the adoption of this rule, evaluate the results of efforts to achieve the reduction in VMT and the effectiveness of the standard in achieving the objective of reducing reliance on the automobile. This shall include evaluating the requirements for parking plans and a reduction in the number of parking spaces per capita.

(9) Where existing and committed transportation facilities and services have adequate capacity to support the land uses in the acknowledged comprehensive plan, the local government shall not be required to evaluate alternatives as provided in this section.

(10) Transportation uses or improvements listed in OAR 660-012-0065(3)(d) to (g) and (o) and located in an urban fringe may be included in a TSP only if the improvement project identified in the Transportation System Plan as described in section (11) of this rule, will not significantly reduce peak hour travel time for the route as determined pursuant to section (10) of this rule, or the jurisdiction determines that the following alternatives can not reasonably satisfy the purpose of the improvement project:

(a) Improvements to transportation facilities and services within the urban growth boundary;

(b) Transportation system management measures that do not significantly increase capacity; or

(c) Transportation demand management measures. The jurisdiction needs only to consider alternatives that are safe and effective, consistent with applicable standards and that can be implemented at a reasonable cost using available technology.

(11) An improvement project significantly reduces peak hour travel time when, based on recent data, the time to travel the route is reduced more than 15% during weekday peak hour conditions over the length of the route located within the urban fringe. For purposes of measuring travel time, a route shall be identified by the predominant traffic flows in the project area.

(12) A "transportation improvement project" described in section (9) of this rule:

(a) Is intended to solve all of the reasonably foreseeable transportation problems within a general geographic location, within the planning period; and

(b) Has utility as an independent transportation project.

Stat. Auth.: ORS 183, ORS 197.040 & ORS 197.245

Stats. Implemented: ORS 195.025, ORS 197.040, ORS 197.230, ORS 197.245, ORS 197.712 & ORS 197.717

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91; LCDC 3-1995, f. & cert. ef. 3-31-95; LCDC 4-1995, f. & cert. ef. 5-8-95; LCDD 6-1998, f. & cert. ef. 10-30-98

660-012-0040

Transportation Financing Program

(1) For areas within an urban growth boundary containing a population greater than 2,500 persons, the TSP shall include a transportation financing program.

(2) A transportation financing program shall include the items listed in (a)–(d):

(a) A list of planned transportation facilities and major improvements;

(b) A general estimate of the timing for planned transportation facilities and major improvements;

(c) A determination of rough cost estimates for the transportation facilities and major improvements identified in the TSP; and

(d) In metropolitan areas, policies to guide selection of transportation facility and improvement projects for funding in the short-term to meet the standards and benchmarks established pursuant to 0035(4)–(6). Such policies shall consider, and shall include among the priorities, facilities and improvements that support mixed-use, pedestrian friendly development and increased use of alternative modes.

(3) The determination of rough cost estimates is intended to provide an estimate of the fiscal requirements to support the land uses in the acknowledged comprehensive plan and allow jurisdictions to assess the adequacy of existing and possible alternative funding mechanisms. In addition to including rough cost estimates for each transportation facility and major improvement, the transportation financing plan shall include a discussion of the facility provider's existing funding mechanisms and the ability of these and possible new mechanisms to fund the development of each transportation facility and major improvement. These funding mechanisms may also be described in terms of general guidelines or local policies.

(4) Anticipated timing and financing provisions in the transportation financing program are not considered land use decisions as specified in ORS 197.712(2)(e) and, therefore, cannot be the basis of appeal under ORS 197.610(1) and (2) or ORS 197.835(4).

(5) The transportation financing program shall provide for phasing of major improvements to encourage infill and redevelopment of urban lands prior to facilities and improvements which would cause premature development of urbanizable lands or conversion of rural lands to urban uses.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 197.040

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91; LCDC 4-1995, f. & cert. ef. 5-8-95; LCDC 11-1995, f. & cert. ef. 12-22-95; LCDD 6-1998, f. & cert. ef. 10-30-98

660-012-0045

Implementation of the Transportation System Plan

(1) Each local government shall amend its land use regulations to implement the TSP.

(a) The following transportation facilities, services and improvements need not be subject to land use regulations except as necessary to implement the TSP and, under ordinary circumstances do not have a significant impact on land use:

(A) Operation, maintenance, and repair of existing transportation facilities identified in the TSP, such as road, bicycle, pedestrian, port, airport and rail facilities, and major regional pipelines and terminals;

(B) Dedication of right-of-way, authorization of construction and the construction of facilities and improvements, where the improvements are consistent with clear and objective dimensional standards;

(C) Uses permitted outright under ORS 215.213(1)(m) through (p) and ORS 215.283(1)(k) through (n), consistent with the provisions of 660-012-0065; and

(D) Changes in the frequency of transit, rail and airport services.

(b) To the extent, if any, that a transportation facility, service or improvement concerns the application of a comprehensive plan provision or land use regulation, it may be allowed without further land use review if it is permitted outright or if it is subject to standards that do not require interpretation or the exercise of factual, policy or legal judgment;

(c) In the event that a transportation facility, service or improvement is determined to have a significant impact on land use or to concern the application of a comprehensive plan or land use regulation and to be subject to standards that require interpretation or the exercise of factual, policy or legal judgment, the local government shall provide a review and approval process that is consistent with 660-012-0050. To facilitate implementation of the TSP, each local government shall amend its land use regulations to provide for consolidated review of land use decisions required to permit a transportation project.

(2) Local governments shall adopt land use or subdivision ordinance regulations, consistent with applicable federal and state requirements, to protect transportation facilities, corridors and sites for their identified functions. Such regulations shall include:

(a) Access control measures, for example, driveway and public road spacing, median control and signal spacing standards, which are consistent with the functional classification of roads and consistent with limiting development on rural lands to rural uses and densities;

(b) Standards to protect future operation of roads, transitways and major transit corridors;

(c) Measures to protect public use airports by controlling land uses within airport noise corridors and imaginary surfaces, and by limiting physical hazards to air navigation;

(d) A process for coordinated review of future land use decisions affecting transportation facilities, corridors or sites;

(e) A process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities, corridors or sites;

(f) Regulations to provide notice to public agencies providing transportation facilities and services, MPOs, and ODOT of:

(A) Land use applications that require public hearings;

(B) Subdivision and partition applications;

(C) Other applications which affect private access to roads; and

(D) Other applications within airport noise corridors and imaginary surfaces which affect airport operations.

(g) Regulations assuring that amendments to land use designations, densities, and design standards are consistent with the functions, capacities and levels of service of facilities identified in the TSP.

(3) Local governments shall adopt land use or subdivision regulations for urban areas and rural communities as set forth below. The purposes of this section are to provide for safe and convenient pedestrian, bicycle and vehicular circulation consistent with access management standards and the function of affected streets, to ensure that new development provides on-site streets and accessways that provide reasonably direct routes for pedestrian and bicycle travel in areas where pedestrian and bicycle travel is likely if connections are provided, and which avoids wherever possible levels of automobile traffic which might interfere with or discourage pedestrian or bicycle travel.

(a) Bicycle parking facilities as part of new multi-family residential developments of four units or more, new retail, office and institutional developments, and all transit transfer stations and park-and-ride lots;

(b) On-site facilities shall be provided which accommodate safe and convenient pedestrian and bicycle access from within new subdivisions, multi-family developments, planned developments, shopping centers, and commercial districts to adjacent residential areas and transit stops, and to neighborhood activity centers within one-half mile of the development. Single-family residential developments shall generally include streets and accessways. Pedestrian circulation through parking lots should generally be provided in the form of accessways.

(A) "Neighborhood activity centers" includes, but is not limited to, existing or planned schools, parks, shopping areas, transit stops or employment centers;

(B) Bikeways shall be required along arterials and major collectors. Sidewalks shall be required along arterials, collectors and most local streets in urban areas, except that sidewalks are not required along controlled access roadways, such as freeways;

(C) Cul-de-sacs and other dead-end streets may be used as part of a development plan, consistent with the purposes set forth in this section;

(D) Local governments shall establish their own standards or criteria for providing streets and accessways consistent with the purposes of this section. Such measures may include but are not limited to: standards for spacing of streets or accessways; and standards for excessive out-of-direction travel;

(E) Streets and accessways need not be required where one or more of the following conditions exist:

(i) Physical or topographic conditions make a street or accessway connection impracticable. Such conditions include but are not limited to freeways, railroads, steep

slopes, wetlands or other bodies of water where a connection could not reasonably be provided;

(ii) Buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or

(iii) Where streets or accessways would violate provisions of leases, easements, covenants, restrictions or other agreements existing as of May 1, 1995, which preclude a required street or accessway connection.

(c) Where off-site road improvements are otherwise required as a condition of development approval, they shall include facilities accommodating convenient pedestrian and bicycle travel, including bicycle ways along arterials and major collectors;

(d) For purposes of subsection (b) "safe and convenient" means bicycle and pedestrian routes, facilities and improvements which:

(A) Are reasonably free from hazards, particularly types or levels of automobile traffic which would interfere with or discourage pedestrian or cycle travel for short trips;

(B) Provide a reasonably direct route of travel between destinations such as between a transit stop and a store; and

(C) Meet travel needs of cyclists and pedestrians considering destination and length of trip; and considering that the optimum trip length of pedestrians is generally 1/4 to 1/2 mile.

(e) Internal pedestrian circulation within new office parks and commercial developments shall be provided through clustering of buildings, construction of accessways, walkways and similar techniques.

(4) To support transit in urban areas containing a population greater than 25,000, where the area is already served by a public transit system or where a determination has been made that a public transit system is feasible, local governments shall adopt land use and subdivision regulations as provided in (a)–(f) below:

(a) Transit routes and transit facilities shall be designed to support transit use through provision of bus stops, pullouts and shelters, optimum road geometrics, on-road parking restrictions and similar facilities, as appropriate;

(b) New retail, office and institutional buildings at or near major transit stops shall provide for convenient pedestrian access to transit through the measures listed in (A) and (B) below.

(A) Walkways shall be provided connecting building entrances and streets adjoining the site;

(B) Pedestrian connections to adjoining properties shall be provided except where such a connection is impracticable as provided for in OAR 660-012-0045(3)(b)(E). Pedestrian connections shall connect the on site circulation system to existing or proposed streets, walkways, and driveways that abut the property. Where adjacent properties are undeveloped or have potential for redevelopment, streets, accessways and walkways on site shall be laid out or stubbed to allow for extension to the adjoining property;

(C) In addition to (A) and (B) above, on sites at major transit stops provide the following:

(i) Either locate buildings within 20 feet of the transit stop, a transit street or an intersecting street or provide a pedestrian plaza at the transit stop or a street intersection;

(ii) A reasonably direct pedestrian connection between the transit stop and building entrances on the site;

(iii) A transit passenger landing pad accessible to disabled persons;

(iv) An easement or dedication for a passenger shelter if requested by the transit provider; and

(v) Lighting at the transit stop.

(c) Local governments may implement (4)(b)(A) and (B) above through the designation of pedestrian districts and adoption of appropriate implementing measures regulating development within pedestrian districts. Pedestrian districts must comply with the requirement of (4)(b)(C) above;

(d) Designated employee parking areas in new developments shall provide preferential parking for carpools and vanpools;

(e) Existing development shall be allowed to redevelop a portion of existing parking areas for transit-oriented uses, including bus stops and pullouts, bus shelters, park and ride stations, transit-oriented developments, and similar facilities, where appropriate;

(f) Road systems for new development shall be provided that can be adequately served by transit, including provision of pedestrian access to existing and identified future transit routes. This shall include, where appropriate, separate accessways to minimize travel distances;

(g) Along existing or planned transit routes, designation of types and densities of land uses adequate to support transit.

(5) In MPO areas, local governments shall adopt land use and subdivision regulations to reduce reliance on the automobile which:

(a) Allow transit-oriented developments (TODs) on lands along transit routes;

(b) Implements a demand management program to meet the measurable standards set in the TSP in response to 660-012-0035(4);

(c) Implements a parking plan which:

(A) Achieves a 10% reduction in the number of parking spaces per capita in the MPO area over the planning period. This may be accomplished through a combination of restrictions on development of new parking spaces and requirements that existing parking spaces be redeveloped to other uses;

(B) Aids in achieving the measurable standards set in the TSP in response to OAR 660-012-0035(4);

(C) Includes land use and subdivision regulations setting minimum and maximum parking requirements in appropriate locations, such as downtowns, designated regional or community centers, and transit oriented-developments; and

(D) Is consistent with demand management programs, transit-oriented development requirements and planned transit service.

(d) As an alternative to (c) above, local governments in an MPO may instead revise ordinance requirements for parking as follows:

(A) Reduce minimum off-street parking requirements for all non-residential uses from 1990 levels;

(B) Allow provision of on-street parking, long-term lease parking, and shared parking to meet minimum off-street parking requirements;

(C) Establish off-street parking maximums in appropriate locations, such as downtowns, designated regional or community centers, and transit-oriented developments;

(D) Exempt structured parking and on-street parking from parking maximums;

(E) Require that parking lots over 3 acres in size provide street-like features along major driveways (including curbs, sidewalks, and street trees or planting strips); and

(F) Provide for designation of residential parking districts.

(e) Require all major industrial, institutional, retail and office developments to provide either a transit stop on site or connection to a transit stop along a transit trunk route when the transit operator requires such an improvement.

(6) In developing a bicycle and pedestrian circulation plan as required by 660-012-0020(2)(d), local governments shall identify improvements to facilitate bicycle and pedestrian trips to meet local travel needs in developed areas. Appropriate improvements

should provide for more direct, convenient and safer bicycle or pedestrian travel within and between residential areas and neighborhood activity centers (i.e., schools, shopping, transit stops). Specific measures include, for example, constructing walkways between cul-de-sacs and adjacent roads, providing walkways between buildings, and providing direct access between adjacent uses.

(7) Local governments shall establish standards for local streets and accessways that minimize pavement width and total right-of-way consistent with the operational needs of the facility. The intent of this requirement is that local governments consider and reduce excessive standards for local streets and accessways in order to reduce the cost of construction, provide for more efficient use of urban land, provide for emergency vehicle access while discouraging inappropriate traffic volumes and speeds, and which accommodate convenient pedestrian and bicycle circulation. Notwithstanding subsection (1) or (3) of this section, local street standards adopted to meet this requirement need not be adopted as land use regulations.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 197.040

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91; LCDC 4-1995, f. & cert. ef. 5-8-95; LCDC 11-1995, f. & cert. ef. 12-22-95; LCDD 6-1998, f. & cert. ef. 10-30-98

660-012-0050

Transportation Project Development

(1) For projects identified by ODOT pursuant to OAR Chapter 731, Division 15, project development shall occur in the manner set forth in that Division.

(2) Regional TSPs shall provide for coordinated project development among affected local governments. The process shall include:

(a) Designation of a lead agency to prepare and coordinate project development;

(b) A process for citizen involvement, including public notice and hearing, if project development involves land use decision-making. The process shall include notice to affected transportation facility and service providers, MPOs, and ODOT;

(c) A process for developing and adopting findings of compliance with applicable statewide planning goals, if any. This shall include a process to allow amendments to acknowledged comprehensive plans where such amendments are necessary to accommodate the project;

(d) A process for developing and adopting findings of compliance with applicable acknowledged comprehensive plan policies and land use regulations of individual local governments, if any. This shall include a process to allow amendments to acknowledged

comprehensive plans or land use regulations where such amendments are necessary to accommodate the project.

(3) Project development involves land use decision-making to the extent that issues of compliance with applicable requirements remain outstanding at the project development phase. Issues may include, but are not limited to, compliance with regulations protecting or regulating development within floodways and other hazard areas, identified Goal 5 resource areas, estuarine and coastal shoreland areas, and the Willamette River Greenway. Where project development involves land use decision-making, all unresolved issues of compliance with applicable acknowledged comprehensive plan policies and land use regulations shall be addressed and findings of compliance adopted prior to project approval. To the extent compliance has already been determined during transportation system planning, including adoption of a refinement plan, affected local governments may rely on and reference the earlier findings of compliance with applicable standards.

(4) Except as provided in Subsection (1) of this section, where an Environmental Impact Statement (EIS) is prepared pursuant to the National Environmental Policy Act of 1969, project development shall be coordinated with the preparation of the EIS. All unresolved issues of compliance with applicable acknowledged comprehensive plan policies and land use regulations shall be addressed and findings of compliance adopted prior to issuance of the Final EIS.

(5) If a local government decides not to build a project authorized by the TSP, it must evaluate whether the needs that the project would serve could otherwise be satisfied in a manner consistent with the TSP. If identified needs cannot be met consistent with the TSP, the local government shall initiate a plan amendment to change the TSP or the comprehensive plan to assure that there is an adequate transportation system to meet transportation needs.

(6) Transportation project development may be done concurrently with preparation of the TSP or a refinement plan.

Stat. Auth.: ORS 183 & ORS 197.040

Stats. Implemented: ORS 195.025, ORS 197.040, ORS 197.230, ORS 197.245, ORS 197.712 & ORS 197.717

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91; LCDD 2-1999 f. & cert. ef. 1-12-99

660-012-0055

Timing of Adoption and Update of Transportation System Plans; Exemptions

(1) MPOs shall complete regional TSPs for their planning areas by May 8, 1996. For those areas within a MPO, cities and counties shall adopt local TSPs and implementing measures within one year following completion of the regional TSP:

(a) If by May 8, 2000, a Metropolitan Planning Organization (MPO) has not adopted a regional transportation system plan that meets the VMT reduction standard in 0035(4) and the metropolitan area does not have an approved alternative standard established pursuant to 0035(5), then the cities and counties within the metropolitan area shall prepare and adopt an integrated land use and transportation plan as outlined in 0035(5)(c)(A)-(E). Such a plan shall be prepared in coordination with the MPO and shall be adopted within three years;

(b) Urban areas designated as MPOs subsequent to the adoption of this rule shall adopt TSPs in compliance with applicable requirements of this rule within three years of designation.

(2) For areas outside an MPO, cities and counties shall complete and adopt regional and local TSPs and implementing measures by May 8, 1997.

(3) By November 8, 1993, affected cities and counties shall, for non-MPO urban areas of 25,000 or more, adopt land use and subdivision ordinances or amendments required by OAR 660-012-0045(3), (4)(a)-(f) and (5)(d). By May 8, 1994 affected cities and counties within MPO areas shall adopt land use and subdivision ordinances or amendments required by OAR 660-012-0045(3), (4)(a)-(e) and (5)(d). Affected cities and counties which do not have acknowledged ordinances addressing the requirements of this section by the deadlines listed above shall apply OAR 660-012-0045(3), (4)(a)-(f) and (5)(d) directly to all land use decisions and all limited land use decisions.

(4)(a) Affected cities and counties that either:

(A) Have acknowledged plans and land use regulations that comply with this rule as of May 8, 1995, may continue to apply those acknowledged plans and land use regulations; or

(B) Have plan and land use regulations adopted to comply with this rule as of April 12, 1995, may continue to apply the provisions of this rule as they existed as of April 12, 1995, and may continue to pursue acknowledgment of the adopted plans and land use regulations under those same rule provisions provided such adopted plans and land use regulations are acknowledged by April 12, 1996. Affected cities and counties that qualify and make this election under this subsection shall update their plans and land use regulations to comply with the 1995 amendments to OAR 660-012-0045 as part of their transportation system plans.

(b) Affected cities and counties that do not have acknowledged plans and land use regulations as provided in subsection (a) of this section, shall apply relevant sections of this rule to land use decisions and limited land use decisions until land use regulations complying with this amended rule have been adopted.

(5) Cities and counties shall update their TSPs and implementing measures as necessary to comply with this division at each periodic review subsequent to initial compliance with

this division. This shall include a reevaluation of the land use designations, densities and design standards in the following circumstances:

(a) If the interim benchmarks established pursuant to OAR 660-012-0035(6) have not been achieved; or

(b) If a refinement plan has not been adopted consistent with the requirements of OAR 660-012-0025(3).

(6) The director may grant a whole or partial exemption from the requirements of this division to cities under 10,000 population, counties under 25,000 population, and for areas of a county within an urban growth boundary that contains a population less than 10,000. Eligible jurisdictions may request that the director approve an exemption from all or part of the requirements in this division. Exemptions shall be for a period determined by the Director or until the jurisdiction's next periodic review, whichever is shorter.

(a) The director's decision to approve an exemption shall be based upon the following factors:

(A) Whether the existing and committed transportation system is generally adequate to meet likely transportation needs;

(B) Whether the new development or population growth is anticipated in the planning area over the next five years;

(C) Whether major new transportation facilities are proposed which would affect the planning areas;

(D) Whether deferral of planning requirements would conflict with accommodating state or regional transportation needs; and

(E) Consultation with the Oregon Department of Transportation on the need for transportation planning in the area, including measures needed to protect existing transportation facilities.

(b) The director's decision to grant an exemption under this section is appealable to the Commission as provided in OAR 660-002-0020 (Delegation of Authority Rule).

(7) Portions of TSPs and implementing measures adopted as part of comprehensive plans prior to the responsible jurisdiction's periodic review shall be reviewed pursuant to OAR Chapter 660, Division 18, Post Acknowledgment Procedures.

Stat. Auth.: ORS 183, ORS 197.040 & ORS 197.245

Stats. Implemented: ORS 195.025, ORS 197.040, ORS 197.230, ORS 197.245, ORS 197.610 - ORS 197.625, ORS 197.628 - ORS 197.646, ORS 197.712 & ORS 197.717

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91; LCDC 1-1993, f. & cert. ef. 6-15-93; LCDC 4-

1995, f. & cert. ef. 5-8-95; LCDD 6-1998, f. & cert. ef. 10-30-98; LCDD 2-2000, f. & cert. ef. 2-4-00

660-012-0060

Plan and Land Use Regulation Amendments

(1) Amendments to functional plans, acknowledged comprehensive plans, and land use regulations which significantly affect a transportation facility shall assure that allowed land uses are consistent with the identified function, capacity, and performance standards (e.g. level of service, volume to capacity ratio, etc.) of the facility. This shall be accomplished by either:

(a) Limiting allowed land uses to be consistent with the planned function, capacity, and performance standards of the transportation facility;

(b) Amending the TSP to provide transportation facilities adequate to support the proposed land uses consistent with the requirements of this division;

(c) Altering land use designations, densities, or design requirements to reduce demand for automobile travel and meet travel needs through other modes; or

(d) Amending the TSP to modify the planned function, capacity and performance standards, as needed, to accept greater motor vehicle congestion to promote mixed use, pedestrian friendly development where multimodal travel choices are provided.

(2) A plan or land use regulation amendment significantly affects a transportation facility if it:

(a) Changes the functional classification of an existing or planned transportation facility;

(b) Changes standards implementing a functional classification system;

(c) Allows types or levels of land uses which would result in levels of travel or access which are inconsistent with the functional classification of a transportation facility; or

(d) Would reduce the performance standards of the facility below the minimum acceptable level identified in the TSP.

(3) Determinations under subsections (1) and (2) of this section shall be coordinated with affected transportation facility and service providers and other affected local governments.

(4) The presence of a transportation facility or improvement shall not be a basis for an exception to allow residential, commercial, institutional or industrial development on rural lands under this division or OAR 660-004-0022 and 660-004-0028.

(5) In determining whether proposed land uses would affect or be consistent with planned transportation facilities as provided in 0060(1) and (2), local governments shall give full credit for potential reduction in vehicle trips for uses located in mixed-use, pedestrian-friendly centers, and neighborhoods as provided in (a)-(d) below;

(a) Absent adopted local standards or detailed information about the vehicle trip reduction benefits of mixed-use, pedestrian-friendly development, local governments shall assume that uses located within a mixed-use, pedestrian-friendly center, or neighborhood, will generate 10% fewer daily and peak hour trips than are specified in available published estimates, such as those provided by the Institute of Transportation Engineers (ITE) Trip Generation Manual that do not specifically account for the effects of mixed-use, pedestrian-friendly development. The 10% reduction allowed for by this section shall be available only if uses which rely solely on auto trips, such as gas stations, car washes, storage facilities, and motels are prohibited;

(b) Local governments shall use detailed or local information about the trip reduction benefits of mixed-use, pedestrian-friendly development where such information is available and presented to the local government. Local governments may, based on such information, allow reductions greater than the 10% reduction required in (a);

(c) Where a local government assumes or estimates lower vehicle trip generation as provided in (a) or (b) above, it shall assure through conditions of approval, site plans, or approval standards that subsequent development approvals support the development of a mixed-use, pedestrian-friendly center or neighborhood and provide for on-site bike and pedestrian connectivity and access to transit as provided for in 0045(3) and (4). The provision of on-site bike and pedestrian connectivity and access to transit may be accomplished through application of acknowledged ordinance provisions which comply with 0045(3) and (4) or through conditions of approval or findings adopted with the plan amendment that assure compliance with these rule requirements at the time of development approval; and

(d) The purpose of this section is to provide an incentive for the designation and implementation of pedestrian-friendly, mixed-use centers and neighborhoods by lowering the regulatory barriers to plan amendments which accomplish this type of development. The actual trip reduction benefits of mixed-use, pedestrian-friendly development will vary from case to case and may be somewhat higher or lower than presumed pursuant to (a) above. The Commission concludes that this assumption is warranted given general information about the expected effects of mixed-use, pedestrian-friendly development and its intent to encourage changes to plans and development patterns. Nothing in this section is intended to affect the application of provisions in local plans or ordinances which provide for the calculation or assessment of systems development charges or in preparing conformity determinations required under the federal Clean Air Act.

(6) Amendments to acknowledged comprehensive plans and land use regulations which meet all of the criteria listed in (a)-(c) below shall include an amendment to the comprehensive plan, transportation system plan the adoption of a local street plan, access

management plan, future street plan or other binding local transportation plan to provide for on-site alignment of streets or accessways with existing and planned arterial, collector, and local streets surrounding the site as necessary to implement the requirements in Section 0020(2)(b) and Section 0045(3) of this division:

- (a) The plan or land use regulation amendment results in designation of two or more acres of land for commercial use;
- (b) The local government has not adopted a TSP or local street plan which complies with Section 0020(2)(b) or, in the Portland Metropolitan Area, has not complied with Metro's requirement for street connectivity as contained in Title 6, Section 3 of the Urban Growth Management Functional Plan; and
- (c) The proposed amendment would significantly affect a transportation facility as provided in 0060(2).

(7) A "mixed-use, pedestrian-friendly center or neighborhood" for the purposes of this rule, means:

(a) Any one of the following:

(A) An existing central business district or downtown;

(B) An area designated as a central city, regional center, town center or main street in the *Portland Metro 2040 Regional Growth Concept*;

(C) An area designated in an acknowledged comprehensive plan as a transit oriented development or a pedestrian district; or

(D) An area designated as a special transportation area as provided for in the Oregon Highway Plan.

(b) An area other than those listed in (a) which includes or is planned to include the following characteristics:

(A) A concentration of a variety of land uses in a well-defined area, including the following:

(i) Medium to high density residential development (12 or more units per acre);

(ii) Offices or office buildings;

(iii) Retail stores and services;

(iv) Restaurants; and

(v) Public open space or private open space which is available for public use, such as a park or plaza.

(B) Generally include civic or cultural uses;

(C) A core commercial area where multi-story buildings are permitted;

(D) Buildings and building entrances oriented to streets;

(E) Street connections and crossings that make the center safe and conveniently accessible from adjacent areas;

(F) A network of streets and, where appropriate, accessways and major driveways that make it attractive and highly convenient for people to walk between uses within the center or neighborhood, including streets and major driveways within the center with wide sidewalks and other features, including pedestrian-oriented street crossings, street trees, pedestrian-scale lighting and on-street parking;

(G) One or more transit stops (in urban areas with fixed route transit service); and

(H) Limit or do not allow low-intensity or land extensive uses, such as most industrial uses, automobile sales and services, and drive-through services.

Stat. Auth.: ORS 183 & ORS 197.040

Stats. Implemented: ORS 195.025, ORS 197.040, ORS 197.230, ORS 197.245, ORS 197.610 - ORS 197.625, ORS 197.628 - ORS 197.646, ORS 197.712, ORS 197.717 & ORS 197.732

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91; LCDD 6-1998, f. & cert. ef. 10-30-98; LCDD 6-1999, f. & cert. ef. 8-6-99

660-012-0065

Transportation Improvements on Rural Lands

(1) This rule identifies transportation facilities, services and improvements which may be permitted on rural lands consistent with Goals 3, 4, 11, and 14 without a goal exception.

(2) For the purposes of this rule, the following definitions apply:

(a) "Access Roads" means low volume public roads that principally provide access to property or as specified in an acknowledged comprehensive plan;

(b) "Collectors" means public roads that provide access to property and that collect and distribute traffic between access roads and arterials or as specified in an acknowledged comprehensive plan;

(C) "Arterials" means state highways and other public roads that principally provide service to through traffic between cities and towns, state highways and major destinations or as specified in an acknowledged comprehensive plan;

(d) "Accessory Transportation Improvements" means transportation improvements that are incidental to a land use to provide safe and efficient access to the use;

(e) "Channelization" means the separation or regulation of conflicting traffic movements into definite paths of travel by traffic islands or pavement markings to facilitate the safe and orderly movement of both vehicles and pedestrians. Examples include, but are not limited to, left turn refuges, right turn refuges including the construction of islands at intersections to separate traffic, and raised medians at driveways or intersections to permit only right turns. "Channelization" does not include continuous median turn lanes;

(f) "Realignment" means rebuilding an existing roadway on a new alignment where the new centerline shifts outside the existing right of way, and where the existing road surface is either removed, maintained as an access road or maintained as a connection between the realigned roadway and a road that intersects the original alignment. The realignment shall maintain the function of the existing road segment being realigned as specified in the acknowledged comprehensive plan;

(g) "New Road" means a public road or road segment that is not a realignment of an existing road or road segment.

(3) The following transportation improvements are consistent with goals 3, 4, 11, and 14 subject to the requirements of this rule:

(a) Accessory transportation improvements for a use that is allowed or conditionally allowed by ORS 215.213, 215.283 or OAR 660, Division 6 (Forest Lands);

(b) Transportation improvements that are allowed or conditionally allowed by ORS 215.213, 215.283 or OAR 660, Division 6 (Forest Lands);

(c) Channelization not otherwise allowed under subsections (a) or (b) of this section;

(d) Realignment of roads not otherwise allowed under subsection (a) or (b) of this section;

(e) Replacement of an intersection with an interchange;

(f) Continuous median turn lane;

(g) New access roads and collectors within a built or committed exception area, or in other areas where the function of the road is to reduce local access to or local traffic on a state highway. These roads shall be limited to two travel lanes. Private access and intersections shall be limited to rural needs or to provide adequate emergency access.

- (h) Bikeways, footpaths and recreation trails not otherwise allowed as a modification or part of an existing road;
 - (i) Park and ride lots;
 - (j) Railroad mainlines and branchlines;
 - (k) Pipelines;
 - (l) Navigation channels;
 - (m) Replacement of docks and other facilities without significantly increasing the capacity of those facilities;
 - (n) Expansions or alterations of public use airports that do not permit service to a larger class of airplanes; and
 - (o) Transportation facilities, services and improvements other than those listed in this rule that serve local travel needs. The travel capacity and level of service of facilities and improvements serving local travel needs shall be limited to that necessary to support rural land uses identified in the acknowledged comprehensive plan or to provide adequate emergency access.
- (4) Accessory transportation improvements required as a condition of development listed in subsection (3)(a) of this rule shall be subject to the same procedures, standards and requirements applicable to the use to which they are accessory.
- (5) For transportation uses or improvements listed in subsection (3)(d) to (g) and (o) of this rule within an exclusive farm use (EFU) or forest zone, a jurisdiction shall, in addition to demonstrating compliance with the requirements of ORS 215.296:
- (a) Identify reasonable build design alternatives, such as alternative alignments, that are safe and can be constructed at a reasonable cost, not considering raw land costs, with available technology. Until adoption of a local TSP pursuant to the requirements of OAR 660-012-0035, the jurisdiction shall consider design and operations alternatives within the project area that would not result in a substantial reduction in peak hour travel time for projects in the urban fringe that would significantly reduce peak hour travel time. A determination that a project will significantly reduce peak hour travel time is based on OAR 660-012-0035(10). The jurisdiction need not consider alternatives that are inconsistent with applicable standards or not approved by a registered professional engineer;
 - (b) Assess the effects of the identified alternatives on farm and forest practices, considering impacts to farm and forest lands, structures and facilities, considering the effects of traffic on the movement of farm and forest vehicles and equipment and considering the effects of access to parcels created on farm and forest lands; and

(c) Select from the identified alternatives, the one, or combination of identified alternatives that has the least impact on lands in the immediate vicinity devoted to farm or forest use.

(6) Notwithstanding any other provision of this division, if a jurisdiction has not met the deadline for TSP adoption set forth in OAR 660-012-0055, or any extension thereof, a transportation improvement that is listed in section (5) of this rule and that will significantly reduce peak hour travel time as provided in OAR 660-0120-035(10) may be allowed in the urban fringe only if the jurisdiction applies either:

(a) The criteria applicable to a "reasons" exception provided in Goal 2 and OAR 660, Division 4; or

(b) The evaluation and selection criteria set forth in OAR 660-012-0035.

Stat. Auth.: ORS 183, ORS 197.040, ORS 197.245, ORS 215.213, ORS 215.283 & ORS 215.296

Stats. Implemented: ORS 195.025, ORS 197.040, ORS 197.230, ORS 197.245, ORS 197.712, ORS 197.717, ORS 197.232, ORS 215.213 & ORS 215.283

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91; LCDC 3-1995, f. & cert. ef. 3-31-95; Administrative correction 9-29-98

660-012-0070

Exceptions for Transportation Improvements on Rural Land

(1) Transportation facilities and improvements which do not meet the requirements of OAR 660-012-0065 require an exception to be sited on rural lands.

(2) Where an exception to Goals 3, 4, 11, or 14 is required, the exception shall be taken pursuant to ORS 197.732(1)(c), Goal 2, OAR Chapter 660, Division 4 and this division.

(3) An exception adopted as part of a TSP or refinement plan shall, at a minimum, decide need, mode, function and general location for the proposed facility or improvement:

(a) The general location shall be specified as a corridor within which the proposed facility or improvement is to be located, including the outer limits of the proposed location. Specific sites or areas within the corridor may be excluded from the exception to avoid or lessen likely adverse impacts;

(b) The size, design and capacity of the proposed facility or improvement shall be described generally, but in sufficient detail to allow a general understanding of the likely impacts of the proposed facility or improvement. Measures limiting the size, design or capacity may be specified in the description of the proposed use in order to simplify the analysis of the effects of the proposed use;

(c) The adopted exception shall include a process and standards to guide selection of the precise design and location within the corridor and consistent with the general description of the proposed facility or improvement. For example, where a general location or corridor crosses a river, the exception would specify that a bridge crossing would be built but would defer to project development decisions about precise location and design of the bridge within the selected corridor subject to requirements to minimize impacts on riparian vegetation, habitat values, etc.;

(d) Land use regulations implementing the exception may include standards for specific mitigation measures to offset unavoidable environmental, economic, social or energy impacts of the proposed facility or improvement or to assure compatibility with adjacent uses.

(4) To address Goal 2, Part II(c)(1) the exception shall demonstrate that there is a transportation need identified consistent with the requirements of OAR 660-012-0030 which cannot reasonably be accommodated through one or a combination of the following measures not requiring an exception:

(a) Alternative modes of transportation;

(b) Traffic management measures; and

(c) Improvements to existing transportation facilities.

(5) To address Goal 2, Part II(c)(2), the exception shall demonstrate that non-exception locations cannot reasonably accommodate the proposed transportation improvement or facility.

(6) To determine the reasonableness of alternatives to an exception under sections (4) and (5) of this rule, cost, operational feasibility, economic dislocation and other relevant factors shall be addressed. The thresholds chosen to judge whether an alternative method or location cannot reasonably accommodate the proposed transportation need or facility must be justified in the exception.

(7) To address Goal 2, Part II(c)(3), the exception shall:

(a) Compare the economic, social, environmental and energy consequences of the proposed location and other alternative locations requiring exceptions;

(b) Determine whether the net adverse impacts associated with the proposed exception site are significantly more adverse than the net impacts from other locations which would also require an exception. A proposed exception location would fail to meet this requirement only if the affected local government concludes that the impacts associated with it are significantly more adverse than the other identified exception sites;

(c) The evaluation of the consequences of general locations or corridors need not be site-specific, but may be generalized consistent with the requirements of section (3) of this rule.

(8) To address Goal 2, Part II(c)(4), the exception shall:

(a) Describe the adverse effects that the proposed transportation improvement is likely to have on the surrounding rural lands and land uses, including increased traffic and pressure for nonfarm or highway oriented development on areas made more accessible by the transportation improvement;

(b) Adopt as part of the exception, facility design and land use measures which minimize accessibility of rural lands from the proposed transportation facility or improvement and support continued rural use of surrounding lands.

Stat. Auth.: ORS 183 & ORS 197.040

Stats. Implemented: ORS 195.025, ORS 197.040, ORS 197.230, ORS 197.245, ORS 197.712, ORS 197.717 & ORS 197.732

Hist.: LCDC 1-1991, f. & cert. ef. 5-8-91

A Summary of Oregon's Statewide Planning Goals

1. **CITIZEN INVOLVEMENT** Goal 1 calls for "the opportunity for citizens to be involved in all phases of the planning process." It requires each city and county to have a citizen involvement program containing six components specified in the goal. It also requires local governments to have a committee for citizen involvement (CCI) to monitor and encourage public participation in planning.
2. **LAND USE PLANNING** Goal 2 outlines the basic procedures of Oregon's statewide planning program. It says that land use decisions are to be made in accordance with a comprehensive plan, and that suitable "implementation ordinances" to put the plan's policies into effect must be adopted. It requires that plans be based on "factual information"; that local plans and ordinances be coordinated with those of other jurisdictions and agencies; and that plans be reviewed periodically and amended as needed. Goal 2 also contains standards for taking exceptions to statewide goals. An exception may be taken when a statewide goal cannot or should not be applied to a particular area or situation.
3. **AGRICULTURAL LANDS** Goal 3 defines "agricultural lands." It then requires counties to inventory such lands and to "preserve and maintain" them through farm zoning. Details on the uses allowed in farm zones are found in ORS Chapter 215 and in Oregon Administrative Rules, Chapter 660, Division 33.
4. **FOREST LANDS** This goal defines forest lands and requires counties to inventory them and adopt policies and ordinances that will "conserve forest lands for forest uses."
5. **OPEN SPACES, SCENIC AND HISTORIC AREAS AND NATURAL RESOURCES** Goal 5 covers more than a dozen natural and cultural resources such as wildlife habitats and wetlands. It establishes a process for each resource to be inventoried and evaluated. If a resource or site is found to be significant, a local government has three policy choices: preserve the resource, allow proposed uses that conflict with it, or strike some sort of a balance between the resource and the uses that would conflict with it.
6. **AIR, WATER AND LAND RESOURCES QUALITY** This goal requires local comprehensive plans and implementing measures to be consistent with state and federal regulations on matters such as groundwater pollution.
7. **AREAS SUBJECT TO NATURAL DISASTERS AND HAZARDS** Goal 7 deals with development in places subject to natural hazards such as floods or landslides. It requires that jurisdictions apply "appropriate safeguards" (floodplain zoning, for example) when planning for development there.
8. **RECREATION NEEDS** This goal calls for each community to evaluate its areas and facilities for recreation and develop plans to deal with the projected demand for them. It also sets forth detailed

standards for expedited siting of destination resorts.

9. **ECONOMY OF THE STATE** Goal 9 calls for diversification and improvement of the economy. It asks communities to inventory commercial and industrial lands, project future needs for such lands, and plan and zone enough land to meet those needs.
10. **HOUSING** This goal specifies that each city must plan for and accommodate needed housing types, such as multifamily and manufactured housing. It requires each city to inventory its buildable residential lands, project future needs for such lands, and plan and zone enough buildable land to meet those needs. It also prohibits local plans from discriminating against needed housing types.
11. **PUBLIC FACILITIES AND SERVICES** Goal 11 calls for efficient planning of public services such as sewers, water, law enforcement, and fire protection. The goal's central concept is that public services should to be planned in accordance with a community's needs and capacities rather than be forced to respond to development as it occurs.
12. **TRANSPORTATION** The goal aims to provide "a safe, convenient and economic transportation system." It asks for communities to address the needs of the "transportation disadvantaged."
13. **ENERGY** Goal 13 declares that "land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles."
14. **URBANIZATION** This goal requires cities to estimate future growth and needs for land and then plan and zone enough land to meet those needs. It calls for each city to establish an "urban growth boundary" (UGB) to "identify and separate urbanizable land from rural land." It specifies seven factors that must be considered in drawing up a UGB. It also lists four criteria to be applied when undeveloped land within a UGB is to be converted to urban uses.
15. **WILLAMETTE GREENWAY** Goal 15 sets forth procedures for administering the 300 miles of greenway that protects the Willamette River.
16. **ESTUARINE RESOURCES** This goal requires local governments to classify Oregon's 22 major estuaries in four categories: natural, conservation, shallow-draft development, and deep-draft development. It then describes types of land uses and activities that are permissible in those "management units."
17. **COASTAL SHORELANDS** The goal defines a planning area bounded by the ocean beaches on the west and the coast highway (State Route 101) on the east. It specifies how certain types of land and resources there are to be managed: major marshes, for example, are to be protected. Sites best suited for unique coastal land uses (port facilities, for example) are reserved for "water-dependent" or "water related" uses.
18. **BEACHES AND DUNES** Goal 18 sets planning standards for development on various types of dunes. It prohibits residential development on beaches and active foredunes, but allows some other

types of development if they meet key criteria. The goal also deals with dune grading, groundwater drawdown in dunal aquifers, and the breaching of foredunes.

19. ***OCEAN RESOURCES*** Goal 19 aims "to conserve the long-term values, benefits, and natural resources of the

nearshore ocean and the continental shelf." It deals with matters such as dumping of dredge spoils and discharging of waste products into the open sea. Goal 19's main requirements are for state agencies rather than cities and counties.

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Transportation Project Delays

Why environmental "streamlining" won't solve the problem

Recent reports from the Federal Highway Administration and the American Association of State Highway and Transportation Officials suggest that problems with transportation project delays will not be solved by diluting widely-supported environmental laws. Instead, the studies indicate that project delivery can best be "streamlined" by addressing intrinsic flaws in the transportation planning process. The most effective strategy to speed project delivery is one of the fundamental principles of the very environmental regulations under attack – involving stakeholders early, often and substantively.

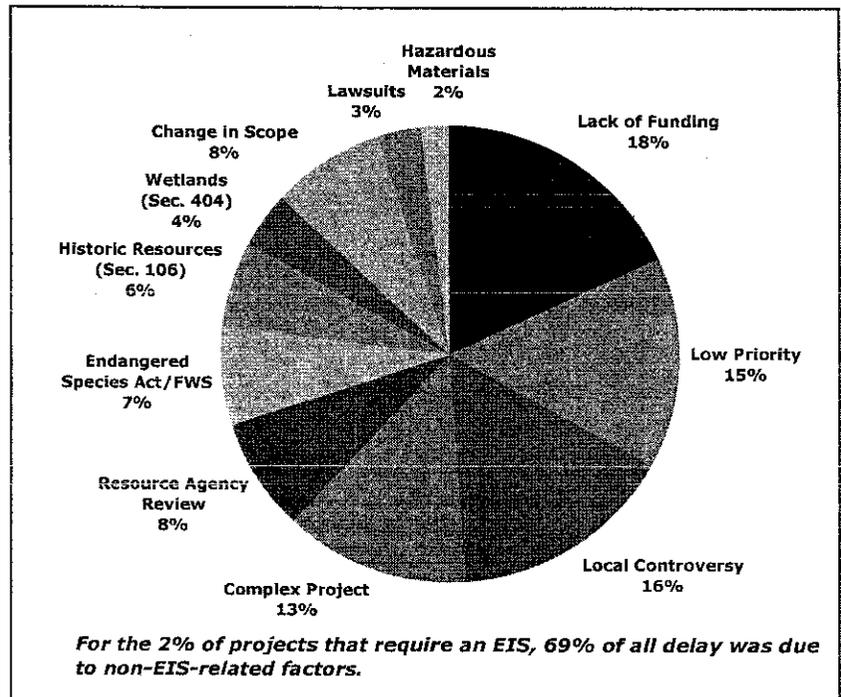
Are Environmental Regulations the Problem?

There is no doubt that many transportation projects stretch far beyond their projected timeframe for delivery. However, there is little evidence to suggest that environmental laws are the cause of most project delays. Three new studies, from the American Association of State Highway and Transportation Officials (AASHTO) and FHWA, attempt to address this gap by quantifying the impact that the NEPA process has had on transportation projects. These studies call into question the complaints that environmental requirements are the source of the delays, instead finding that most delayed projects are held up by a lack of funding and/or lack of local political support, or by their controversial nature (in which case the projects may merit a go-slow approach). Other projects are held up because of the complexity of their environmental impacts, which rightfully require extensive review by the appropriate natural resource agencies.

FHWA Finds that Lack of Funding and Local Support Are Source of Delays

The Federal Highway Administration's review of transportation infrastructure projects with outstanding Environmental Impact Statements (projects that have yet to complete the review process after five or more years) contradicts many of the claims made by proponents of environmental streamlining. Most (57.5 percent) of the 89 protracted projects studied were between 5 and 7 years old, with 13 still awaiting a Record of Decision after more than 10 years. FHWA's study found that the most common reason that the projects were delayed was because of lack of funding or low priority (32 percent), local controversy (16 percent), or the inherent complexity of the project (13 percent). All of these issues, as well as changing or expanding the scope of the project (8 percent) surpass environmental factors as causes of project delay.

A second FHWA study found that these delayed



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complete the NEPA process for EIS projects was about 3.6 years. The median (which in this case is a better measure because of outliers in the sample) time required was only 3 years. It is important to note that the time required to complete the NEPA process is not necessarily additive to the project planning process, and may be coincident with other phases of the project. Regardless, the second FHWA study found that the NEPA process typically comprises only 28 percent of the entire project development process.

On average, states process only 5 Environmental Impact Statements (EISs) in any given year.

AASHTO Report Exposes Incorrect Project Classification as Major Cause of Delays

The AASHTO study focused not on overall project delivery, but on state DOT experiences with the environmental review process itself. According to AASHTO's survey of 32 state DOTs, the vast majority of transportation projects require only enough environmental documentation to support a Categorical Exclusion (CE) from NEPA, the lowest level of review. In fact, the AASHTO study found that fully 92 percent of environmental documents processed by state DOTs are CEs. Environmental Assessments (EA) make up seven percent, with full Environmental Impact Statements (EIS) rounding out the sample at less than 2 percent. In absolute terms, that amounts to average of only 5 EISs processed by each state in a given year. According to the AASHTO study, of states which experienced delays with CE preparation (63 percent of the surveyed states), only 31 to

48 percent of all the CEs prepared by those states were delayed. Similarly, for the 81 percent of states which experienced delays in EA preparation, 43 to 64 percent of the EAs prepared by those states were delayed. In other words, even in states which reported delays in the environmental review process, between as many as 70 percent of documents were completed without any delay at all.

Interestingly, the causes of delay cited by state DOTs indicate that the issues encountered should probably

have triggered a more rigorous environmental review process. A review of the report indicates that some of the projects selected by state DOTs to typify delays were processed using lower-level documentation than was merited. Janine Bauer of the Coalition to Defend NEPA and the Tri-State Transportation Campaign has suggested that perhaps the projects processed as CEs should have been processed instead by EAs; likewise, projects processed as EAs should have been processed through a full EIS.

The bottom line is that average delays for a CE or EA process were not that burdensome. In fact, according to the AASHTO study almost 40 percent of the surveyed states did not experience delays in the CE process, and almost 20 percent experienced no delays in the EA review process. And for those projects that experienced long delays, it was likely because they merited a more rigorous environmental review.

Sources:

FHWA. *Reasons for EIS Project Delays*. September 2000.

The Louis Berger Group. *Evaluating the Performance of Environmental Streamlining: Development of a NEPA Baseline for Measuring Continuous Performance*. FHWA: 2000.

American Association of State Highway and Transportation Officials. *Environmental Process Streamlining: A Report on Delays Associated with States' Categorical Exclusion and Environmental Assessment Processes*. October 2000.

FHWA Environmental Streamlining Website: <http://www.fhwa.dot.gov/environment/strmlng>

Defenders of Wildlife Habitat and Highways Campaign: <http://www.defenders.org/habitat/highways>

National Coalition to Defend NEPA: (212) 268-7474

For further information, see:

<http://www.transact.org>

<http://www.tea3.org>

EXHIBIT A

REGIONAL FRAMEWORK PLAN

December 11, 1997

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Introduction

Introduction: Foundations of the Regional Framework Plan

In 1978, voters in Multnomah, Washington and Clackamas counties approved the creation of an elected regional government, defined as a “metropolitan service district” to oversee issues that transcend traditional city and county boundaries. This entity became known as Metro. The state legislation which authorized the creation of Metro described Metro’s responsibilities and procedures. Among these are the responsibilities to adopt and amend the regional Urban Growth Boundary (UGB), and adopt “land use planning goals and objectives for the district” that are consistent with state goals.

The Metro Council, in partnership with local governments, adopted land use planning goals and objectives, called the Regional Urban Growth Goals and Objectives (RUGGOs), in September 1991. Through their representatives on Metro advisory committees, the cities and counties indicated that while the directions set in the RUGGOs were appropriate, they were not specific enough. Accordingly, local representatives recommended that additional work be done to further define the goals and objectives.

In 1990, the voters of Oregon approved an amendment to the Oregon Constitution, authorizing a metropolitan service district to have home rule status. Subject to voter approval, Metro would have jurisdiction over all matters of “metropolitan concern” as set forth in a charter. In 1991, the legislature authorized the appointment of a charter committee to draft a charter for Metro and to place it on the ballot. In November, 1992, the voters approved Metro’s Charter. The Charter stated that the Regional Planning functions described in Section 5 of the Charter would be Metro’s primary functions.

Section 5 of the Charter required that Metro adopt a Future Vision statement before July 1, 1995. This statement was adopted by the Council and a copy is attached in the Appendices of this Plan. In addition, the Charter required Metro to adopt this Regional Framework Plan before December 31, 1997, with the consultation and advice of the Metro Policy Advisory Committee (MPAC). A copy of Section 5 and Section 27 (which creates MPAC) of the Charter are also included in the Appendices of this Plan.

After the adoption of the Charter and the local government recommendation that the RUGGOs needed further refinement, Metro continued to actively pursue its regional planning mission. The Region 2040 Project (begun before adoption of the Charter) was the forum for developing specific land-use and transportation planning policies. In 1995, the RUGGOs were substantially revised to incorporate the 2040 Growth Concept. A description of the process that led to the adoption of the 2040 Growth Concept is included in the Appendices of this Plan. The Regional Framework Plan is

based on the adopted 2040 Growth Concept and the policy statements contained in the RUGGOs and, upon adoption, will consolidate all Metro land-use planning goals and objectives.

Section 5 of the Charter requires that Metro implement the Regional Framework Plan by requiring cities and counties to comply with the Plan. In addition to authorizing Metro to adopt land use planning goals and objectives, the state legislation creating Metro authorized Metro to adopt "Functional Plans" that could contain specific recommendations and requirements for the cities and counties within Metro's boundaries to amend their comprehensive plans and implementing zoning ordinances. Metro also has authority under state law to coordinate local comprehensive plans. Further, Metro is designated as the Metropolitan Planning Organization (MPO) for the purpose of Federal transportation funding. Pursuant to this authority, Metro has adopted, and amended from time to time, a Regional Transportation Plan (the RTP) as a Functional Plan.

After the adoption of the 2040 Growth Concept, MPAC and the Metro Council agreed that early implementation of the Growth Concept was desirable. Accordingly, the Council adopted the Metro Urban Growth Management Functional Plan in November, 1996. A copy of this Functional Plan is included in the Appendices of to this Plan.

The Regional Framework Plan is intended to be the document that unites all of Metro's adopted land use planning policies and requirements. The Charter directs Metro to address the following subject matter in the Plan:

- management and amendment of the Urban Growth Boundary
- protection of lands outside the Urban Growth Boundary for natural resource use and conservation, future urban expansion or other uses
- urban design and settlement patterns
- housing densities
- transportation and mass transit systems
- parks, open spaces and recreational facilities
- water sources and storage
- coordination with Clark County, Washington.
- planning responsibilities mandated by state law
- other issues of metropolitan concern.

This document brings together these elements and the contents of previous regional policies to create a coordinated, integrated Regional Framework Plan to achieve the preferred form of regional growth and development which is the 2040 Growth Concept. While a new document, the Regional Framework Plan incorporates goals, objectives and policies established in existing Metro legislation, including the Regional Urban Growth Goals and Objectives, the 2040 Growth Concept, the Urban Growth Management Functional Plan, the Metropolitan Greenspaces Master Plan, and the Regional Transportation Plan.

In addressing the subject matters that Metro is required or allowed to address, Metro does not choose to mandate specific requirements for cities and counties for all of these areas. Instead, the Regional Framework Plan remains consistent with previous planning legislation adopted by Metro. The Regional Framework Plan is a combination of broad planning goals and objectives, as well as specific requirements. The goals and objectives intended to be policy statements that will guide future planning activities conducted by Metro are found in Chapters 1-7 of this Plan. The goals and objectives are themselves broad policy statements and future planning activities will need to seek a balance between these sometimes competing planning directives.

Specific requirements are also included in this Framework Plan. Some requirements are applicable to Metro itself, such as the provisions that establish procedures and standards for Urban Growth Boundary Amendments, included in the Appendices of this Plan. Where requirements are directed to cities and counties, these requirements are adopted as Functional Plans, such as the Urban Growth Management Functional Plan and the RTP. These requirements are summarized in Chapter 8 and fully stated in the Appendices of this Plan.

The Oregon Legislature, in 1997, adopted statutory amendments that require Metro to unify all of its planning goals, objectives and requirements into the Regional Framework Plan. This legislation (Oregon Laws 1997, Chapter 833) and 1993 legislation specifically requires compliance acknowledgment of the Regional Framework Plan and its implementing ordinances by the Oregon Land Conservation and Development Commission.

Metro has authority under the Charter and state law to require cities and counties to amend their comprehensive plans and implementing ordinances by requiring compliance and consistency with Metro's adopted Functional Plans and the Regional Framework Plan. In this Regional Framework Plan, Metro has decided to designate clearly any portions of the Plan that are requirements for cities and counties as Functional Plans. Section 7 of the Metro Charter limits Metro's authority to otherwise regulate services currently being provided by local governments. The requirements for cities and counties contained in this Framework Plan as component functional plans are not intended to be considered as regulations of local government services because they are enforceable pursuant to the specific provisions of Section 5 of the Charter.

Relationships with Other Governments

The planning and growth management activities of many jurisdictions affect and are affected by the actions of other jurisdictions in the region. In this region, as in others throughout the country, coordination of planning and management activities is essential if urban growth management efforts are to succeed.

In the Portland metropolitan area, representatives from many governments and agencies play critical roles in urban growth management. Metro's partners in the region's 24 cities, three counties and more than 130 special service districts and school districts, the State of Oregon, Tri-Met, the Port of

Portland and the Portland Area Boundary Commission all make decisions that affect and respond to regional urban growth. And from a broader regional perspective, the cities of Southwest Washington and Clark County are partners in addressing growth management issues such as air quality, transportation and regional economy. Metro also works with nearby Oregon cities outside the Metro boundary to develop complementary policies.

While the Metro Council makes decisions about policies, Metro has more than a dozen advisory committees that advise the Executive Officer, Metro Council and staff on matters of Metro's responsibility. Membership of the committees is varied, based on the purpose of each committee, and is structured to promote interagency communication and coordination at several levels, as well as citizen involvement.

The Metro Policy Advisory Committee (MPAC) is a Charter-mandated committee consisting of members of city councils and county commissions and other representatives of local government governing bodies. Three citizen members are appointed by Metro's Executive Officer. As provided for in the Charter, the membership of MPAC has been adjusted and can continue to be adjusted to reflect the desire for broad input from affected governments as well as citizens. MPAC provides advice and consultation to the Metro Council on the land-use matters. The committee may authorize Metro to provide or regulate a local government service. The Metro Technical Advisory Committee (MTAC) is a 24-member committee of planning managers, citizens and business representatives that provides technical support to MPAC.

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation needs in the region to evaluate transportation needs and make recommendations to the Metro Council related to transportation policy. JPACT's discussions usually follow technical assessments by Transportation Policy Alternatives Committee (TPAC), whose membership includes technical staff from the same agencies as JPACT, as well as six citizens appointed at-large by the Metro Council.

Relationships with Metro Citizens

Metro is committed to including meaningful citizen involvement in regional planning and implementation of the Framework Plan. Metro utilizes a wide range of mechanisms to achieve this goal. Metro's commitment to citizen and public involvement is stated in the Metro Citizen Involvement Principals and in Objective 1, Goal 1 of the Regional Urban Growth Goals and Objectives.

Metro believes that effective citizen involvement is essential to good government. Elected officials, staff and citizens all play important roles in governing the region. Cooperation among Metro, local governments and citizens results in the best policy decisions. Therefore, Metro commits to promote

and to sustain a responsive citizen involvement environment. To carry out this commitment, Metro adopts these guiding principles:

1. Value active citizen involvement as essential to the future of the Metro region.
2. Respect and consider all citizen input.
3. Encourage opportunities that reflect the rich diversity of the region.
4. Promote participation, based on citizen involvement opportunities, of individuals and of community, business and special interest groups.
5. Provide communications to encourage citizen participation in Metro processes that are understandable, timely and broadly distributed.
6. Provide citizens with an opportunity to be involved early in the process of policy development, planning and projects.
7. Organize involvement activities to make the best use of citizens' time and efforts.
8. Provide financial and staff support to Metro's Office of Citizen Involvement.
9. Sustain ongoing networking among citizens, local governments, Metro officials and staff.
10. Respond to citizens' perspectives and insights in a timely manner.
11. Coordinate interdepartmental and interjurisdictional activities.
12. Evaluate the effectiveness of Metro citizen involvement.

Citizen Participation

Metro shall develop and implement an ongoing program for citizen participation in all aspects of the regional planning program. Such a program shall be coordinated with local programs for supporting citizen involvement in planning processes and shall not duplicate those programs.

Metro Committee for Citizen Involvement (MCCI)

The Metro Charter established a Metro Committee for Citizen Involvement to assist with the development, implementation and evaluation of its citizen involvement program and to advise the MPAC regarding ways to best involve citizens in regional planning activities.

Notification

Metro shall develop programs for public notification, especially for (but not limited to) proposed legislative actions, that ensure a high level of awareness of potential consequences, as well as opportunities for involvement on the part of affected citizens, both inside and outside of its districts' boundaries.

Future Vision

The spirit of the Regional Framework Plan took root in a Charter-mandated document, the Future Vision Report. The first requirement of the Metro Charter, as stated below, was to develop a “Future Vision” that, while not a regulatory document, is:

“...a conceptual statement that indicates population levels and settlement patterns that the region can accommodate within the carrying capacity of the land, water and air resources of the region, and its educational and economic resources, and that achieves a desired quality of life. The Future Vision is a long-term, visionary outlook for at least a 50-year period.”

The Charter also states:

“The matters addressed by the Future Vision include but are not limited to: (1) use, restoration and preservation of regional land and natural resources for the benefit of present and future generations, (2) how and where to accommodate the population growth of the region while maintaining a desired quality of life for its residents, and (3) how to develop new communities and additions to the existing urban areas in well-planned ways.”

The connection between the Future Vision and the Regional Framework Plan, as stated in the Charter, is that the Regional Framework Plan must “describe its relationship to the Future Vision.” That is the intent of this section. The full text of the Future Vision, as adopted by the Metro Council by Ordinance 95-604A, is included in the Appendices. However, the following excerpts are useful highlights in this Plan.

In the Future Vision report, the Future Vision Commission came to the following conclusion regarding carrying capacity:

“This metropolitan area, like all others, exceeded its ability to meet the physical needs of its people long ago. Our style of life depends on the importation of energy, materials, capital and brain power from all over the world. We have also found that traditional biological models of population carrying capacity are simply too narrowly drawn to be of much use in a metropolitan setting. Determining the sustainability of even current population levels at our existing quality of life is greatly complicated by uncertainties due to future technological and global economic changes. In addition, there are difficult questions of value which must be addressed first, since values can be the basis for an analysis of carrying capacity but cannot be derived from such a study. For these reasons, it may not be possible to choose a single sustainable population level for the region.”

Further on, the report states:

“Consequently, we have chosen to approach carrying capacity as an issue requiring ongoing discussion and monitoring. We believe that the relevant question is not when carrying capacity will be exceeded, but how we will collectively restore, maintain and/or enhance the qualities of the region central to sustaining our health, the quality of the natural environment and the ability of future generations to take action to meet the needs of their time.

Sustainable communities will come about through the skillful blending of factual data, our values and new ideas in a public discussion occupying a place of honor in

this region, not through blind adherence to numerical thresholds that cannot be specified, much less met. Hence, carrying capacity is not a one-time issue, a single number, a simple answer, but an ongoing question for us all.”

With regard to accommodating new growth, the Future Vision report includes the following recommendations:

“This vision does not call specifically for the creation of new communities. We choose instead to focus on the restoration and redevelopment of what already has been committed to non-resource use.”

“Direct all regional planning efforts to include equitable economic progress for communities throughout the region as a critical component for modeling and evaluation.”

“Address the further diversification of our economy, the creation of family-wage jobs and the development of accessible employment centers throughout the nine-county region in the Regional Framework Plan elements for transportation, rural lands, urban design, housing and water resources.”

“Identify needs and solutions to community problems at the neighborhood level, and actively work to enlist all units of government in supporting and acting on these grassroots agenda rather than allowing governmental entities to insulate themselves from participating.”

“Continue to encourage a choice of neighborhood types, including new neighborhoods with suburban densities, neighborhoods of traditional (pre-World War II) densities, and mixed-use neighborhoods of a more urban design.”

The relationship of the Regional Framework Plan to the Future Vision is as follows:

- The Future Vision statement provides a beginning point from which policy debate and analysis can begin.
- The Future Vision brings a broad, inclusive perspective to the Regional Framework Plan.
- The Future Vision establishes the approach that all of the issues and problems addressed in the Regional Framework Plan will require an ongoing process of monitoring, analysis and reform in order to meet the needs and expectations of this and future generations.

Description of the Regional Framework Plan Structure

This Plan is organized into this Introduction, a broad description of the 2040 Growth Concept which constitutes the “framework” which unifies all of the components of the Regional Framework Plan, and 8 additional chapters. Informational material is included in the Appendices. Chapters 1 through 6 address substantive planning issues. Chapter 7 addresses how Metro will manage the plan, including provisions addressing future amendments to the Plan. These amendments may be in the form of adoption of revisions to existing provisions of the Plan, additions to goals and objectives or additions of new requirements for cities and counties. Chapter 8 incorporates the specific requirements for cities and counties adopted as Functional Plan components of the Regional Framework Plan and identifies the process Metro will follow to adopt implementing ordinances to establish the rules by which Metro will enforce compliance with the Plan.

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Each chapter is structured with a format that includes statements of goals and objectives that are intended to apply to Metro's planning efforts. In addition, some of the chapters include references to the specific requirements that are made directly applicable to cities and counties in Chapter 8. Furthermore, the chapters contain background information and policy analysis that describes the subject matter that is addressed.

Any requirements that apply directly to cities or counties are separately referenced in a substantive chapter addressing a specific subject area and summarized in Chapter 8. All requirements of this Regional Framework Plan that are requirements applicable to cities and counties are adopted by functional plans included in the Appendices.

2040 Growth Concept

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The 2040 Growth Concept

This chapter of the Framework Plan describes the 2040 Growth Concept which is the unifying concept or “framework” around which this Regional Framework Plan is based. This 2040 Growth Concept contains refinements to the original 2040 Growth Concept that was adopted in the 1995 amendments to RUGGO. This Plan anticipates that the 2040 Growth Concept and the provisions of this Plan will continue to evolve.

The Growth Concept states the preferred form of regional growth and development and includes the Growth Concept map. The preferred form of growth is to contain growth within a carefully managed Urban Growth Boundary. Growth should occur inside the current UGB in the form of infill and redevelopment with higher density being developed in areas where it is appropriate. Expansions of the UGB should be done carefully to allow for the need for additional land. This concept is adopted for the long-term growth management of the region including a general approach to approximately where and how much the UGB should be ultimately expanded, what ranges of density are estimated to accommodate projected growth within the boundary, and which areas should be protected as open space.

The Growth Concept is designed to accommodate approximately 720,000 additional residents and 350,000 additional jobs. The total population served within this concept is approximately 1.8 million residents within the Metro boundary.

The basic philosophy of the Growth Concept is to preserve our access to nature and build better communities for the people who live here today and who will live here in the future. The Growth Concept applies the above policies with the technical analysis to guide growth for a period up to the next 50 years. The Growth Concept is an integrated set of objectives which guide all Regional Framework Plan policies.

The Growth Concept sets the direction for development of implementing policies in Metro’s existing functional plans and the Charter-required Regional Framework Plan. This direction will be refined, as well as implemented, in subsequent functional plan amendments and framework plan components. Additional planning will be done to test the Growth Concept and to determine implementation actions. Amendments to the Growth Concept and some Regional Framework Plan policies may be needed to reflect the results of additional planning to maintain the consistency of implementation actions with the stated policies.

Fundamental to the Growth Concept is a multi-modal transportation system that assures continued mobility of more people and goods throughout the region, consistent with transportation policies. By coordinating land uses and this transportation system, the region embraces its existing locational advantage as a relatively uncongested hub for trade.

The basic principles of the Growth Concept directly apply to the Regional Framework Plan policies. An urban to rural transition to reduce sprawl, keeping a clear distinction between urban and rural lands and balancing re-development, is needed. Separation of urbanizable land from rural land shall be accomplished by the UGB for the region's 20-year projected need for urban land. That boundary will be expanded into designated urban reserves areas when a need for additional urban land is demonstrated. About 18,600 acres of lands shown on the Growth Concept map have been designated by the Metro Council as urban reserves. The Growth Concept also assumes that cooperative agreements will be reached with neighboring cities to coordinate planning for the proportion of projected growth in the four county region expected to locate within their urban growth boundaries and urban reserve areas.

The Metro UGB would only expand into urban reserves when need for additional urban land is demonstrated. Rural reserves are intended to assure that Metro and neighboring cities remain separate. The result is intended to be a compact urban form for the region coordinated with nearby cities to retain the region's sense of place.

Mixed-use urban centers inside the UGB are one key to the Growth Concept. Creating higher density centers of employment and housing and transit service with compact development, retail, cultural and recreational activities in a walkable environment is intended to provide efficient access to goods and services, enhance multi-modal transportation and create vital, attractive neighborhoods and communities. The Growth Concept uses interrelated types of centers. The central city is the largest market area, the region's employment and cultural hub. Regional centers serve large market areas outside the central city, connected to it by high-capacity transit and highways. Connected to each regional center, by road and transit, are smaller town centers with local shopping and employment opportunities within a local market area. Planning for all of these centers will seek a balance between jobs, housing and unique blends of urban amenities so that more transportation trips are likely to remain local and become more multi-modal.

In keeping with the jobs-housing balance in centers, a jobs-housing balance by regional sub-areas can and should also be a goal. This would account for the housing and employment outside centers, and direct policy to adjust for better jobs-housing ratios around the region.

Recognition and protection of open spaces both inside the UGB and in rural reserves outside urban reserves are reflected in the Growth Concept. Open spaces, including important natural features and parks, are important to the capacity of the UGB and the ability of the region to accommodate housing and employment, while protecting and promoting livability. Green areas on the Growth Concept map may be designated as regional open space, removing these lands from the inventory of urban land available for development. Rural reserves, already designated for farms, forestry, natural areas or rural-residential use, would remain and be further protected from development pressures by the rural zoning of the counties.

The Concept map shows some transportation facilities to illustrate new concepts, such as “green corridors,” and how land-use areas, such as centers, may be served based on agreements with affected agencies and jurisdictions. Neither the current regional system nor final alignment choices for future facilities are intended to be represented on the Concept map.

The percentages and density targets in the Growth Concept are used to describe the relationship between centers and areas. They are estimates based on modeling analysis of one possible configuration of the Growth Concept. Implementation actions that vary from these estimates may indicate a need to balance other parts of the Growth Concept to retain the compact urban form contained in the Growth Concept. Each jurisdiction is encouraged to adopt a unique mix of characteristics to retain the sense of place of each locality consistent with the overall Growth Concept.

Neighbor Cities

The Growth Concept recognizes that neighboring cities outside Metro’s boundaries are likely to grow rapidly. There are several such cities proximate to the Metro region. Metro shall pursue discussion of cooperative efforts with neighboring cities. Neighbor city coordination could be achieved with the completion of intergovernmental agreements concerning key concepts. Communities such as Sandy, Canby and Newberg will be affected by Metro, city and county decisions about managing growth within Metro. A significant number of people may be accommodated in these neighboring cities, and cooperation between Metro and these communities is necessary to coordinate planning to address common transportation and land-use issues.

There are four key Metro policies for seeking cooperative agreements with neighbor cities:

1. There shall be a separation of rural land between each neighboring city and the metropolitan area. If the region grows together, the transportation system would suffer and the cities would lose their sense of community identity.
2. There should be a strong balance between jobs and housing in the Metro region and in the neighbor cities. The more a balance of jobs and households is retained, the more trips will remain local.
3. Each neighboring city should retain its own identity through its unique mix of commercial, retail, cultural and recreational opportunities which support the its balance of jobs and housing.
4. There should be consideration of a “green corridor,” transportation facility through a rural reserve that serves as a link between the metropolitan area and a neighbor city with limited access to the farms and forests of the rural reserve. Keeping accessibility high encourages employment growth but limits the adverse effect on the surrounding rural areas. Metro will seek limitations in access to these facilities and will seek intergovernmental agreements with ODOT, the appropriate counties and neighbor cities to establish mutually acceptable growth management strategies. Metro will link transportation improvements to neighbor cities to successful implementation of these intergovernmental agreements.

Cooperative planning between a city outside the region and Metro could also be initiated on a more limited basis. These cooperative efforts could be completed to minimize the impact of growth on surrounding agriculture and natural resource lands, maintain a separation between a city and the

Metro UGB, minimize the impact on state transportation facilities, match population growth to rural resource job and local urban job growth and coordinate land-use policies. Communities such as North Plains and other communities adjacent to the region such as Estacada and Scappoose may find this more limited approach suitable to their local situation.

Rural Reserves

Some rural lands adjacent to and nearby the regional UGB and not designated as urban reserves may be designated as rural reserves. This designation is intended as a policy statement by Metro to not extend its UGB into these areas and to support neighboring cities' efforts not to expand their urban growth boundaries into these areas. The objectives for rural land planning in the region will be to maintain the rural character of the landscape to support and maintain our agricultural economy, and to avoid or eliminate conflicts with farm and forest practices, help meet regional needs for open space and wildlife habitat, and help to clearly separate urban from rural land. The UGB will not be expanded into these areas. Supporting rural zoning designations will be encouraged. These rural reserves keep adjacent urban areas separate. These rural lands are not needed or planned for development but are more likely to experience development pressures than are areas farther away.

These lands will not be developed in urban uses in the foreseeable future, an idea that requires establishing and maintaining agreement among local, regional and state agencies. They are areas outside the present UGB and along highways that connect the region to neighboring cities.

New rural commercial or industrial development should be restricted. Some areas should receive priority status as potential areas for park and open space acquisition. Zoning should be for resource protection on farm and forestry land, and very low-density residential (no greater average density than one unit for five acres) for exception land.

These rural reserves would support and protect farm and forestry operations. The reserves also would include some purchase of natural areas adjacent to rivers, streams and lakes to ensure that water quality is protected and wildlife habitat enhanced. Large natural features, such as hills and buttes, also would be included as rural reserves because they buffer developed areas and are poor candidates for compact urban development.

Rural reserves are designated in areas that are most threatened by new development, that separate communities, or exist as special resource areas.

Rural reserves also would be retained to separate cities within the Metro boundary. Cornelius, Hillsboro, Tualatin, Sherwood and Wilsonville all have existing areas of rural land that provide a break in urban patterns. Urban reserve study areas that are indicated on the Concept Map are also separated by rural reserves, such as the Damascus-Pleasant Valley areas from Happy Valley.

The primary means of achieving rural reserves would be through the Regional Framework Plan for areas within the Metro boundary, and voluntary agreements among Metro, the counties, neighboring cities and the state for those areas outside the Metro boundary. Metro shall seek agreements which

would prohibit extending urban growth into the rural reserves and require that state agency actions be consistent with the rural reserve designation.

Open Spaces and Trail Corridors

The areas designated open space on the Concept map are parks, stream and trail corridors, wetlands and floodplains, largely undeveloped upland areas and areas of compatible very low-density residential development. Many of these natural features already have significant land set aside as open space. The Tualatin Mountains, for example, contain major parks such as Forest Park and Tryon Creek State Park and numerous smaller parks such as Gabriel Park in Portland and Wilderness Park in West Linn. Other areas are oriented toward wetlands and streams, with Fanno Creek in Washington County having one of the best systems of parks and open space in the region.

Local jurisdictions are encouraged to establish acres of open space per capita goals based on rates at least as great as current rates, in order to keep up with current conditions.

Designating these areas as open spaces has several effects. First, it removes these lands from the category of urban land that is available for development. The capacity of the UGB then has to be calculated without these areas, and plans to accommodate housing and employment have to be made without them. Second, these natural areas, along with key rural reserve areas, receive a high priority for purchase as parks and open space, through programs such as Metro's Open Spaces Acquisition program. Finally, regulations should be developed, to protect critical natural areas, that would not conflict with housing and economic goals. This will provide protection of critical creek areas, compatible low-density development of sensitive areas and transfer of development rights from protected natural areas to other lands better suited for development.

About 35,000 acres of land and water inside today's UGB are included as open spaces in the Growth Concept map. Preservation of these open spaces may be achieved by a combination of ways. Some areas could be purchased by public entities, such as Metro through its Open Spaces Acquisition program or local park departments. Others may be donated by private citizens or by developers of adjacent properties to reduce the impact of development. Some could be protected by environmental zoning that allows very low-density residential development through the clustering of housing on portions of the land while leaving important features as common open space.

Centers

Creating higher density centers of employment and housing provides many advantages to communities. These centers provide citizens with access to a variety of goods and services in a relatively small geographic area, creating an intense business climate. Having centers also makes sense from a transportation perspective, since most centers have an accessibility level that is conducive to transit, bicycling and walking. Centers also act as social gathering places and community centers, where people would find the cultural and recreational activities and "small-town atmosphere" they cherish.

The major benefits of centers in the marketplace are accessibility and the ability to concentrate goods and services in a relatively small area. The problem in developing centers, however, is that most of the existing centers are already developed and any increase in the density must be made through redeveloping existing land and buildings. Emphasizing redevelopment in centers over development of new areas of undeveloped land is a key strategy in the Growth Concept. Areas of high unemployment and low property values should be specially considered to encourage reinvestment and redevelopment. Incentives and tools to facilitate redevelopment in centers should be identified.

There are three types of centers, distinguished by size and accessibility. The central city is downtown Portland and is accessible to millions of people. Regional centers are accessible to hundreds of thousands of people and town centers are accessible to tens of thousands.

The Central City

Downtown Portland serves as our major regional center and functions quite well as an employment and cultural hub for the metropolitan area. It provides accessibility to the many businesses that require access to a large market area and also serves as the location for cultural and social functions that draw the region together. It is the center for local, regional, state and federal governments, financial institutions, commerce, the center for arts and culture, and for visitors to the region.

In addition, downtown Portland has a high percentage of travel other than by car – three times higher than the next most successful area. Jobs and housing are readily available there, without the need for a car. Maintaining and improving upon the strengths of our regional downtown shall remain a high priority.

Today, about 20 percent of all employment in the region is in downtown Portland. Under the Growth Concept, downtown Portland would grow at about the same rate as the rest of the region and would remain the location of about 20 percent of regional employment. To do this, downtown Portland's 1990 density of 150 people per acre would increase to about 250 people per acre. Improvements to the transit system network, development of a multi-modal street system and maintenance of regional through routes (the highway system) would provide additional mobility to and from the city center.

Regional Centers

There are nine regional centers, serving four market areas (outside of the central city market area). Hillsboro serves that western portion of the region and Gresham the eastern. The central city and Gateway serve most of the Portland area as a regional center. Downtown Beaverton and Washington Square serve the east Washington County area, and downtown Oregon City, Clackamas Town Center and Milwaukie together serve Clackamas County and portions of outer south east Portland.

These regional centers would become the focus of compact development, redevelopment and high-quality transit service, multi-modal street networks and act as major nodes along regional through

routes. The Growth Concept estimates that about 3 percent of new household growth and 11 percent of new employment growth would be accommodated in these regional centers. From the current 24 people per acre, the Growth Concept would allow for about 60 people per acre.

Transit improvements would include light-rail connecting all regional centers to the central city. A dense network of multi-modal arterial and collector streets would tie regional centers to surrounding neighborhoods and other centers. Regional through-routes would be designed to connect regional centers and ensure that these centers are attractive places to conduct business. The relatively small number of centers reflects not only the limited market for new development at this density but also the limited transportation funding for the high-quality transit and roadway improvements envisioned in these areas. As such, the nine regional centers should be considered candidates and ultimately the number should be reduced or policies established to phase in certain regional centers earlier than others.

Town Centers

Smaller than regional centers and serving populations of tens of thousands of people, town centers are the third type of center with compact development and transit service. Town centers would accommodate about 3 percent of new households and more than 7 percent of new employment. The 1990 density of an average of 23 people per acre would nearly double – to about 40 persons per acre, the current densities of development along Hawthorne Boulevard and in downtown Hillsboro.

Town centers would provide local shopping, employment and cultural and recreational opportunities within a local market area. They are designed to provide local retail and services, at a minimum. They also would vary greatly in character. Some would become traditional town centers, such as Lake Oswego, Oregon City and Forest Grove, while others would change from an auto-oriented development into a more complete community, such as Hillsdale. Many would also have regional specialties, such as office centers envisioned for the Cedar Mill town center. Several new town centers are designated, such as in Happy Valley and Damascus, to accommodate the retail and service needs of a growing population while reducing auto travel. Others would combine a town center within a regional center, offering the amenities and advantages of each type of center.

Corridors

Corridors are not as dense as centers, but also are located along good quality transit lines. They provide a place for densities that are somewhat higher than today and feature a high-quality pedestrian environment and convenient access to transit. Typical new developments would include rowhouses, duplexes and one- to three-story office and retail buildings, and average about 25 persons per acre. While some corridors may be continuous, narrow bands of higher intensity development along arterial roads, others may be more nodal, that is, a series of smaller centers at major intersections or other locations along the arterial that have high quality pedestrian environments, good connections to adjacent neighborhoods and good transit service. As long as the

average target densities and uses are allowed and encouraged along the corridor, many different development patterns -- nodal or linear -- may meet the corridor objective.

Station Communities

Station communities are nodes of development centered around a light-rail or high-capacity transit station that feature a high-quality pedestrian environment. They provide for the highest density outside centers. Station communities would encompass an area approximately one-half mile from a station stop. The densities of new development would average about 45 persons per acre. Zoning ordinances now set minimum densities for most Eastside and Westside MAX station communities. An extensive station community planning program is now under way for each of the Westside station communities; similar work is envisioned for the proposed South/North line. It is expected that the station community planning process will result in specific strategies and plan changes to implement the station communities concept.

Because the Growth Concept calls for many corridors and station communities throughout the region, together they are estimated to accommodate 27 percent of the new households of the region and nearly 15 percent of new employment.

Main Streets and Neighborhood Centers

During the early decades of this century, main streets served by transit and characterized by a strong business and civic community were a major land-use pattern throughout the region. Examples remain in Hillsboro, Milwaukie, Oregon City and Gresham as well as the Westmoreland neighborhood and Hawthorne Boulevard. Today, these areas are undergoing a revival and provide an efficient and effective land-use and transportation alternative. The Growth Concept calls for main streets to grow from 1990 levels of 36 people per acre to about 39 per acre. Main streets would accommodate nearly 2 percent of housing growth.

Main streets typically will serve neighborhoods and may develop a regional specialization -- such as antiques, fine dining, entertainment or specialty clothing -- that draws people from other parts of the region. Main streets form neighborhood centers as areas that provide the retail and service development at other intersections at the focus of neighborhood areas and around MAX light-rail stations. When several main streets occur within a few blocks of one another, they may also serve as a dispersed town center, such as the main street areas of Belmont, Hawthorne and Division that form a town center for inner Southeast Portland.

Neighborhoods

Residential neighborhoods would remain a key component of the Growth Concept and would fall into two basic categories. Inner neighborhoods include areas such as Portland, Beaverton, Milwaukie and Lake Oswego, and would include primarily residential areas that are accessible to employment. Lot sizes would be smaller to accommodate densities increasing from 1990 levels of

about 11 people per acre to about 14 per acre. Inner neighborhoods would trade smaller lot sizes for better access to jobs and shopping. They would accommodate about 28 percent of new households and 15 percent of new employment (some of the employment would be home occupations and the balance would be neighborhood-based employment such as schools, daycare and some neighborhood businesses).

Outer neighborhoods would be farther away from large employment centers and would have larger lot sizes and lower densities. Examples include cities such as Forest Grove, Sherwood and Oregon City, and any additions to the UGB. From 1990 levels of nearly 10 people per acre, outer neighborhoods would increase to about 13 per acre. These areas would accommodate about 28 percent of new households and 10 percent of new employment.

One of the most significant problems in some newer neighborhoods is the lack of street connections, a recent phenomenon that has occurred in the last 25 years. It is one of the primary causes of increased congestion in new communities. Traditional neighborhoods contained a grid pattern with up to 20 through streets per mile. But in new areas, one to two through streets per mile is the norm. Combined with large-scale single-use zoning and low densities, it is the major cause of increasing auto dependency in neighborhoods. To improve local connectivity throughout the region, all areas shall develop master street plans intended to improve access for all modes of travel. These plans shall include eight to 20 local street connections per mile, except in cases where fewer connections are necessitated by constraints such as natural or constructed features (for example streams, wetlands, steep slopes, freeways, airports, etc.)

Industrial Areas and Employment Areas

The Portland metropolitan area economy is heavily dependent upon wholesale trade and the flow of commodities to national and international markets. The high quality of our freight transportation system and, in particular, our intermodal freight facilities are essential to continued growth in trade. The intermodal facilities (air and marine terminals, freight rail yards and common carrier truck terminals) are an area of regional concern, and the Regional Framework Plan will identify and protect lands needed to meet their current and projected space requirements.

Industrial areas would be set aside primarily for industrial activities. Other supporting uses, including some retail uses, may be allowed if limited to sizes and locations intended to serve the primary industrial uses. They include land-intensive employers, such as those around the Portland International Airport, the Hillsboro Airport and some areas along Highway 212/224. Areas of high agglomerative economic potential, such as the Sunset Corridor for electronics products and the Northwest industrial sanctuary for metal products, shall be supported with transportation planning and infrastructure development designed to meet their needs. Industrial areas are expected to accommodate 10 percent of regional employment and no households. Retail uses whose market area is substantially larger than the employment area shall not be considered supporting uses.

Other employment centers would be designated as employment areas, mixing various types of employment and including some residential development as well. These employment areas would provide for about 5 percent of new households and 14 percent of new employment within the region. Densities would rise substantially from 1990 levels of about 11 people per acre to about 20 people per acre. Employment areas would be expected to include some limited retail commercial uses primarily to serve the needs of people working or living in the immediate employment areas, not larger market areas outside the employment area. Exceptions to this general policy can be made only for certain areas, indicated in a functional plan.

The siting and development of new industrial areas would consider the proximity of housing for all income ranges provided by employment in the projected industrial center, as well as accessibility to convenient and inexpensive non-auto transportation. The continued development of existing industrial areas would include attention to these two issues as well.

Urban Reserves

One important feature of the Growth Concept is that it would accommodate all 50 years of forecasted growth through a relatively small amount of urban reserves. Urban reserves consist of land set aside outside the present UGB for future growth. The Growth Concept contained approximately 22,000 acres of urban reserve study areas. Less than the full study area, about 18,600 acres was designated as urban reserve areas in March, 1997. More than 75 percent of these lands are currently zoned for rural housing and the remainder are zoned for farm or forestry uses.

Transportation Facilities

Adoption of the 2040 Growth Concept established a new direction for planning in the region by linking urban form to transportation. This new direction reflects a commitment to develop a regional plan that is based on efficient use of land and a safe, efficient and cost-effective transportation system that supports the land uses in the 2040 Growth Concept and accommodates all forms of travel.

In this new relationship, the 2040 Growth Concept provides the desired urban form for the Regional Transportation Plan to support. The 2040 Growth Concept Map identifies one possible regional transportation system. Therefore, the 2040 Growth Concept Map does not prescribe or limit what the adopted regional transportation system will include.

The transportation elements needed to create a successful growth management policy are those that support the 2040 Growth Concept. Traditionally, streets have been defined by their traffic-carrying potential, and transit service according to its ability to draw commuters. Other travel modes have not been viewed as important elements of the transportation system. The Growth Concept establishes a new framework for planning in the region by linking urban form to transportation. In

this new relationship, transportation is viewed as a range of travel modes and options that reinforce the region's growth management goals.

In the 2040 Growth Concept, transportation is viewed as a range of travel modes and options that reinforce the region's growth management goals. To implement this vision, the Regional Transportation Plan will define the regional transportation system and prioritize planned transportation improvements to support the 2040 Growth Concept design types and to serve the region's current and future travel needs.

Consistent with the 2040 Growth Concept, the Regional Transportation Plan shall define a regional transportation system integrating intermodal facilities, truck routes, regional through-routes, multi-modal arterials, collectors and local streets, light rail, bus networks and other public transportation, bicycle and pedestrian networks and transportation demand management.

For example, the Regional Transportation Plan will target areas of concentrated development, such as the central city and regional centers such as Gresham and Beaverton, to provide a balance of high quality transit, pedestrian and bicycle projects that complement needed auto and freight improvements. In station communities, town centers, main streets and along mixed-use corridors, the Regional Transportation Plan will emphasize a high quality bicycle and pedestrian environment and improved access to transit, but will also allow for auto access. Industrial areas need good auto, truck and rail access for freight movement, while allowing employees and customers to commute by auto, transit and, in some instances, bicycles. Improvements within these areas will be largely oriented toward accommodating these needs and improved access to intermodal facilities.

Chapter 2 of this Regional Framework Plan describes the different 2040 Growth Concept land use components and associated transportation policies as defined during the Region 2040 process. Implementation of these transportation policies will occur through the Regional Transportation Plan and the Metro Transportation Improvement Program (MTIP).

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Land Use

Chapter 1 Land Use

Overview

This chapter of the Framework Plan addresses regional land use policies, including those relating to the following Charter-mandated Regional Framework Plan components:

- management and amendment of the Urban Growth Boundary
- protection of lands outside the Urban Growth Boundary for natural resources, future urban or other uses
- housing densities
- urban design and settlement patterns

This chapter contains specific goals and objectives adopted to guide Metro in future growth management land use planning. Following the goals and objectives, this chapter refers to specific legal requirements for cities and counties as well as for Metro that are adopted in Chapter 8. These provisions are implemented in the acknowledged Metro Code section governing Urban Growth Boundary Amendments and in the adopted Urban Growth Management Functional Plan.

The Metro Code provisions, Urban Growth Management Functional Plan, and a background discussion and policy analysis for this chapter are all included in the Appendices of this Plan.

Policies (Goals and Objectives)

Following are Regional Framework Plan policies for land use:

1.1 Urban Form

The quality of life and the urban form of our region are closely linked. The Growth Concept is based on the belief that we can continue to grow and enhance livability by making the right choices for how we grow. The region's growth will be balanced by:

- maintaining a compact urban form, with easy access to nature
- preserving existing stable and distinct neighborhoods by focusing commercial and residential growth in mixed-use centers and corridors at a pedestrian scale
- assuring affordability and maintaining a variety of housing choices with good access to jobs and assuring that market-based preferences are not eliminated by regulation

- targeting public investments to reinforce a compact urban form.

1.2 Built Environment

Development in the region should occur in a coordinated and balanced fashion as evidenced by:

- a regional “fair-share” approach to meeting the housing needs of the urban population
- the provision of infrastructure and critical public services concurrent with the pace of urban growth and that supports the 2040 Growth Concept
- the continued growth of regional economic opportunity, balanced so as to provide an equitable distribution of jobs, income, investment and tax capacity throughout the region and to support other regional goals and objectives
- the coordination of public investment with local comprehensive and regional functional plans
- the creation of a balanced transportation system, less dependent on the private automobile, supported by both the use of emerging technology and the location of jobs, housing, commercial activity, parks and open space.

1.3 Housing and Affordable Housing

The Metro Council shall adopt a “fair share” strategy for meeting the housing needs of the urban population in cities and counties based on a subregional analysis that provides for:

- a diverse range of housing types available within cities and counties inside the UGB;
- specific goals for low- and moderate-income and market rate housing to ensure that sufficient and affordable housing is available to households of all income levels that live or have a member working in each jurisdiction;
- housing densities and costs supportive of adopted public policy for the development of the regional transportation system and designated centers and corridors;
- a balance of jobs and housing within the region and subregions.

Metro shall, through the adoption of a functional plan, require that

- before a Goal 10 exception or an exception to a functional plan requirement affecting housing is pursued by a city or county, the effect of the grant of the exception on the need for expansion of the Urban Growth Boundary shall be considered.

The regional “fair share” strategy shall be subject to all of the following policies:

- 1.3.1 Metro shall link regional transportation funding to affordable housing policy and achievement of affordable housing targets to the extent allowed by law.
- 1.3.2 Metro shall provide the forum of an Affordable Housing Technical Advisory Committee with representatives of homebuilders, affordable housing advocate groups, major employers, financial institutions, local governments and citizens to identify cooperative approaches, regulatory reforms and incentives to be considered for inclusion in a functional plan to ensure that needed affordable housing gets built.

- 1.3.3 Numerical “fair share” affordable housing targets for each jurisdiction shall be included in a functional plan performance standard. With assistance from the Affordable Housing Technical Advisory Committee, the “fair share” targets will reflect the current and future affordable housing needs of the region, and are consistent with the affordable housing and jobs-housing balance policies established in this Plan.. The housing needs and the numerical targets will include consideration of existing jurisdictional proportions of affordable and non-affordable housing supply. Metro shall monitor the existing and new supply and delivery of affordable housing in the region as part of the “fair share” performance standard.
- 1.3.4 The 1996 Urban Growth Management Functional Plan shall be amended, if necessary, to include performance standards and other requirements for the following regionwide affordable housing policies:
- 1.3.4.1 A minimum density shall be established in all zones allowing residential uses.
- 1.3.4.2 At least one accessory unit shall be allowed within any detached single family dwelling.
- 1.3.4.3 Housing densities shall be increased in light rail station communities, centers and corridors, if necessary, to implement the 2040 Growth Concept.
- 1.3.4.4 A performance standard requiring a density bonus incentive shall be adopted. This incentive shall allow an increase of at least 25% density over the maximum allowable density in mixed use areas as incentive for a percentage of units to be developed as affordable units. The units qualifying for the incentive shall remain affordable for at least 60 years or be subject to a shared equity mortgage program. An exemption process shall be adopted with this performance standard to allow cities and counties an exemption from this requirement if a demonstrated lack of public facilities prevents implementation of this requirement.
- 1.3.5 An Affordable Housing Functional Plan shall be developed to include requirements for cities and counties to adopt numerical “fair share” targets and any unadopted affordable housing policies required by the Plan.
- 1.3.5.1 A performance standard requiring replacement ordinances shall be adopted. These ordinances shall ensure that existing affordable housing units which are lost to demolition or non-residential development are replaced with an equal number of new affordable housing units. Metro shall develop a model ordinance for cities and counties which complies with this performance standard.
- 1.3.5.2 The Functional Plan shall consider the following:
- additional measures to encourage and give incentives to develop affordable housing;

- types and amounts of affordable housing to be accommodated by the jurisdiction consistent with the functional plan targets;
- provisions to remove procedural barriers to current production of affordable housing;
- a variety of tools to ensure that the affordable housing to be accommodated is actually built, such as additional inclusionary zoning incentives, donation of tax foreclosed properties for nonprofit or government development as mixed market affordable housing, transfer of development rights, permit process incentives, fee waivers, property tax exemptions, land banking, linkage programs, expedited review processes, and affordable housing funding programs.
- requirements for maintaining architectural consistency of affordable units;
- long term or permanent affordability requirements;
- provision for affordable housing for seniors and the disabled;
- provision for preferential processing of UGB amendments in First Tier urban reserves when a minimum percentage of affordable units are included.
- support for a real estate transfer tax as a funding source for an affordable housing fund at the state, regional or local level when that option becomes available under state law.

1.3.6 Regionwide mandatory inclusionary zoning, which requires a minimum percentage of moderately-priced dwelling units for all developments over a minimum size, is an important tool of regional affordable housing policy to be used with density bonuses and other incentives.

Metro shall seek immediate increases in production of affordable housing by implementing all of its regional affordable housing policies in this section. Efforts to immediately increase production of affordable housing shall include the following inclusionary housing policy:

- 1.3.6.1 The goals of this inclusionary housing policy are that at least 20% of new units in regionwide opportunity areas inside the UGB and in first tier urban reserves are built to be affordable to households at and below the median income without public subsidy and that accessory dwelling units begin to be a significant part of new development in 1998.
- 1.3.6.2 The urban reserve planning requirement for affordable housing shall include the establishment of requirements for a minimum percentage of affordable units and accessory dwellings. These requirements shall be developed with assistance from the Affordable Housing Technical Advisory Committee.
- 1.3.6.3 Metro shall develop performance standards and a model ordinance for a density bonus incentive consistent with Policy 1.3.4.5, above.

- 1.3.6.4 In 1998, Metro will develop a voluntary inclusionary zoning approach consistent with Oregon land use laws and 2040 Growth Concept design types that includes neighborhood architectural consistency.
- 1.3.6.5 During development of its voluntary inclusionary zoning approach, Metro will use inclusionary housing goals and principles as the basis of a voluntary program for increased production of affordable housing units without regulation.
- 1.3.6.6 Metro will develop a public-private program as soon as possible to reduce costs of production of new affordable housing and increase the supply of units to non-profit providers for possible subsidy. One part of such a program may be coordination between for profit builders and non profit affordable housing providers to facilitate sales of affordable for profit units to non profit affordable housing providers during the development of these units.
- 1.3.6.7 Regionwide mandatory inclusionary zoning and other functional plan requirements based on the zoning approach developed by Metro shall be considered for functional plan implementation at the end of 1998, if cooperative programs have not significantly moved the region toward the goals of this policy.
- 1.3.7 Metro shall inventory publicly owned lands, including the "air rights" above public lands, to identify underutilized public lands, excluding parks and open space, for possible development of affordable housing.
- 1.3.8 Metro shall be a resource to assist developers of affordable housing and nonprofit charitable organizations to identify underutilized lands owned by nonprofit organizations, including the "air rights" above those lands, for possible development of affordable housing.
- 1.3.9 Metro shall review all lands designated for residential use inside the UGB in implementation of Urban Growth Management Functional Plan to determine whether additional measures are needed to insure that an adequate supply of land, including opportunities for redevelopment, are zoned appropriately and available for affordable housing.

1.4 Economic Opportunity

Metro should support public policy that maintains a strong economic climate through encouraging the development of a diverse and sufficient supply of jobs, especially family wage jobs, in appropriate locations throughout the region.

In weighing and balancing various values, goals and objectives, the values, needs, choices and desires of consumers should also be taken into account. The values, needs and desires of consumers include:

- low costs for goods and services
- convenience, including nearby and easily accessible stores; quick, safe, and readily available transportation to all modes
- a wide and deep selection of goods and services
- quality service
- safety and security
- comfort, enjoyment and entertainment.

Expansions of the UGB for industrial or commercial purposes shall occur in locations consistent with this plan and where an assessment of the type, mix and wages of existing and anticipated jobs within subregions justifies such expansion. The number and wage level of jobs within each subregion should be balanced with housing cost and availability within that subregion. Strategies should be developed to coordinate the planning and implementation activities of this element with Policy 1.3, Housing and Affordable Housing, and Policy 1.8, Developed Urban Land.

1.5 Economic Vitality

The region's economy is a single dynamic system including the urbanized part of the Portland area and lands beyond the Urban Growth Boundary. The economic welfare of residents throughout the region directly impacts the ability of all citizens in the region to create economic vitality for themselves and their communities.

The region's economic development must include all parts of the region, including areas and neighborhoods which have been experiencing increasing poverty and social needs, even during periods of a booming regional economy. To allow the kinds of social and economic decay in older suburbs and the central city that has occurred in other larger and older metro regions is a threat to our quality of life and the health of the regional economy. All neighborhoods and all people should have access to opportunity and share the benefits, as well as the burdens, of economic and population growth in the region.

To support economic vitality throughout the entire region, Metro shall undertake the following steps, beginning in 1998:

- Monitor regional and subregional indicators of economic vitality, such as the balance of jobs, job compensation and housing availability.
- If Metro's monitoring finds that existing efforts to promote and support economic vitality in all parts of the region are inadequate, Metro shall facilitate collaborative regional approaches which better support economic vitality for all parts of the region.

In cooperation with local governments and community residents, Metro shall promote revitalization of existing city and neighborhood centers that have experienced disinvestment and/or are currently underutilized and/or populated by a disproportionately high percentage of people living at or below 80% of the region's median income.

1.6 Growth Management

The management of the urban land supply shall occur in a manner that:

- encourages the evolution of an efficient urban growth form
- provides a clear distinction between urban and rural lands
- supports interconnected but distinct communities in the urban region
- recognizes the inter-relationship between development of vacant land and redevelopment objectives in all parts of the urban region
- is consistent with the 2040 Growth Concept and helps attain the region's objectives.

1.7 Urban/Rural Transition

There should be a clear transition between urban and rural land that makes best use of natural and built landscape features and that recognizes the likely long-term prospects for regional urban growth.

- **Boundary Features** – The Metro UGB should be located using natural and built features, including roads, rivers, creeks, streams, drainage basin boundaries, floodplains, power lines, major topographic features and historic patterns of land use or settlement.
- **Sense of Place** – Historic, cultural, topographic and biological features of the regional landscape that contribute significantly to this region's identity and "sense of place" shall be identified. Management of the total urban land supply should occur in a manner that supports the preservation of those features, when designated, as growth occurs.
- **Urban Reserves** – "Urban reserve areas," shall be designated by Metro consistent with state law. Urban reserve designations shall be consistent with the Regional Framework Plan policies and shall be reviewed by Metro at least every 15 years.
 - The priority for inclusion of land within an urban reserve area shall generally be based upon the locational factors of Goal 14. Lands adjacent to the UGB shall be studied for suitability for inclusion within urban reserves as measured by factors 3 through 7 of Goal 14 and by the requirements of OAR 660-04-010. (Copies of Goal 14 and OAR 660-04010 are included in the Appendices for informational purposes.)
 - Lands of lower priority in the LCDC rule priorities may be included in urban reserves if specific types of land needs cannot be reasonably accommodated on higher priority lands, after options inside the UGB have been considered, such as land needed to bring jobs and housing into close proximity to each other.
 - Lands of lower priority in the LCDC rule priorities may be included in urban reserves if higher priority land is needed for physical separation of communities inside or outside the UGB to preserve separate community identities.
 - Expansion of the UGB shall occur consistent with the urban/rural transition, developed urban land, UGB and neighbor city objectives. Where urban land is adjacent to rural lands outside of an urban reserve, Metro will work with affected cities and counties to ensure that urban uses do not significantly affect the use or condition of the rural land. Where urban land is adjacent to lands within an urban reserve that may someday be included within the UGB, Metro will work with affected cities and counties to ensure that rural development does not create obstacles to efficient urbanization in the future.

1.8 Developed Urban Land

Opportunities for and obstacles to the continued development and redevelopment of existing urban land shall be identified and actively addressed. A combination of regulations and incentives shall be employed to ensure that the prospect of living, working and doing business in those locations remains attractive to a wide range of households and employers. In coordination with affected agencies, Metro should encourage the redevelopment and reuse of lands used in the past or already used for commercial or industrial purposes wherever economically viable and environmentally sound.

Redevelopment and Infill – When Metro examines whether additional urban land is needed within the UGB, it shall assess redevelopment and infill potential in the region. The potential for redevelopment and infill on existing urban land will be included as an element when calculating the buildable land supply in the region, where it can be demonstrated that the infill and redevelopment can be reasonably expected to occur during the next 20 years.

Metro will work with jurisdictions in the region to determine the extent to which redevelopment and infill can be relied on to meet the identified need for additional urban land. After this analysis and review, Metro will initiate an amendment of the UGB to meet that portion of the identified need for land not met through commitments for redevelopment and infill.

1.9 Urban Growth Boundary

The regional UGB, a long-term planning tool, shall separate urbanizable from rural land and be based in aggregate on the region's 20-year projected need for urban land. The UGB shall be located consistent with statewide planning goals and these RUGGOs and adopted Metro Council procedures for UGB amendment. In the location, amendment and management of the regional UGB, Metro shall seek to improve the functional value of the boundary.

1.9.1 Expansion into Urban Reserves – Upon demonstrating a need for additional urban land, major and legislative UGB amendments shall only occur within adopted urban reserves, unless urban reserves are found to be inadequate to accommodate the amount of land needed for one or more of the following reasons:

- Specific types of identified land needs cannot be reasonably accommodated on urban reserve lands
- Future urban services could not reasonably be provided to urban reserves due to topographical or other physical constraints
- Maximum efficiency of land uses within a proposed UGB requires inclusion of lower priority lands other than urban reserves in order to include or provide services to urban reserves.

1.9.2 First Tier Urban Reserves – Some urban reserves adjacent to the UGB shall be designated as first tier urban reserves. First tier urban reserves shall be included in the Metro Urban

Growth Boundary prior to other urban reserves unless a special land need is identified which cannot be reasonably accommodated on first tier urban reserves.

- 1.9.3 Urban Growth Boundary Amendment Process – Criteria for amending the UGB shall be adopted based on statewide planning goals 2 and 14, other applicable state planning goals and relevant portions of the RUGGOs and this Plan:
- Major Amendments. Proposals for major amendment of the UGB may be made through a quasi-judicial or a legislative process using Metro’s regional forecasts for population and employment growth. The legislative amendment process will be initiated by a Metro finding of need, and involve local governments, special districts, citizens and other interests.
 - Locational Adjustments. Locational adjustments of the UGB shall be brought to Metro by cities, counties and/or property owners based on public facility plans in adopted and acknowledged comprehensive plans.
- 1.9.4 Urban Reserve Plans – A conceptual land use plan and concept map coordinated among affected jurisdictions shall be required for all quasi-judicial and legislative amendments of the Urban Growth Boundary which add more than twenty net acres to the UGB. The Metro Council shall establish criteria for urban reserve plans coordinated among affected local governments and districts which shall address the following issues:
- Annexation to a city prior to development whenever feasible.
 - Establishment of a minimum average residential density to ensure efficient use of land.
 - Requirements to ensure a diversity of housing stock and meet needs for affordable housing.
 - Ensure sufficient commercial and industrial land to meet the needs of the area to be developed and the needs of adjacent land inside the Urban Growth Boundary consistent with 2040 Growth Concept design types.
 - A conceptual transportation plan to identify large scale problems and establish performance standards for city and county comprehensive plans.
 - Identification of natural resource areas for protection from development.
 - A conceptual public facilities and services plan including rough cost estimates and a financing strategy for the provision of sewer, water, storm drainage, parks, transportation, fire and police protection.
 - A conceptual plan estimating the amount of land and improvements needed for school facilities.
 - A concept map showing the general locations of major roadways, unbuildable lands, commercial and industrial lands, single and multi-family housing, open space and established or alternative locations for any needed school, park and fire hall sites.

The actual specific criteria will be adopted as part of the Metro Code.

1.10 Urban Design

The identity and functioning of communities in the region shall be supported through:

- the recognition and protection of critical open space features in the region
- public policies that encourage diversity and excellence in the design and development of settlement patterns, landscapes and structures
- ensuring that incentives and regulations guiding the development and redevelopment of the urban area promote a settlement pattern that:
 - link any public incentives to a commensurate public benefit received or expected and evidence of private needs
 - is pedestrian “friendly,” encourages transit use and reduces auto dependence
 - provides access to neighborhood and community parks, trails and walkways, and other recreation and cultural areas and public facilities
 - reinforces nodal, mixed-use, neighborhood-oriented design
 - includes concentrated, high-density, mixed-use urban centers developed in relation to the region’s transit system
 - is responsive to needs for privacy, community, sense of place and personal safety in an urban setting
 - facilitates the development and preservation of affordable mixed-income neighborhoods.

Pedestrian- and transit-supportive building patterns will be encouraged in order to minimize the need for auto trips and to create a development pattern conducive to face-to-face community interaction.

1.11 Neighbor Cities

Growth in cities outside the Metro UGB, occurring in conjunction with the overall population and employment growth in the region, should be coordinated with Metro’s growth management activities through cooperative agreements which provide for:

Separation – The communities within the Metro UGB, in neighbor cities and in the rural areas in between will all benefit from maintaining the separation between these places as growth occurs. Coordination between neighboring cities, counties and Metro about the location of rural reserves and policies to maintain separation should be pursued.

Jobs Housing Balance – To minimize the generation of new automobile trips, a balance of sufficient number of jobs at wages consistent with housing prices in communities both within the Metro UGB and in neighboring cities should be pursued.

Green Corridors – The “green corridor” is a transportation facility through a rural reserve that serves as a link between the metropolitan area and a neighbor city which also limits access to the farms and forests of the rural reserve. The intent is to keep urban to urban accessibility high to encourage a balance of jobs and housing, but limit any adverse effect on the surrounding rural areas.

1.12 Protection of Agriculture and Forest Resource Lands

Agricultural and forest resource land outside the UGB shall be protected from urbanization, and accounted for in regional economic and development plans, consistent with this Plan. However, Metro recognizes that all the statewide goals, including Statewide Goal 10, Housing and Goal 14, Urbanization, are of equal importance to Goals 3 and 4 which protect agriculture and forest resource lands. These goals represent competing and, some times, conflicting policy interests which need to be balanced.

Rural Resource Lands – Rural resource lands outside the UGB that have significant resource value should actively be protected from urbanization. However, not all land zoned for exclusive farm use is of equal agricultural value.

Urban Expansion – Expansion of the UGB shall occur in urban reserves, established consistent with the urban rural transition objective. All urban reserves should be planned for future urbanization even if they contain resource lands.

Farm and Forest Practices – Protect and support the ability for farm and forest practices to continue. The designation and management of rural reserves by the Metro Council may help establish this support, consistent with the Growth Concept. Agriculture and forestry require long term certainty of protection from adverse impacts of urbanization in order to promote needed investments.

1.13 Participation of Citizens

The following policies relate to participation of Citizens:

1.13.1 Metro will encourage public participation in Metro land use planning.

1.13.2 Metro will follow and promote the citizen participation values inherent in RUGGO Goal 1, Objective 1 and the Metro Citizen Involvement Principles.

1.13.3 Local governments are encouraged to provide opportunities for public involvement in land use planning and delivery of recreational facilities and services.

1.14 School Siting

1.14.1 School and Local Government Plan and Policy Coordination – Metro shall coordinate plans among local governments, including cities, counties, special districts and school districts for adequate school facilities for already developed and urbanizing areas.

1.14.2 Metro Review of Public Facility Plans to Include Schools – Metro, in its review of city and county comprehensive plans for compliance with the Regional Framework Plan, shall consider school facilities to be “public facilities.” School facility plans are required to be developed through the Urban Reserve Plans as specified by Metro Code 3.01.012(e)(11). Additions to the Urban Growth Boundary may only be approved by Metro following

completion of conceptual school plans which provide for adequate land for school facilities in addition to other requirements.

- 1.14.3 Resolution of School Facility Funding in the Region – Metro will use the appropriate means, including, but not limited to, public forums, open houses, symposiums, dialogues with state and local government officials, school district representatives, and the general public in order to identify funding sources necessary to acquire future school sites and commensurate capital construction to accommodate anticipated growth in school populations.
- 1.14.4 Functional Plan –A school siting and facilities functional plan shall be prepared with the advice of MPAC to implement the policies of this Plan. Chapter 8, Implementation, lists the issues to be considered in the development of the functional plan.

Requirements

In order to immediately implement the land use portion of the Regional Framework Plan, Metro has adopted Metro Code Chapter 3.01, Urban Growth Boundary Amendments, and Urban Growth Management Functional Plan. These documents are incorporated as components of the Regional Framework Plan in Chapter 8 and are included in the Appendices. The Urban Growth Management Functional Plan contains requirements for cities and counties. Any additional land use planning requirements for cities and counties adopted by Metro should be incorporated into the Urban Growth Management Functional Plan structure.

Background

Future Vision

As noted above, the Future Vision statement is the broadest set of declarations about our region. The Regional Framework Plan is required to describe its relationship to the Future Vision. With regard to land-use, the Future Vision notes many values including the following:

“We value natural systems for their intrinsic value, and recognize our responsibility to be stewards of the region’s natural resources.”

“Widespread land restoration and redevelopment must precede any conversion of land to urban uses to meet our present and future needs.”

“We value economic development because of the opportunities it affords us all, but recognize that there can be true economic development only with unimpaired and sustainable natural ecosystems, and suitable social mechanisms to ensure dignity and equity for all and compassion for those in need.”

“We value our regional identity, sense of place and unique reputation among metropolitan areas, and celebrate the identity and accomplishments of our urban neighborhoods and suburban and rural communities.”

“We value a life close to the beauty and inspiration of nature, incorporated into urban development in a manner that remains a model for metropolitan areas into the next century.”

“We value vibrant cities that are both an inspiration and a crucial resource for commerce, cultural activities, politics and community building.”

“Direct all regional planning efforts to include equitable economic progress for communities throughout the region as a critical component for modeling and evaluation.”

“Address the further diversification of our economy, the creation of family-wage jobs and the development of accessible employment centers throughout...the region in the Regional Framework Plan elements for transportation, rural lands, urban design, housing and water resources.”

“Focus public policy and investment on the creation of mixed-use communities that include dedicated public space and a broad-range of housing types affordable to all.”

“Incorporate specific expectations for a basic standard of living for all citizens in Regional Framework Plan elements concerned with urban design, housing, transportation, and parks and open space.”

“Specifically incorporate historic preservation and landscape ecology in Regional Framework Plan elements concerned with transportation, housing, urban design, rural lands and the UGB, parks and open space, and bi-state governance.”

Regional Framework Plan relationships to these statements will be described in the discussion following.

Urban Growth Boundary

State law assigns Metro responsibility for managing the region’s Urban Growth Boundary, one tool for managing growth, which separates urbanizable land from rural land. The boundary was established in 1979 and included 24 cities (Beaverton, Cornelius, Durham, Fairview, Forest Grove, Gladstone, Gresham, Happy Valley, Hillsboro, Johnson City, King City, Lake Oswego, Maywood Park, Milwaukie, Oregon City, Portland, Rivergrove, Sherwood, Tigard, Troutdale, Tualatin, West Linn, Wilsonville and Wood Village) and the urban metropolitan portions of Clackamas, Multnomah and Washington counties. The UGB has been reevaluated about every five to seven years to assess whether capacity for the next 20 years is available. Since the UGB’s inception, fewer than 3,000 acres of land have been added. As of the first quarter of 1997, the UGB contained 232,667 acres. Expansion of the UGB from 1978-1997 was only a little more than 1.2 percent increase. In 1997, the Metro Council concluded that there was not a 20 year land supply and that additional lands would need to be added to the Metro Urban Growth Boundary.

Approximately every five years, Metro revisits the region’s urban land needs for the next 20 years and estimates the growth capacity within the UGB. A state law now requires Metro to demonstrate that there is a sufficient 20-year future capacity, which, if previous forecasts were not higher than actual growth, must be remedied by more efficiently using the land within the current UGB or by expanding it.

Urban Reserves

The Oregon Land Conservation and Development Commission (LCDC) mandated that Metro designate urban reserves adjacent to the Urban Growth Boundary as a means of managing long-term regional growth. Designating urban reserves allows communities and the region to more cost-effectively plan and phase in public infrastructure (sewer, water, streets, schools, etc.) and enables private interests to plan development with more certainty. Careful development of urban reserves also may allow communities to plan more livable communities and conserve natural resources.

LCDC’s Urban Reserve Area Rule (especially Goal 14, Factors 3 – 7) and the requirements of OAR 660-04-010 are the basis for considering urban reserves.

Compiling the state criteria and using data available or created to address state criteria, the region’s selection criteria for urban reserves include:

- Factor 3: utility feasibility, road network, traffic congestion and schools
- Factor 4: efficiency of land and buildable land
- Factor 5: environmental constraints, access to centers, jobs/housing balance
- Factor 6: agricultural retention
- Factor 7: agricultural compatibility

Metro designated urban reserve areas in March, 1997, to meet projected urban land needs to the year 2040. Counties are required by the Urban Reserve Area Rule to adopt rural zoning to preserve designated urban reserves for future urban use.

As the Metro Council considered possible urban reserve areas, they concluded that establishing priorities for bringing in urban reserve lands would be helpful to property owners, service providers and citizens. Accordingly, the Metro Council, with the advice of local jurisdictions, established “First Tier” lands within the urban reserves. These First Tier lands are those thought to be most easily served with urban services and for which adjacent cities or the county have indicated capacity to serve. About 4,100 acres of land are designated as First Tier of the 18,579 total acres designated as Urban Reserves. The designation establishes, as a formal Metro policy, which lands would be brought in first. The Metro Council is expected to move the Urban Growth Boundary into the Tier 1 lands consistent with its decision in 1997 that there was not a 20 year land supply.

Housing

The state’s Metropolitan Housing Rule (OAR 660, Division 7) requires local jurisdictions to “plan for local residential housing densities that support net residential housing density assumptions underlying the Urban Growth Boundary.”

In addition, ORS 197.303 states that cities' and counties' needed housing means "...housing types determined to meet the need shown for housing within an Urban Growth Boundary at particular price ranges and rent levels. "It also "...includes, but is not limited to attached and detached single-family housing and multiple family housing for both owner and renter occupancy; (b) government assisted housing; (c) mobile home or manufactured dwelling parks... (d) manufactured homes on individual lots planned and zoned for single-family residential use that are in addition to lots within designated manufactured dwelling subdivisions."

In addition to these requirements, the state requires that cities and the urban portions of counties in the region must "...provide the opportunity for at least 50 percent of new residential units to be attached single family or multiple family housing..." and provide an "...overall density of six, ...eight...or ten or more dwelling units per net buildable acre..." Relatively small cities with some growth potential of less than 8,000 persons for the active planning area were required to provide zoning for at least six dwelling units. This applied to the cities of Cornelius, Durham, Fairview, Happy Valley and Sherwood. The urban portions of Clackamas and Washington counties and the cities of Forest Grove, Gladstone, Milwaukie, Oregon City, Troutdale, Tualatin, West Linn and Wilsonville were to provide at least eight dwelling units per acre. The urban portion of Multnomah county and the cities of Portland, Gresham, Beaverton, Hillsboro, Lake Oswego and Tigard were to provide 10 dwelling units per acre.

Analysis

The Urban Growth Boundary is one of the primary tools available to the region for managing urban form. In turn, the capacity of the boundary to accommodate growth is of critical importance to managing the UGB. Assessment of the current UGB capacity includes analysis of nine variables. These are:

- a forecast of population and jobs for the next 20 year period
- an estimate of the amount of unbuildable land (land over 25 percent slope, etc.);
- reductions to remaining buildable land for streets, parks, etc.
- reductions for the probable difference between zoning maximum densities and actual built densities
- consideration of time to allow local jurisdictions to make zoning changes if higher densities are to be allowed and required
- reductions for buildable parcels with full buildout obstacles (e.g., land with 8-24 percent slopes, etc)
- an estimate of the probable amount of additional redevelopment
- projections of probable infill on built land
- evaluation of the amount of farm tax assessment lands within the current UGB that are likely to be urbanized.

The Metro Council has concluded that capacity for the additional dwelling units needed to accommodate the year 2017 forecasted need is not totally available within the current Urban Growth Boundary. The following table provides a step-by-step description of the process, assumption and initial conclusions about the current capacity of the region's Urban Growth Boundary.

It is important to note that the variables include several new factors never before measured or considered when the capacity of the UGB was calculated. These include assessing the amount of infill and redevelopment capacity within the current UGB and assuming implementation of the 2040 Growth Concept. Estimating infill and redevelopment potential increased the total estimated potential capacity of the UGB significantly. About 40 percent of the jobs and almost 30 percent of the demand for housing is estimated to be accommodated through infill and redevelopment. These forecasts are based on actual rates occurring now in the region. This responds to statements in the Future Vision about land restoration and redevelopment as well as recognizing what is actually happening in the market.

Assuming that the Growth Concept will be implemented in UGB capacity calculations also responds to issues raised in the Future Vision. The Growth Concept includes "mixed-use communities" and a "broad range of housing types" by including regional centers, town centers, main streets, station communities and employment areas. These are all design types which encourage mixed-use development. The Growth Concept also is designed to protect existing neighborhoods by directing the higher density development to these mixed-use areas where transit service is most frequent. Assuming that this zoning will be applied and that the market will respond remains a supposition based on the requirements of Metro's Urban Growth Management Functional Plan. However, recent data concerning the past few years indicates that job growth is more than 100 percent of the Growth Concept goal and that residential growth is up to 83 percent of goal. Activity in the next few years will provide verification of these trends and will demonstrate the extent that the Growth Concept is achievable.

Table 1.1 Calculation of Current Urban Growth Boundary Capacity

	Dwelling Units	Employment
Demand Calculations:		
1994 History	633,600	956,000
2017 Regional Forecast	990,500	1,536,500
Regional Need (1994 – 2017)	356,900	580,500
UGB Need (1994 – 2017)	249,800	476,000
	(70% of Region)	(82% of Region)
Supply Calculations:		
Metro UGB Supply Capacity (net buildable vacant land today)	22,420	22,420
Capacity using 2040 Growth Concept densities	175,430	291,870
- Underbuild	(36,850)	(22,330)
- Ramp-up (1994 to 1999)	(6,430)	(2,650)
+ Net Redevelopment	46,990	162,510
+ Infill and Absorption	24,200	43,700
+ Platted Lots not counted as vacant	10,900	0
+ Development rights on "unbuildable land"	3,190	0
UGB Capacity	217,430	473,100
Result:	(32,370)	(2,900)
	(deficit)	(deficit)

Housing

Table 1.1 included estimates of needed urban housing for the region to the year 2017. In order to ensure that housing choice is provided, more detailed data about housing needs of the region are necessary.

Table 1.2 is from the Housing Needs Analysis, describing the region's housing needs to the year 2017.

62535

Table 1.2 Regional Housing Need 1994 - 2017 - Based on the Metro 2040 Growth Concept (Urban Metro Area Only - Includes Vacancy Rate)

Monthly w/Rental Cost	Approximate Equivalent Ownership Price	Number of New Housing Units Needed ¹	Housing Type Distribution (+)))))) Detached Homes))))))))+()))))) (Attached Homes))))))))))						
			Detached Single Family & Manufactured Homes on Individual Lots	Detached Small Lot Single Family & Mobile Homes and Manufactured Housing in Parks	Attached Single Family & Rowhouses	Multiple Family Low Rise	Multiple Family Mid Rise	Multiple Family High Rise	
0-299	< 49,999	2,381	n/a ²	n/a	n/a	A,R	A,R	A,R	A,R
300-399	50-59,999	10,340	n/a	n/a	n/a	A,R	A,R	A,R	A,R
400-499	60-74,999	25,859	n/a	n/a	A,R	A,R	A,R	A,R	A,R
500-599	75-89,999	32,993	O ³	O	A,R	A,O,R	A,O,R	A,O,R	A,O,R
600-749	90-114,999	38,823	O	O	O,R	O,R	O,R	O,R	O,R
750-999	115-149,999	51,823	O	O	O,R	O,R	O,R	O,R	O,R
1,000-1,165	150-174,999	39,082	O	O	O,R	O,R	O,R	O,R	O,R
1,166-1,330	175-199,999	12,693	O	O	O,R	O,R	O,R	O,R	O,R
1,331+	200,000 +	35,806	O	O	O,R	O,R	O,R	O,R	O,R
Total Units ⁴ : 249,800⁵			SF Units Range: 105,077 - 137,993 ⁶		Rowhouse Units: 20,787-53,732		Multi-Family Units: 86, -97,526		
Single Family/Rowhouse/Multi-Family Split ⁷ : 42/19/39 - 5/10/35			Assisted Housing Units ⁸ : 48,000 ⁹ - 66,000 ¹⁰						

¹ To calculate the total number of housing units needed, you must add the high end of the detached single family range to the low end of the attached home range, or vice-versa. Total demand for housing units is not assumed to change, but actual housing preferences could range within the estimates of the ranges cited.

² n/a means not available in the cost/price range. Ownership tenancy within the lower range of prices is a rough estimate.

³ O means that the new housing is expected to be owner occupied; "R" means that the housing is expected to be renter occupied. "A" means assisted housing.

⁴ Housing demand and supply analysis is based on a "baseline projection" assuming that no new single family dwelling units are produced on the private market below \$110,000 and no new multifamily rental units are produced below \$550 per month rent. Dollar estimates are in 1995 dollars.

⁵ Housing needs projected in this chart are cited to the level of individual units in order to be consistent with model results. However, these forecasts should be considered to be accurate to the nearest 1,000 units.

⁶ of this between 5,750 and 25,062 manufactured homes would be needed.

⁷ Assumes 35 % to 50 % of assisted housing will be multifamily; conversely, we assume 65% or 50% will be single family of which _ will be detached and _ will be attached.

⁸ Assisted Housing means housing provided through Government Assisted Housing programs, non-profit organizations or households paying more than 30 percent of income for housing. Additional assisted housing for larger households also may be provided on a limited basis in other categories than those listed above.

⁹ Estimate for UGB. Low estimate preserves current % of income spent on housing. High estimate derived from separate analysis where share of household income spent on housing was 30%. Low estimate is calculated consistently with the other data used in the Table is used to calculate housing needs.

¹⁰ Based on UGB receiving 70% of the 4 county regional total (94,000 affordable units) of housing demand and supply; model run on 8/20/97.

As can be seen, a wide variety of housing types will be needed to meet expected future demand in the region. Differing construction types, including manufactured housing, stick built and some high-rise structures are included. Ownership and rental options are also included, as are varieties in housing density. No one housing type can supply the varying needs of the region.

It is also important to consider the dynamics of residential development in the region. The regional economy is cyclical and the region is likely to continue to have times of high and low growth rates. The importance of these cycles is that there is a correlation between high growth rates and high housing prices/low affordability. In the late 1970s, we had high growth rates and low affordability at rates comparable to current conditions.

Housing prices in the region are high and housing affordability is lower than some times in the region's past. In particular, this causes those who rent or first-time homebuyers to get less housing or pay much more of their household income than recommended. However, housing prices are only slightly higher than those in other metropolitan regions in the nation and are lower than most metropolitan areas in the West.

Interestingly, the region is at historic highs with regard to the number of units being built. Accordingly, an unchanging or slowly increasing supply does not seem to be the primary obstacle to lowering housing prices.

Limitations to increased production include:

- home builders can "ramp-up" production only so quickly
- the increasing cost of land and labor
- lack of urban infrastructure to vacant buildable lands
- local government zoning inflexibility can limit development options and reduce the capacity of the region to accommodate growth. This results in more expensive housing.
- higher standards including those for stormwater management, seismic standards, energy conservation, etc. (However, these costs existed before the regulations, they were simply paid for in a different way – homes were flooded, residents paid more for heating costs, etc. These "extra" costs may also be thought of as cost shifts rather than increased cost.)

It is estimated that about 2/3 of the forecast growth is from people moving to the region. In addition, the demographic characteristics of the total population is expected to change. The future population is expected to be on average older, have more years of education, have fewer people per household and be more racially diverse. Inherent in these forecasts is that continuing in-migration will be attracted by a continuing robust economy and preeminent livability. Also of note, a smaller average household size means a demand for more housing units even if total population did not change.

Another finding of the technical analysis of housing market dynamics of this region is that the demand for land is much more elastic than previously thought. That is, most people are not willing to pay much more for a larger lot. Therefore, the market is likely to adjust if higher densities are

allowed. In fact, the market has already adjusted to 83 percent of Growth Concept residential densities during the 1993 to 1995 period. The biggest obstacle to accommodating this density of development seems to be existing zoning regulations, which may limit change in some area. As building size has much more influence on total housing cost than the cost of raw land, unless average house size built drops dramatically, expanding the Urban Growth Boundary greatly could likely only result in lower densities, not lower housing costs.

Another dynamic of our region can be illustrated by comparison with other metropolitan areas. For example, in most regions in the country, a deteriorating inner urban core is the source of affordable, if less desirable, housing. However, in this region, the value of close-in housing has not depreciated, rather, it has appreciated substantially from values in the early 1980s even adjusting for inflation. In some cases, appreciation in inner urban areas has outstripped the appreciation in more suburban locations. As long as these areas retain a high quality of life, they will remain desirable and not be a source of affordable housing.

It is also important to note that as new lands are added to the Urban Growth Boundary, they will not effectively increase the supply of buildable land until infrastructure (roads, sewer, water, etc.) is available or provided. If the public is not willing to fiscally support these services in a timely manner, either standards must be lowered or new property owners (through the housing price passed on by the developer or builder) must be able to pay for these services. Alternatively, very large tracts of buildable lands must be made available (e.g., 500-1,000 acre pieces of flat farmlands) so that economies of scale can be realized.

Another factor in housing dynamics is that housing expectations have been rising. If the average house built in 1950 were built today, the result would likely be affordable housing. The average house built in 1950 was about 800 square feet (with a much larger average household size than today). In contrast, the average home built today is about 1,900 square feet. Simply put, one way to produce affordable housing is to build small homes on small lots.

A substantial number of today's households (currently about 12 percent) are subsidized or assisted housing. Subject to very major changes to the regional housing market and/or state and federal government policy changes, it is likely that this percentage of assisted housing will be needed in the future.

Housing costs are likely to be high and unaffordable in the future when high rates of growth occur. There is only so much that can be done to address affordability during these times. If the inner core housing remains desirable, high growth rates continue, low public interest in substantial urban expansion on farmlands persists and low public support for substantial public infrastructure extensions remains, then public policy initiatives to encourage affordable housing will be needed if additional affordable housing is to be provided.

Consistent with the analysis above and concerns stated in the Future Vision statement regarding "...a broad range of housing affordable to all." The Housing Needs Analysis includes three

examples of how fair share can be calculated. However, additional discussion of fair share calculations and methods will be needed before fair share targets for each jurisdiction in the region can be determined.

Urban Reserves

Urban reserve areas are lands designated for future expansion of the Urban Growth Boundary when needed. Recognizing that accommodation of future growth within the current UGB is only one way to address future growth, more than 23,000 acres of lands adjacent to the current Urban Growth Boundary were analyzed for suitability as urban reserves. These urban reserve study areas were determined by the Metro Council after consideration of public testimony and technical analysis. The technical analysis included consideration of land forms and the landscape ecology of the region. Land forms such as the Boring Lava domes and water features such as streams, floodplains and wetlands were mapped and considered along with avoidance of lands protected as exclusive farm and forest lands all around the current UGB. Avoidance of most of these features was directed by the Metro Council as it determined which areas to study as urban reserves. This direction relates to the Future Vision statement that suggests that "...specifically incorporate...landscape ecology in Regional Framework Plan elements concerned with transportation, housing, urban design, rural lands and the UGB. . ."

During a period of more than two years, a technical analysis of the study areas was completed, and discussion and public testimony was heard and considered by the Metro Council. On March 6, 1997, the Metro Council designated 18,579 acres of urban reserves. The location of these urban reserves is shown on the Metro 2040 Growth Concept Map.

The adopted urban reserves provide an estimated 23-year inventory of land beyond the 20-year supply to be maintained within the Urban Growth Boundary. From these reserves, the region can expand as needs are unable to be met within the current Urban Growth Boundary.

In addition, a "First Tier" of urban reserves lands – lands to be brought into the Urban Growth Boundary first – has been designated. A set of requirements to be met prior to development also has been added to the Metro Code (see Appendix B, Metro Code Chapter 3.01 for more details) to ensure that the transition from rural to urban within the First Tier and other urban reserves addresses critical issues including governance, land-use planning, provision and funding of needed public facilities, conservation of natural resources and affordable housing.

While there are direct connections between the Urban Growth Boundary and urban reserves, it should be noted that one of the fundamental aspects of urban growth boundaries is that they are intended to expand as needed to provide capacity for projected growth. Urban reserves, whether there is an immediate demand, provide clear policy direction about where the boundary will move over time and allow both private and public sectors to anticipate and act accordingly.

Economic Opportunity

The regional economy, like all economies, is subject to cycles – periods of faster growth and slower growth. Currently the region has very low unemployment and relatively high rates of construction. Some of these conditions may be the result of local policies, but, as much of the country as a whole is experiencing similar conditions, other factors, outside the region, clearly also play a role. It seems likely that these conditions will not continue indefinitely, and economic circumstances will change. When change does occur, interest in addressing future unemployment is likely to increase. However, the results of any corrective actions may take time to take hold. Accordingly, actions to address economic conditions must consider that there is a time lag between action and outcome. There may be few short-term regional economic fixes.

The region has effectively used several strategies to maintain economic activity. One strategy has been to maintain the region's livability. This includes conservation of and access to the natural landscape as well as more traditional considerations such as attention to the transportation system, public infrastructure, etc. A second strategy has been to encourage efficient use of land within the region. While housing at prices or rents consistent with jobs could be improved in some areas, the region is relatively compact, making jobs and housing reasonably close. As long as sufficient land for housing and jobs are provided and sufficient natural areas are conserved, these strategies can continue to keep the region attractive and provide a competitive advantage when compared with other metropolitan areas of the country. A third strategy has been to designate large amounts of industrial land such as the sunset corridor, Columbia south shore and in Tualatin.

Analysis of employment growth in the region has found that about 40 percent of new jobs are on lands considered "developed." Second shifts are added, office space per person is reduced or other measures are taken to accommodate more workers within existing buildings. Redevelopment of existing buildings or removal and replacement also constitute means of securing additional density. Another means of adding capacity is that additional building space may be added to lands assumed to be fully developed. While either of these methods are not as noticeable as new buildings built on vacant lands, this job capacity is significant.

Another economic consideration is diversification of the region's economy. The bulk of new jobs come from small businesses. Many small businesses provide a diversified and stable economy when compared to an alternative of reliance on a relatively few large businesses. Having more small businesses also provides more opportunities for people to own their own businesses and likely provides more business interest in community affairs.

The Future Vision states that the Regional Framework Plan should "address the further diversification of our economy, the creation of family-wage jobs and the development of accessible employment centers throughout...the region in the Regional Framework Plan elements for transportation, rural lands, urban design, housing and water resources." In addition, it recommends the Regional Framework Plan "incorporate specific expectations for a basic standard of living for

all citizens in Regional Framework Plan elements concerned with urban design, housing, transportation, and parks and open space.”

The Growth Concept provides access to most areas of the region via many different modes, especially transit service. This is in contrast to some metropolitan areas which have urban inner cores with difficult transit access to suburban jobs. The region apparently does have some attractiveness to smaller businesses, as the region has been named two years running as the No. 1 large “city” (“Portland, OR/Vancouver, WA”) for entrepreneurs (“The Nations Entrepreneurial Hot Spots,” October 1995 and October 1996 Entrepreneur Magazine).

Accordingly, policies that encourage smaller businesses to form, expand and prosper would seem to be more effective than other methods of maintaining a stable economy.

Urban/rural Transition

The concept of separating urban areas, or rural reserves, emerged during the Region 2040 planning process. Rural reserves would serve to separate and protect rural lands from lands within the Urban Growth Boundary over a 50-year period.

Rural reserves would include land used for farms, forestry, natural preserves and very low-density rural residential development and might receive priority status for new park and open space acquisitions. New commercial or industrial development would be restricted, and highway interchanges, other highway access to the rural road system and extensions of urban services would be prohibited.

Rural reserves might also be used to separate cities and break urban patterns within the Urban Growth Boundary. Rural lands already create separation between Cornelius and Hillsboro, and Tualatin, Sherwood and Wilsonville.

Neighbor Cities

The future of the region is closely linked to our neighbor cities. Their growth will affect us, as ours will affect them. By coordinating planning efforts, we can help ensure livability inside and outside our borders.

Based on projections, Sandy, Canby and Newberg will grow the most. And as a result of strong transportation connections, Woodburn, Scappoose and North Plains will also experience growth pressure. Conversely, with poor transportation connections, Estacada will probably experience less growth.

Based on analysis done in Concepts for Growth, developing an effective neighbor cities strategy could help contain traffic congestion by keeping 65 percent of work traffic and 90 percent of non-work traffic within neighbor cities. This strategy relies on using rural reserves to separate neighbor

cities from urban areas, working cooperatively with neighbor cities to balance jobs and housing within their communities and directing transportation through green corridors.

Protection of Agriculture and Forest Lands

More than 233,000 acres of rural resource lands (zoned exclusive farm and forest) exist within the tri-county area. With the Metro Council decision on Urban Reserves, 3,085 acres of resource lands were designated as urban reserves, leaving more than 230,000 acres of remaining resource lands in the tri-county area. The Future Vision states that “rural lands shape our sense of place by keeping our cities separate from one another, supporting viable farm and forest resource enterprises and keeping our citizens close to nature, farm, forest...” Further, it states that the Regional Framework Plan should “actively reinforce the protection of land currently reserved for farm and forest uses for those purposes.” While not all rural resource lands were protected, less than 2 percent were affected by the urban reserve decision – a decision that is estimated to provide a 23 year supply of buildable land beyond the capacity within the current UGB.

Schools

Overview

Our region faces many challenges in accommodating growth while still maintaining a high level of amenities and sustaining the quality of life standards that the people of this region cherish. One of these challenges is to provide a quality education for the growing number of school-age children¹¹ in this region. This chapter focuses on the challenges faced by public schools today and in the future.

Current population estimates (1995) show about 223,000 children¹² living inside the Urban Growth Boundary. This represents a sharp increase of nearly 11 percent growth in school-age children in just the last five years. By the year 2015, Metro expects the total number of school-age children to increase by another 35 percent to about 300,000. According to current school enrollment estimates, about 90 percent of the region’s school-age population attends public schools¹³. If this school enrollment ratio continues, an increase of around 70,000 children can be expected to attend public schools when compared with today’s enrollment estimates.

¹¹ We define school-age children to be between the ages of 5 and 18, inclusively. Elementary school-age children are assumed to be between 5 and 10 years old, inclusive. Middle school children are between ages 11 and 13, inclusive.

¹² The school-age population estimate for the tri-county area (Multnomah, Clackamas and Washington counties) in 1995 is 247,000. In order to get a UGB estimate of school-age children, we assume about 90% of the tri-county population figure. The school-age population estimate for the tri-county area (Multnomah, Clackamas and Washington counties) in 1995 is 247,000. In order to get a UGB estimate of school-age children, we assume about 90% of the tri-county population figure.

¹³ The other 10 percent of eligible school-age children attend private or parochial schools or are home-schooled.

New schools are needed in areas with growing populations, but sufficient land for school siting is becoming more difficult to locate as large parcels are becoming more scarce and expensive within the Urban Growth Boundary. Planning in the region has always attempted to encourage the establishment of schools, especially elementary schools, as the major focus of neighborhoods. However, school districts are usually unable to establish long-term site acquisition plans. They have only been able to address more immediate facility needs, in the 1-4 year range, and usually two years or less. This does not lend itself to acquisition of sites well in advance of need. In addition, schools have a cash flow problem. Even if able to locate an appropriate site, the district must raise the capital, usually through a bond measure. By the time the district is in a position to purchase the land, the land price is much higher than what it was when growth in the area began, or the property may no longer be available for purchase.

The basic philosophy of the 2040 Growth Concept is to preserve our access to nature and to build better communities for the residents living here today and who will live here in the future. The Growth Concept calls for a more compact urban form, and for providing for all modes of transportation, including walking. Design of residential areas, especially street connectivity, can be critical in providing alternatives to only driving school children to school. School siting and design can also play a role in assuring that walking and biking are an alternative and viable means of transportation. School site size may also be an issue as most other public and private uses are looking for ways to more efficiently (and more cheaply) accommodate uses on smaller sites.

Schools provide a valuable service to our communities and serve a variety of functions: education center, meeting center, sporting events and open space. Land needs will need to reflect the variety of uses and needs that a school site may serve. Better communities may also be enhanced if planning for schools is done in coordination with planning for other public facilities such as parks, libraries, etc.

The needs of schools and children and the families they serve must be recognized in the growth equation of this region. Together we must address the challenges faced by school districts. We must strive to discover creative solutions and tools that address issues of school siting and design, capital costs and funding strategies, and collaborative community partnerships relative to at least the land use, transportation and parks elements of this framework plan.

Background

This section gives an overview of existing state and regional policies governing school districts in regards to planning for school needs.

State Requirements

ORS 195.110 addresses planning for schools districts with high growth. A city or county with a "high growth school district," must include in its comprehensive plan a school facility plan prepared by the district in cooperation with the city or county. A "high growth school district" is one that has "an enrollment of over 5,000 student and had an increase in student enrollment of six percent or more during the three most recent school years, based on certified enrollment numbers submitted to the Department of Education during the first quarter of each new school year." As can be seen, the school districts of Beaverton, Tigard-Tualatin and West Linn meet the requirements of a high growth school district.

Table 1.3 Enrollments in School Districts Larger than 5,000 Pupils in the Metro Area

School District	1994-1995	1995-1996	1996-1997	Increase in Enrollment 1994-1997
Beaverton	28,341	29,320	30,210	6.6%
Centennial	5,595	5,631	5,881	5.1%
David Douglas	7,092	7,237	7,369	3.9%
Gresham-Barlow	11,022	11,060	11,242	2.0%
Hillsboro	15,220	15,564	15,898	4.5%
Lake Oswego	6,938	7,026	7,272	4.8%
North Clackamas	13,817	13,964	14,339	3.8%
Oregon City	6,905	6,966	7,199	4.3%
Portland	53,339	53,527	54,408	2.0%
Reynolds	7,959	7,955	8,142	2.3%
Tigard-Tualatin	10,302	10,645	10,917	6.0%
West Linn/Wilsonville	6,711	6,975	7,182	7.0%

Source: Oregon Department of Education, Hillsboro School District 1J

In addition to ORS 195.110, Goal 11 of the Statewide Planning Goals and Guidelines addresses public facilities and services. The goal is to "plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development." However, for urban facilities and services, "key facilities" does not include schools, nor does the goal require public facilities plans to include schools.

Regional Policies

Future Vision

The Future Vision statement is the broadest set of declarations about our region. The Regional Framework Plan is required to describe its relationship to the Future Vision. With regard to schools, the Future Vision notes many values, including that the region should:

“Create and enhance cooperative ventures linking public and private enterprises to ensure that:

Community arts and performance centers, community libraries and schools, colleges and universities, concert halls, galleries, museums, nature centers and theaters are each vital links in the integrated educational system for all residents, and

Opportunities exist for all children and community residents, regardless of income, to engage in the visual, literary and performing arts in community centers closest to their homes.”

Metro Policies

The Regional Urban Growth Goals and Objectives (RUGGO), originally adopted in 1991 and are now wholly incorporated within this document (see Chapter 8, Management, especially section 8.7, Implementation) defined implementation roles including school districts.

In addition, in February 1997, Metro Council adopted approximately 18, 500 acres of urban reserves, areas where future Urban Growth Boundary expansion will occur. Chapter 3.01 of the Metro Code addresses the Urban Growth Boundary and urban reserve procedures. The chapter was amended after the adoption of urban reserves to reflect procedural changes to the Urban Growth Boundary amendment process and establishment and management of urban reserves. Objectives of the urban reserve, which are outlined in 3.01.005(c), include one that specifically relates to schools: urban reserves are to “provide for coordination between cities, counties, school districts and special districts for planning for the urban reserve areas.”

Section 3.01.012(e) of the Code requires a conceptual land use plan and concept map that demonstrates compliance with the 2040 Growth Concept for any major amendment applications and legislative amendments of the Urban Growth Boundary. A conceptual school plan is one of the required components of urban reserve plan that “provides for the amount of land and improvements needed for schools facilities. Estimates of the need shall be coordinated among affected school districts, the affected city or county, and affected special districts consistent with the procedures in ORS 195.110(3), (4) and (7).” An urban reserve plan map must show the “general locations or alternative locations for any needed school, park or fire hall sites.

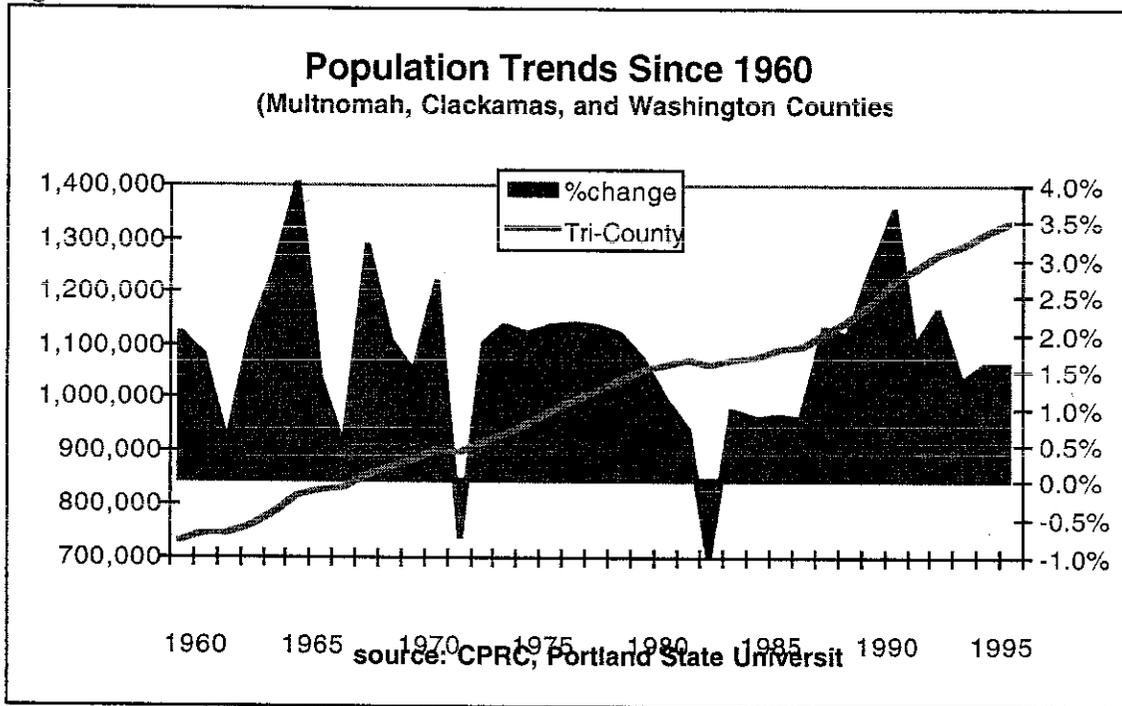
Analysis

The Metro Urban Growth Boundary added over 500,000 new residents¹⁴ between 1960 and 1995. In 1960, there were about 730,00 people living in the tri-county area (Multnomah, Clackamas, and Washington counties). The share of school-age children then was 24.8 percent of the total

¹⁴ The net change in population inside the present Metro UGB for the period 1960 to 1995 is a very rough estimate because the first Urban Growth Boundary was not drawn until 1979. Therefore, any estimate of population inside the UGB prior to 1979 is, at best, an educated guess. The U.S. Census in 1960 estimated 728,088 residents in the tri-county area. By 1995, Portland State University (CPRC) estimated 1,305,100 residents living in the tri-county area, an increase of about 575,000 during this 35 year span.

population, or about 181,000 children between the ages of 5 and 18, inclusive. Today, the number of residents in the tri-county area has grown to over 1.3 million in all – of which 247,000 are school-age children. However, there are now proportionally fewer school-age children in the tri-county area – only 18.9 percent of the total. The overall demographic characteristics of the entire population have also changed. As a population, the people living in the region today are somewhat older and are less likely to have as many children during their lifetime. Fertility rates and the average household sizes across the region have steadily declined during this period. A summary statistic in 1960 showed that the median age in the region was 32.8 years; today the median age has edged up to over 34.8 years of age.

Figure 1.4



Between 1960 and 1995, the number of school-age children for the tri-county population increased by approximately 66,000 children. However, this single statistic does not describe the entire story. During this 35-year period, a number of demographic changes occurred. In 1964, the “baby-boom” generation ended, and with the end of this generation began almost two decades of virtually no change in the number of school-age children in this region even while the overall total population was still increasing at a rapid pace. During this period, the region’s population grew at an average annual rate of 1.7 percent a year (the national average during this same period was 1.08%), but the total regional number of children did not appreciably change. In 1970, the decade began with about 230,000 school-age children; twenty-five years later, the number of children in the same age group increased only slightly to 247,000, an average growth rate of only 0.3 percent per year.

In the 1990's, we saw a remarkable turnaround in the number of school-age children in the tri-county area. From about 223,000 in 1990, the number of children between 5 and 18, inclusive, rose to about 247,000, an increase of 10.8 percent or 2.1 percent growth per year (see table: *Change in the Number of School Age Children*). After 20 years of virtually no increase in the school-age population, clearly, the so called "baby-bust" generation has come to an end and a second wave of births had begun in the late 1980's and is now appearing in elementary school enrollment in the 1990's.

Table 1.5 Change in the Number of School Age Children

Year	Change	% Change
1960-70	49,143	27.2 %
1970-80	11,152	4.8
1980-90	3,753	1.7
1990-95	24,246	10.9
1995-00	24,120	9.8
2000-05	16,338	6.0
2005-10	15,275	5.3
2010-15	15,715	5.2

It has become apparent that the baby-boom generation, which was once thought to have forsaken the path of parenthood, has temporarily reversed the downward spiral of child births and is now giving birth to a "baby-boomlet" – an echo of the first baby boom.¹⁵ Demographers now believe that women have only delayed childbirth to a later age. Instead of bearing children in their early 20's, many women of the previous generation (1965-1985) put off having children until their late 20's and early 30's. Some have even waited until their late 30's and early 40's to have their first child.

This shift in demographics is now starting to show up in the number of school-age children growing up in this region. An increase of nearly 25,000 additional children of school age within a span of five years (1990-95) is a sharp increase not seen since the last baby boom. However,

¹⁵ Shifting socio-economic behavior (e.g., greater number of women entering the workforce, higher female labor force participation, birth control, higher costs involved in raising children, slower wage and productivity growth) have occurred which have combined to create the "baby-bust" which began in the late 1960's and extended through the early 1980's.

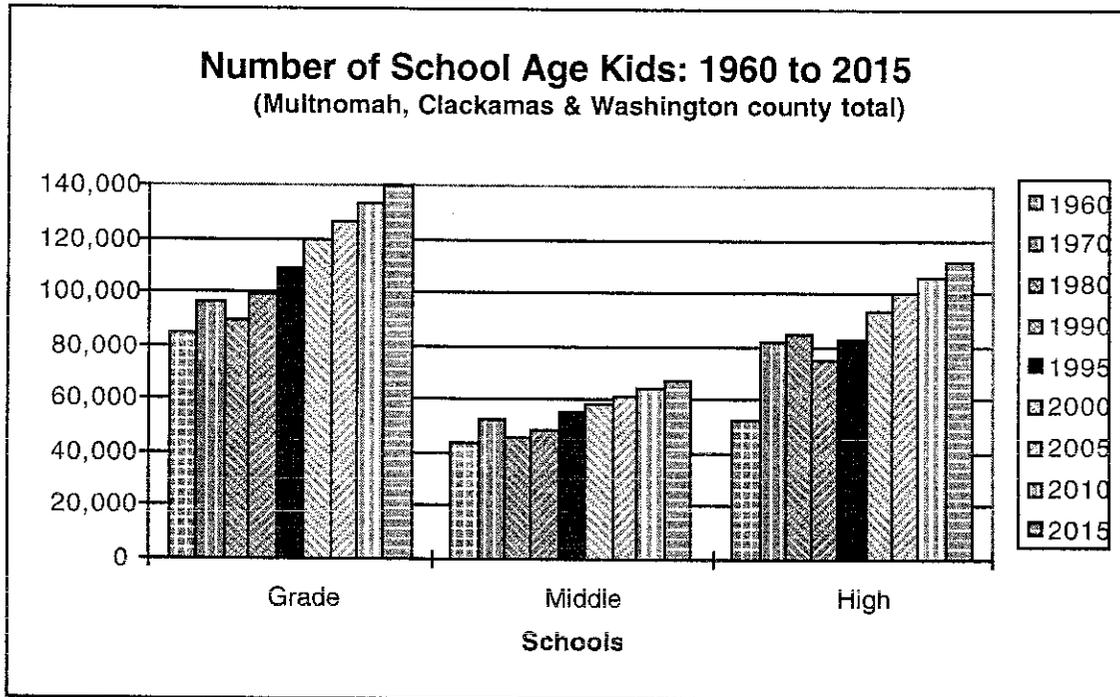
we are less sanguine about the peak and duration of the current baby-boomlet. It is our belief that because of the delay in female pregnancy combined with slowly declining fertility rates, the baby-boomlet will be shorter in length and less robust. By 2000-05, we anticipate the current baby-boomlet will begin to falter and slow.

Meanwhile, direct migration of families with school-age children and working-age couples will tend to prop up and boost the number of children. Migrants tend to be younger and eventually more likely to begin families after they have settled into the region. The Metro Regional Forecast anticipates a steady stream of migrants flowing into this region – about 10,000 per year. About 20 percent are assumed to be in the school-age population group. Therefore, migration not only directly adds about 2,000 school-age children each year, but also contributes through additional births derived from newly transplanted Oregonians.

However, despite continuing gains projected in school-age population numbers, the overall population will continue to age and the share of school-age children will slowly decrease. The median age today is estimated to be about 34.8 years; by 2015 the median age is projected to increase to 36.9 years old. In other words, the fastest growing segment of the population will still be weighted in favor of the baby-boomers, but these baby-boomers will be much grayer than they are today. The second-baby boom wave, the baby-boomlet, will be like an echo – much fainter than the original wave but still audible.

In the forecast for the next 20 years, we anticipate an increase in the number of school-age children from 247,000 in 1995 to approximately 318,000 – an increase of another 71,000. This is a potential increase of about 29 percent more children than in today's student enrollment.

Figure 1.6



The conclusion that is reached from reviewing this data is that the next decade or so is likely to experience much greater growth of school-age children than that experienced in the last two decades. While there may be some additional capacity available within existing school infrastructures, it is likely that substantial increases in school capacities will be needed in order to accommodate expected growth.¹⁶

¹⁶ The scope of this analysis was limited to the entire tri-county region. Any interpolation or extrapolation of the data or information from this analysis to smaller areas or specifically to individual school districts or attendance areas should NOT be made. Each school district in the region should analyze its own population and enrollment projections based on its own population forecast, attendance and school district specific data sets. It would be inappropriate to use regional data to estimate individual school district enrollment trends.

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Transportation

Chapter 2 Transportation

Overview

In 1992, the region's voters approved a charter for Metro that formally gave responsibility for regional land use planning to the agency, and requires adoption of a Regional Framework Plan that integrates land use, transportation and other regional planning mandates. The combined policies of this framework plan establish a new framework for planning in the region by linking land use and transportation plans. Fundamental to this plan is a transportation system that integrates goods and people movement with the surrounding land uses.

This chapter of the Regional Framework Plan presents the overall policy framework for the specific transportation goals, objectives and actions contained in the Regional Transportation Plan (RTP). It also sets a direction for future transportation planning and decision-making by the Metro Council and the implementing agencies, counties and cities.

Policy highlights of this chapter include:

- Ensuring efficient access to jobs, housing, cultural and recreational opportunities, shopping in and throughout the region and providing transportation facilities that support a balance of jobs and housing.
- Reducing reliance on any single mode of travel and increasing the use of alternative modes, such as transit, bicycling and walking.
- Integrating land use, automobile, bicycle, pedestrian, freight and public transportation needs in regional and local street designs.
- Providing efficient transportation systems that accommodate motor vehicles, public transportation, pedestrian transportation, bicycle transportation and freight movement.
- Reducing vehicle miles of travel per capita and related parking spaces.
- Providing transportation demand management and system management strategies.
- Minimizing impact of urban travel on rural land through use of green corridors.
- Protecting water and air quality and reducing energy consumption.

Policies¹⁷ (Goals and Objectives)

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The following section contains the policies for regional transportation. It should be noted that implementation of these policies is through the Regional Transportation Plan, a Metro functional plan that includes both recommendations and requirements for cities and counties of the region. The RTP is now being revised and as the Metro Council considers potential changes to the existing RTP, the Regional Framework Plan may be revised.

2.1 Intergovernmental Coordination

Coordinate among the local, regional and state jurisdictions that own and operate the region's transportation system to better provide for state and regional transportation needs. These partners include the cities and counties of the region, Metro, the Oregon Department of Transportation (ODOT), the Oregon Department of Environmental Quality, the Port of Portland and Tri-Met. Metro also coordinates with RTC, C-Tran, the Washington Department of Transportation (WashDOT), the Southwest Washington Air Pollution Control Authority (SWWAPCA) and other Clark County Governments on bi-state issues.

2.2 Consistency between Land Use and Transportation Planning

Ensure the identified function, capacity and level of service of transportation facilities are consistent with applicable regional land use and transportation policies as well as the adjacent land use patterns.

2.3 Public Involvement

2.3.1 Provide complete information, timely public notice, full public access to key decisions and support broad-based, early and continuing involvement of the public in all aspects of the transportation planning process that is consistent with Metro's adopted regional Public Involvement Policy and Local Public Involvement Policy for transportation planning. This includes involving individuals traditionally under-served by the existing system, individuals traditionally under-represented in the transportation planning process, the general public and local, regional and state jurisdictions that own and operate the region's transportation system in all aspects of the transportation planning process.

¹⁷ The following policies result from integration of the air quality and transportation objectives in the adopted Regional Urban Growth Goals and Objectives (RUGGO) and policies approved by resolution by the Metro Council in July 1996 as part of the Regional Transportation Plan (RTP) update. These policies comply with and replace the air quality and transportation objectives adopted in the RUGGOs. They also comply with the 2040 Growth Concept, the federal Intermodal Surface Transportation Efficiency Act (ISTEA), Clean Air Act Amendments (CAAA) and Americans with Disabilities Act (ADA), the Oregon Transportation Planning Rule (TPR) and the Oregon Transportation Plan (OTP). These mandates are described in the Background section of this chapter. The RTP, which will be updated in early 1998, will continue to provide specific transportation information, including project identification and funding criteria.

- 2.3.2 Develop a detailed public involvement work plan consistent with the regional Public Involvement Policy for each transportation plan, program or project.
- 2.3.3 Provide opportunities for the public to supply input. Revise work scopes, plans and programs to reflect public comment, as appropriate. Create a record of public comment received and agency response regarding draft transportation plans and programs at the regional level.

2.4 System Objectives

In developing new transportation system infrastructure, the highest priority should be providing accessibility and mobility to and from central city, regional centers and industrial areas and intermodal facilities. Specific needs, associated with ensuring access to jobs, housing, cultural and recreational opportunities and shopping within and among those centers, should be assessed and met through a combination of intensifying land uses and increasing transportation system capacity so as to mitigate negative impacts on environmental quality and where and how people live, work and play. The region's system-wide policies are:

- 2.4.1 Implement a transportation system that serves the region's current and future travel needs and implements the 2040 Growth Concept.
- 2.4.2 Provide a cost-effective transportation system.
- 2.4.3 Protect the region's livability.
- 2.4.4 Protect the region's natural environment.
- 2.4.5 Improve the safety of the transportation system.
- 2.4.6 Provide for statewide, national and international connections to and from the region, consistent with the Oregon Transportation Plan.
- 2.4.7 Provide for the movement of people and goods through an interconnected system of road, air and rail systems, including passenger and freight intermodal facilities, major distribution facilities and air and water terminals.

2.5 Transportation Finance

- 2.5.1 Implement a regional transportation system that supports the 2040 Growth Concept through the selection of complementary transportation projects and programs.
- 2.5.2 Emphasize the maintenance, preservation and effective use of transportation infrastructure in the selection of the RTP projects and programs.

- 2.5.3 Anticipate and address system deficiencies that threaten the safety of the traveling public in the implementation of the RTP.
- 2.5.4 Recognize financial constraints and provide public investment guidance for achieving the desired urban form.

2.6 Urban Form

- 2.6.1 Support and maintain a compact urban form with specific strategies that address mobility and accessibility needs and use transportation investments to leverage desired land use patterns.
- 2.6.2 Serve new development with interconnected public streets which provide safe and convenient pedestrian, bicycle and motor vehicle access.
- 2.6.3 Provide street, bicycle and pedestrian connections to transit routes within and between new and existing residential, commercial and employment areas and other activity centers.
- 2.6.4 Encourage development consistent with desired land use patterns that supports increased mobility and accessibility, particularly by transit, walking and bicycling.

2.7 Jobs/Housing Balance

Support a balance of jobs and housing in each subarea of the region to reduce the need for additional transportation facilities. Provide housing that is easily accessible to jobs and that is affordable to all members of the workforce.

2.8 Transportation Education

Encourage bicyclists, motorists and pedestrians to share the road safely. Expand the amount of information available about alternative modes of travel to encourage their use.

2.9 Barrier-free Transportation

- 2.9.1 Provide transportation facilities that comply with the Americans with Disabilities Act of 1990 (ADA).
- 2.9.2 Continue to work with Tri-Met and local jurisdictions to identify and assess structural barriers to mobility for transportation disadvantaged populations in the current and planned regional transportation system .
- 2.9.3 Continue to work with Tri-Met and local jurisdictions to make public transportation stops and walkway approaches accessible.

2.10 Transportation Balance

Provide a multi-modal regional transportation system that reduces reliance on any single mode of travel and increases the use of alternative modes of travel.

2.11 Street Design

Regional street design policies address federal, state and regional transportation planning mandates with street design elements intended to link land use and transportation planning. These street design policies are intended to support individual 2040 Growth Concept land use design types, reduce reliance on any single mode of travel and increase the use of alternative modes of travel. These design concepts reflect the fact that streets perform many, often conflicting functions, and that there is a need to reconcile conflicts among travel modes. The regional street design map (see Figure 2.1) will work in tandem with the modal system maps (Figures 2.2 through 2.7). The region's street design policies are:

- 2.11.1 Provide regional street design concepts to guide local implementation of the 2040 Growth Concept.
- 2.11.2 Support local implementation of regional street design concepts in local transportation system plans (TSPs).
- 2.11.3 Manage the regional street system to achieve the access and mobility needs of each of the 2040 design types.
- 2.11.4 Although focused on motor vehicle travel, the system is multi-modal, with street design criteria intended to limit the impact of motor vehicles on bicyclists, pedestrians, public transportation and pedestrian and transit-oriented districts.
- 2.11.5 To implement regional street design policies, Metro shall consider non-binding guidelines contained in "Creating Livable Streets: Street Design Guidelines for 2040" (1997) and other non-binding resources.

2.12 Motor Vehicle Transportation

The motor vehicle system provides access to the central city, regional centers, industrial areas and intermodal facilities, with an emphasis on mobility between these destinations. The regional motor vehicle system is shown in Figure 2.2. This plan recognizes the need to accommodate a variety of trip types on the regional motor vehicle system that include shopping, recreation, personal errands, commuting to work or school, commerce, freight movement and public transportation. Although focused on motor vehicle travel, the system described in this section is multi-modal, with design criteria intended to serve motor vehicle mobility needs, while reinforcing the urban form of the 2040 Growth Concept. While the motor vehicle system usually serves bicycle and pedestrian travel, the system is designed to limit impacts of motor vehicles on pedestrian and transit-oriented districts. The region's motor vehicle system policies are:

- 2.12.1 Provide a regional motor vehicle system of arterials and collectors that connect the central city, regional centers, industrial areas and intermodal facilities, and other regional destinations, and provide regional accessibility and mobility.
- 2.12.2 Implement a congestion management system to identify and evaluate low cost strategies to mitigate and manage congestion in the metropolitan region.

2.13 Public Transportation

The regional public transportation system is a key component in providing access to the region's most important activity centers, and for 25 years has been the centerpiece to the region's strategies for improving air quality and reducing reliance on the automobile as a principal mode of travel. Public transportation service is also prominent in Metro's 2040 Growth Concept, such that key elements of the concept, including regional centers, town centers, corridors, main streets and station communities, are strongly oriented toward existing and planned public transportation service. The regional public transportation system map is shown in Figure 2.3. Public transportation ridership is highly dependent on pedestrian access and adjacent land use. Therefore, the overarching goal of the public transportation system, within the context of the 2040 Growth Concept, is to provide an appropriate level of access to regional activities for everyone residing within the Urban Growth Boundary (UGB). An important aspect of this goal is promoting public transportation amenities and connections to serve the region's major activity centers. Providing amenities that make walking to or waiting for transit safer and more pleasant (e.g., street lights, benches, bus shelters and improved street crossings) can benefit other elements of the region's transportation system and complement the region's urban form and growth management goals. The region's public transportation policies are:

- 2.13.1 Develop a public transportation system that provides a primary transit level of service to central city, regional centers and a primary or secondary transit level of service to industrial areas, intermodal facilities and special regional destinations (such as major colleges or entertainment facilities).
- 2.13.2 Develop a public transportation system that provides a primary transit level of service to station communities, town centers, main streets, corridors and special community destinations (such as local colleges or entertainment facilities).
- 2.13.3 Develop a public transportation system that provides a secondary transit level of service to employment areas, outer neighborhoods and inner- neighborhoods).
- 2.13.4 Continue to develop fixed-route service and complementary paratransit services which comply with the Americans with Disabilities Act of 1990 (ADA).
- 2.13.5 Continue efforts to maintain transit as the safest form of motorized transportation in the region.

- 2.13.6 Expand the amount of information available about public transportation to encourage more people to use the system.
- 2.13.7 Continue efforts to make public transportation an environmentally friendly form of motorized transportation.
- 2.13.8 Increase use of transit through making public transportation competitive with the private automobile.

2.14 Pedestrian Transportation

Walking is the most basic form of transportation and links most other trip types. All bicycle, bus, light rail, car and truck trips begin and end in a walk. By providing dedicated space for those on foot or using mobility devices, pedestrian facilities are recognized as an important incentive that promotes walking as a mode of travel. Walking for short distances is an attractive option for most people when safe and convenient pedestrian facilities are available. Combined with adequate sidewalks and curb ramps, amenities such as benches, curb extensions, marked street crossings, landscaping and wide planting strips make walking a safe, attractive and convenient mode of travel. This benefits other elements of the region's transportation system and complements the region's urban form and growth management goals. For example, both bus users and motorists benefit from an improved pedestrian environment. Improved street crossings, street lighting, bus shelters, benches and wide planting strips that create a buffer for pedestrians between the curb and sidewalk are examples of pedestrian improvements that make waiting for a bus safer and more appealing. For motorists, where there are sidewalks and street crossing opportunities, a person can park a car once to access several destinations. The focus of the regional pedestrian system is identifying areas of high, or potentially high, pedestrian activity in order to target infrastructure improvements that can be made with regional funds. The regional pedestrian system map is shown in Figure 2.4. The region's pedestrian system policies are:

- 2.14.1 Increase the walk mode share for short trips, including walking to public transportation within the central city, regional centers, town centers, main streets, corridors and LRT station communities and as access to regionally significant parks, open spaces and recreational facilities.
- 2.14.2 Increase walking for short trips and improve access to the region's public transportation system through pedestrian improvements and changes in land use patterns, designs and densities.
- 2.14.3 Make the pedestrian environment safe, convenient, attractive and accessible for all users.
- 2.14.4 Provide for pedestrian access, appropriate to existing and planned land uses, street classification and public transportation, as a part of all transportation projects.

2.14.5 Encourage motorists, bicyclists and pedestrians to share the roadway safely.

2.15 Bicycle Transportation

The bicycle is an important component in the region's strategy to provide a multi-modal transportation system. The regional bicycle system map is shown in Figure 2.5. The 2040 growth concept focuses growth in the central city and regional centers, station communities, town centers and main streets. One way to meet the region's travel needs is to provide greater opportunity to use bicycles for shorter trips and to access regionally significant parks, open spaces and recreational facilities. The region's bicycle system policies are:

- 2.15.1 Provide a continuous regional network of safe and convenient bikeways integrated with other transportation modes and local bikeway systems.
- 2.15.2 Increase the modal share of bicycle trips.
- 2.15.3 Ensure that all transportation projects include bicycle facilities using established design standards appropriate to regional land use and street classifications.
- 2.15.4 Encourage bicyclists and motorists to share the road safely.

2.16 Freight Movement

Developing and adopting the Regional Freight System and associated system goals acknowledges that the movement of goods and services makes a significant contribution to the region's economy and wealth, and that it contributes to our quality of life. The region's relative number of jobs in transportation and wholesale trade exceeds the national average. The regional economy has historically, and continues to be closely tied to the transportation and distribution sectors. This trend is projected to increase. Freight volume is projected (by the 2040 Commodity Flow Analysis) to grow two to three times by 2040 - a rate faster than population growth. The significant growth in freight projected by the 2040 Commodity Flow Analysis indicates the need to make available adequate land for expansion of intermodal facilities, manufacturing, wholesale and distribution activities, and to continue maintaining and enhancing the freight transportation network. The 2040 Growth Concept identifies industrial sanctuaries for distribution and manufacturing activities. The RTP freight system identifies the transportation infrastructure and intermodal facilities that serve these land uses and commodities flowing through the region to national and international markets. The regional freight system map is shown in Figure 2.6. The region's freight system policies are:

- 2.16.1 Provide efficient, cost-effective and safe movement of freight in and through the region.
- 2.16.2 Maintain and enhance the region's competitive advantage in freight distribution through efficient use of a flexible, continuous, multi-modal transportation network that offers competitive choices for freight movement.

- 2.16.3 Protect and enhance public and private investments in the freight network.
- 2.16.4 Promote the safe operation of the freight system.

2.17 Parking Management

The Oregon Transportation Planning Rule requires that the Regional Transportation Plan include methods to reduce non-residential parking spaces per capita by 10 percent over the next 20 years (by 2015). The requirement is one aspect of the rule's overall objective to reduce per-capita vehicle miles traveled (VMT), promote alternative modes and encourage pedestrian and bicycle friendly development.

The mode of travel is directly influenced by the convenience and cost of parking. As auto parking in densely developed areas becomes less convenient and more costly, alternative modes of travel (e.g., public transportation, bicycle, walk and telecommute) become relatively more attractive. In addition, as alternative modes of travel are used more for work and non-work trips, the demand for scarce parking decreases. The reduction in demand will allow the region to develop more compactly and provide the opportunity for redevelopment of existing parking into other important and higher end uses. The region's parking management policies are:

- 2.17.1 Reduce the demand for parking by increasing the use of alternative modes for accessing the central city, regional centers, town centers, main streets and employment areas.
- 2.17.2 Reduce the number of off-street parking spaces per capita.
- 2.17.3 Provide regional support for implementation of the voluntary parking provisions of the Portland region's Ozone Maintenance Plan.
- 2.17.4 Manage and optimize the efficient use of public and commercial parking in the central city, regional centers, town centers, main streets and employment centers to support the 2040 Growth Concept and related RTP goals and objectives.
- 2.17.5 Establish minimum and maximum parking ratios no greater than those listed in Regional Parking Ratios Table and as illustrated in the Parking Maximum Map in Title 2 of the Urban Growth Management Functional Plan. The designation of A and B zones on the Parking Maximum Map should be reviewed after the completion of the Regional Transportation Plan update and every three years thereafter.

2.18 Transportation Demand Management

Transportation demand management (TDM) is not one action, but rather a series of actions to promote shared ride and the use of alternative modes, especially during the most congested times of the day. The term TDM encompasses the strategies, techniques and supporting actions that

encourage non-single occupant vehicle travel (i.e., transit, walk, bike, carpool and telecommute), as well as measures to reduce per-capita vehicle miles traveled (VMT).

The primary benefit of managing travel demand is to minimize the need to expand the capacity of the region's transportation system (i.e., building new highways or adding lanes to existing highways) and make more efficient use of non-SOV modes (transit, walk, bike, carpool and telecommute) of travel. Managing travel demand will also help the region reduce overall per-capita vehicle travel, reduce air pollution and maximize energy conservation in a relatively low-cost manner. Regional TDM policies are intended to complement city and county efforts to assist employers in implementing measures to meet the Department of Environmental Quality Employee Commute Options (ECO) rule. Regional TDM policies also help the region achieve its 2040 Growth Concept land use accessibility goals. The region's transportation demand management policies are:

- 2.18.1 Enhance mobility and support the use of alternative transportation modes by improving regional accessibility to public transportation, carpooling, telecommuting, bicycling and walking options.
- 2.18.2 Promote policies and strategies that reduce travel by single occupant vehicles (SOV) in order to help the region achieve the 10 percent reduction in vehicle miles traveled (VMT) per capita as required by the Transportation Planning Rule (TPR) over the Regional Transportation Plan planning period, and that improve air quality.
- 2.18.3 Provide incentives for employers and developers to build/locate in the 2040 Growth Concept central city, regional centers, town centers, station communities and transit corridors to promote more compact land use.
- 2.18.4 Continue to coordinate efforts to promote TDM at the regional and local level.
- 2.18.5 Implement TDM support programs to reduce the need to travel, and to make it more convenient for people to use alternative modes for all trips throughout the region.
- 2.18.6 Increase public knowledge and understanding about TDM as a tool to reduce congestion, reduce air pollution, implement the 2040 Growth Concept and to help the region meet the TPR VMT per capita and parking per capita reduction targets.
- 2.18.7 Mode split will be used as the key regional measure for transportation effectiveness in this region. Metro shall establish an alternative mode split target (defined as non-Single Occupancy Vehicle person trips as a percentage of all person trips for all modes of transportation) for each of the 2040 Design Types identified in Table 2.1, below.

The alternative mode split targets shall be evaluated for each 2040 Design Type based on their ability to help the region meet the Transportation Planning Rule 10 percent VMT reduction

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requirement. Metro will develop additional guidance in the Regional Transportation Plan on methods to implement these regional mode split targets.

Table 2.1 Regional Non-SOV Mode Split Targets
Needed To Achieve State Transportation Planning Rule 10% VMT/Capita Reduction Requirement
(for trips to and within each 2040 Design Type)

2040 Design Type	Non-SOV* Mode Split Target
Central City	60-70%
Regional Centers, Town Centers, Main Streets, Station Communities and Corridors	45-55%
Industrial Areas and Intermodal Facilities, Employment Areas and Inner and Outer Neighborhoods	40-45%

*Non-SOV includes shared ride, bike, walk and transit.

2.19 Transportation System Management

Use transportation system management techniques (e.g., signal improvements, intersection channelization, access management, HOV lanes, ramp metering, incident response and programs that smooth transit operations) to optimize performance of the region’s transportation systems. Mobility will be emphasized on corridor segments between high priority land use designations. Access and livability will be emphasized within such designations. Selection of appropriate TSM techniques will be according to the functional classification of corridor segments.

2.20 Right-of-Way Opportunities

Where appropriate, plan for the preservation of rights-of-way for future transportation projects, including future transportation corridors.

2.21 Adequacy of Transportation Facilities

Ensure that changes to land use patterns are consistent with the identified function, capacity and level of service (see Policy 2.28 which defines motor vehicle level of service) of the facility.

2.22 Urban to Urban Travel on Rural Routes

Minimize the impact of urban travel on rural land uses. Limit access to and minimize urban development pressure on resource lands adjacent to transportation corridors that link neighboring towns to the nearest regional center by designating urban connectors between these destinations as “green corridors”, with exceptions identified in the motor vehicle system map (see Figure 2.2).

2.23 Recreational Travel and Tourism

Provide reasonable and convenient access to regional cultural, historic or natural area sites for passive and active recreational or tourism purposes.

2.24 Natural Environment

- 2.24.1 Place a priority on protecting the region's natural environment in all aspects of the transportation planning process.
- 2.24.2 Minimize the environmental impacts of system development, operations and maintenance.
- 2.24.3 Reduce negative impacts on parks, public open space, natural areas, wetlands and rural reserves arising from noise, visual impacts, physical segmentation and volume and pollutants of storm water runoff from transportation facilities.

2.25 Water Quality

Protect the region's water quality by meeting applicable state and federal water quality standards and supporting local jurisdiction efforts to reduce impervious surface coverage in the development review and street design process.

2.26 Clean Air

- 2.26.1 Protect and enhance air quality so that as growth occurs, human health and visibility of the Cascades and the Coast Range from within the region is maintained.
- 2.26.2 Encourage use of all modes of travel (e.g., transit, telecommuting, zero-emissions vehicles, ridesharing, bicycles and walking) that contribute to clean air.
- 2.26.3 Include strategies for planning and managing air quality in the regional airshed in the State Implementation Plan for the Portland-Vancouver air quality maintenance areas as required by the federal Clean Air Act Amendments.
- 2.26.4 Develop new regional strategies to comply with federal Clean Air Act Amendments requirements and provide capacity for future growth.
- 2.26.5 Work with the state to pursue close collaboration of the Oregon and Clark County Air Quality Management Areas.

2.27 Energy Efficiency

Reduce the region's transportation-related energy consumption through increased use of transit, telecommuting, zero-emissions vehicles, ridesharing, bicycles and walking and through increasing efficiency of transportation network to diminish delay and corresponding fuel consumption.

2.28 Motor Vehicle Level of Service

Establish acceptable motor vehicle level of service thresholds that balance the regional accessibility and mobility policies with the region's growth management objectives. Exceeding an acceptable threshold identifies a system deficiency or need. The appropriate motor vehicle level-of-service shall correspond to categories of design types defined in the 2040 Growth Concept and will be balanced against the alternative mode split target established for the various design types. A variable motor vehicle level-of-service will also enable the region to ensure that:

- limited resources are allocated to the most critical motor vehicle projects in the most critical areas
- limited resources remain to fund alternative mode projects and projects that best leverage the 2040 Growth Concept
- when road projects are recommended, they are sized consistent with the availability of limited resources, appropriate to the applicable 2040 design type and consistent with alternative mode split targets.

A transportation need is identified when a particular transportation standard or threshold has been exceeded either through a land use action or projected travel demand. Subsequent to the identification of a need, an appropriate transportation strategy or solution is generally identified through a two-phased multi-modal planning and project development process. The first phase is multi-modal system-level planning that examines a number of transportation alternatives over a larger geographic area such as a corridor or sub-area, or through a local or regional Transportation System Plan (TSP). The purpose of the TSP step is to determine the best mode and corridor to pursue in addressing an identified need after considering alternative modes and corridors. The second phase is project-level planning (also referred to as project development). The purpose of project-level planning is to develop design details and consider potential environmental impacts for the recommended mode and corridor identified during multi-modal system-level planning.

The Regional Transportation Plan shall provide specific thresholds, as appropriate, to ensure that the economic vitality and livability of any given area is protected from unacceptable levels-of-service occurring outside of normal peak periods of congestion.

One-hour of significant congestion is expected in both the a.m. peak-hour of the day and the p.m. peak-hour of the day within the Central City, Regional Centers, Main Streets and Station Communities because of the level of activity expected to occur in these areas. This level of congestion is acceptable in these 2040 Design Types because the opportunity to use alternative modes of travel is greatest in these areas. However, more than one-hour of significant congestion in either the a.m. peak-hour of the day or p.m. peak-hour of the day is unacceptable, with the preference being that these areas remain substantially uncongested for the remainder of the day.

Less congestion will be tolerated in the less concentrated Corridors, Industrial Areas, Intermodal Facilities, Employment Areas and Inner and Outer Neighborhoods.

Acceptable levels of congestion for Regional Highway Corridors will be determined on a case-by-case basis in the Regional Transportation Plan, consistent with Policies 2.11, 2.12 and 2.16 of this

chapter. Regional Highway Corridors are defined as I-84, I-205, I-5, I-405, US 26, OR 217, OR 224, 99E, 99W connecting to I-5 in Tualatin, the Sunrise Corridor, US 26 entering the eastern edge of the UGB, US 30 entering NW Portland, the Mount Hood Parkway, Marine Drive from I-5 to T-6 terminal, Going Street from I-5 to Swan Island and Airport Way from I-205 to Portland International Airport. (See Regional Highway Corridors map in Figure 2.7.)

Level of Service definitions adopted in the Urban Growth Management Functional Plan are summarized in Table 2.4 at the end of this chapter.

2.29 Transit Level of Service

Establish transit level of service thresholds that balance the regional accessibility and mobility policies with the region’s growth management objectives. Exceeding an acceptable threshold identifies a transit system deficiency or need. The Regional Transportation Plan shall define specific thresholds for each 2040 Design Type, as appropriate, to ensure that the highest quality transit service (in terms of coverage, speed and frequency) is available to the areas with the highest population and employment densities.

Within the Central City and Regional Centers, the regional public transportation system shall provide full coverage to high-quality transit service for all households and jobs within _-mile of that service, including routes competitive with the automobile and frequent service to its full market area.

Within Town Centers, Main Streets, Station Communities and Corridors, the regional public transportation system shall provide full coverage to high-quality transit service for all households and jobs within _-mile of that service, including routes competitive with the automobile.

Within Industrial Areas and Intermodal Facilities, Employment Areas and Inner and Outer Neighborhoods, the regional public transportation system shall provide an appropriate level of transit service, if densities in those Design Types exceeds 10 persons per acre.

2.30 Local Street Connectivity

Establish 10 to 16 street intersections per mile as a minimum range for local street connectivity, except where topography, barriers such as railroads or freeways, or environmental constraints such as major streams and rivers, prevent full street connections. The number of street intersections should be greatest in the highest density mixed-use centers. Consider bicycle, pedestrian and emergency accessway connections on public easements or right-of-way when full street connections are not possible, with spacing between auto connections of at least 16 connections per mile in the highest density mixed-use centers, except where topography, barriers such as railroads or freeways, or environmental constraints such as major streams and rivers, prevent street extension.

Regional System Maps

The Regional System Maps referred to as Figures 2.1 through 2.7 are included in the Appendices of this Regional Framework Plan.

Background

A number of federal, state and regional mandates form the basis for the policies contained in this chapter of the Regional Framework Plan.

Federal Mandates

At the federal level, the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) emphasizes expanding public participation in the transportation planning process and increasing cooperation among the jurisdictions that own and operate the regional transportation system. These partners include the region's cities and counties, Metro, Oregon Department of Transportation (ODOT), Oregon Department of Environmental Quality (DEQ), Port of Portland, Tri-Met, Washington Regional Transportation Council (RTC), Washington Department of Transportation (Wash-DOT), Southwest Washington Air Pollution Control Authority (SWWAPCA) and other Clark County governments.

As the federally designated Metropolitan Planning Organization (MPO) for the region, Metro must coordinate metropolitan transportation planning efforts in partnership with these multiple jurisdictions and citizens to help develop statewide and regional transportation plans. These plans must forecast future growth, identify needed transportation investments to meet this growth and ensure the maintenance and efficient operation of existing transportation systems over a 20-year period. The Oregon Transportation Plan guides the transportation system statewide, and the Regional Transportation Plan (a Metro functional plan) is the transportation plan for this region.

ISTEA also requires the establishment of a National Highway System to provide an interconnected system of principal arterial routes that will serve major population centers, public transportation facilities, airports, and intermodal facilities, and serve interstate and inter-regional travel.

In addition to the Federal requirements of ISTEA, Federal 1990 Clean Air Act Amendments (CAAA) establish air quality standards for key air pollutants, including carbon monoxide, ozone and particulate matter. Areas that do not meet the standards are designated in varying degrees of nonattainment, from "marginal" to "extreme." States must submit implementation plans (SIP) showing how these areas will meet the standards and maintain compliance over a ten-year period. Areas that do not meet SIP requirements may face sanctions, including potential loss of highway funds and limits on industrial expansion.

The Portland-Vancouver Interstate Air Quality Maintenance Area (AQMA) was designated as a marginal nonattainment area for ozone and moderate nonattainment area for carbon monoxide in

1991. By the end of 1991, the area began to meet the federal ozone and carbon monoxide standards on a consistent basis. As a result, the region began to work on ten-year maintenance plans and attainment redesignation requests for both pollutants. These plans were finalized in 1996 and submitted to the U.S. Environmental Protection Agency (EPA) as revisions to the Oregon State Implementation Plan (SIP). EPA approved the maintenance plans and also redesignated the Portland-Vancouver Interstate AQMA to attainment status in 1997.

The maintenance plans were developed on the basis of Metro's long-range population and employment forecasts. Control strategies, including transportation control measures (TCMs) were developed to reduce automobile emissions to show standards maintenance through the ten-year plan period. These measures include projects to provide facilities for alternative modes, demand management programs to encourage use of alternative modes and implementation of the 2040 Growth Concept to produce more transportation efficient land use patterns. The goal of these measures is to manage travel demand and improve traffic flow in order to reduce the number of vehicle trips made and the number of vehicle miles traveled. The SIP recognizes that land use patterns that shorten trips and increase opportunities for transit, bicycling and walking also help reduce emissions.

The Oregon Department of Environmental Quality monitors three locations for the ozone standard and four locations for the carbon monoxide standard for the Portland-Vancouver AQMA, as shown in Table 2.2, below.

Table 2.2 Oregon Department of Environmental Quality Air Quality Monitoring Locations

Ozone Monitoring Locations	Carbon Monoxide Monitoring Locations
<ul style="list-style-type: none"> • Milwaukie High School • Sauvie Island • Carus (approximately 5 miles south of Oregon City on Highway 213) 	<ul style="list-style-type: none"> • 4th/Alder Street - downtown Portland • Postal Building - downtown Portland • SE 82nd Avenue/Division Street - Portland • SE 58th Avenue/Lafayette Street - Portland

In 1996, the AQMA area exceeded the summer ozone standard twice at one monitoring location (Milwaukie High School). There was no violation of the summer ozone standard in 1997. A fourth exceedance, at one monitoring location over a three-year period, would violate federal air quality standards and trigger the SIP contingency plan for ozone. The contingency plan provides for a rule development process to reduce emissions from industry and other sources. Any TCMs identified as control strategies in the SIP are to be included in Metro's Transportation Improvement Program and the Regional Transportation Plan within twelve months after the violation is recorded.

Additional federal requirements include the 1990 Americans with Disabilities Act (ADA) which mandates that transportation plans address equal access and opportunity for disabled people. An

ADA transportation plan has been developed by Tri-Met. In addition, state and local jurisdictions must design and construct pedestrian facilities in compliance with ADA requirements.

State Mandates

The Oregon Transportation Planning Rule (TPR) focuses on the link between land use and transportation. It intends to ensure that planned transportation systems support land use plans and travel patterns to achieve the state goal of compact, highly livable urban areas. The TPR contains requirements designed to reduce reliance on the automobile and requires consideration of land-use policies when developing transportation plans. Cities and counties are required to revise development standards to promote public transportation, pedestrian and bicycle travel, orient new buildings toward major transit stops and design local streets that require less right-of-way width and improve pedestrian circulation. The TPR also requires that city and county transportation plans include policies that promote completion of local street networks. The rule also requires that local and regional transportation system plans target the following goals:

- a 10 percent reduction in vehicle miles of travel per capita during the next 20 years and 20 percent during the next 30 years
- less reliance on the automobile and a reduction in the number of people driving alone
- a 10 percent reduction in the number of parking spaces per capita during the next 20 years
- a stronger connection between land use and transportation planning

Local and regional transportation system plans must also examine possible land-use solutions to transportation problems and identify multi-modal, system management and demand management strategies to address transportation needs.

Regional Mandates

With adoption of the 1992 Metro Charter by voters in the region, Metro was directed to complete a Future Vision. The fifty-year Future Vision includes many references as to the importance of transportation. These references include:

“Address the further diversification of our economy, the creation of family-wage jobs and the development of accessible employment centers throughout...the region in the Regional Framework Plan elements for transportation, rural lands, urban design, housing and water resources.”

“Incorporate specific expectations for a basic standard of living for all citizens in Regional Framework Plan elements concerned with urban design, housing, transportation, and parks and open space.”

“Identify and address public and personal safety issues in the Regional Framework Plan elements dealing with transportation, urban design and bi-state coordination.”

Other regional statements of existing transportation policy are included in the Regional Urban Growth Goals and Objectives (RUGGOs), the Urban Growth Management Functional Plan (see

Appendix A) and the 1992 Regional Transportation Plan (RTP). The Regional Urban Growth Goals and Objectives (RUGGOs) are Metro's regional goals and objectives required by state law. First adopted in 1991, revised in 1995 and acknowledged by the Land Conservation Development Commission in 1996, the RUGGOs establish a process for coordinating planning in the metropolitan area in an effort to preserve regional livability. The RUGGO goal and objectives, including the 2040 Growth Concept, also provide the policy framework for guiding Metro's regional planning program, including development of functional plans and management of the region's Urban Growth Boundary.

RUGGOs policies related to transportation include Objective 14 (Air Quality) and Objective 19 (Transportation). Transportation policies contained in this chapter of the Regional Framework Plan integrate existing RUGGOs policies and Chapter 1 policies developed as part of the current Regional Transportation Plan update to become Chapter 1 of the 1998 RTP. Many of these new policies were created for the Regional Framework plan to address mandates in ISTEA, ADA, CAAA, the Oregon Transportation Planning Rule and the Oregon Transportation Plan.

Likewise, the 1998 Regional Transportation Plan will respond to the same federal and state requirements and define a balanced, multi-modal transportation system that supports the Region 2040 Growth Concept. New Regional Transportation Plan policies were approved by the Metro Council in July 1996 and reflect extensive public comment. These new policies, as amended with the adoption of the Regional Framework Plan will be used to direct and define specific improvements to the regional transportation system for the next 20 years. The plan update is expected to be completed in June 1998.

The relationship of Regional Transportation Plan (RTP) policies to Regional Framework Plan policies is that the RTP implements this Chapter of the Regional Framework Plan. Separate functional plans, like the RTP, will clearly identify the role that cities and counties will play in implementing this Regional Framework Plan.

To ensure consistency between the two plans, the policy statements in the updated Regional Transportation Plan will be identical to the policy statements in this chapter of the Regional Framework Plan. However, the Regional Framework Plan does not include the same level of detail as the Regional Transportation Plan, where policy statements will be accompanied by objectives and performance measures that will guide implementation of individual policies. This chapter of the Regional Framework Plan will not include objectives and performance measures.

This chapter of the Regional Framework Plan will be implemented through the 1998 Regional Transportation Plan, a Metro functional plan, once the current update is complete. In the interim, Title 2 and Title 6 of the Urban Growth Management Functional Plan will be amended at the time the Regional Framework Plan is adopted to clearly identify the role that cities and counties will play in implementing transportation policies reflected in this chapter.

Analysis

Metro and its regional partners initiated the Region 2040 planning process to better evaluate how different growth management strategies could accommodate expected growth in this region and to analyze the possible consequences of such policies (see Chapter 1). In undertaking the Region 2040 process, the region has shown a strong commitment to developing a regional plan that is based on more efficient use of land and a balanced, multi-modal transportation system. The adopted and acknowledged 2040 Growth Concept resulted from this process. The 2040 Growth Concept integrates transportation, land use, water and open space elements to reinforce the region's growth management goals. The success of this land use concept, in large part, hinges on regional transportation policy. The following section includes general descriptions of the 2040 Growth Concept land-use components, called "design types," and associated transportation elements as defined during the Region 2040 process. In general, each of the land use components will be served with a multi-modal transportation system tailored to its specific needs. The land use components are ordered according to their relative significance in the region.

The central city, regional centers, industrial areas and intermodal facilities are key design types of the 2040 Growth Concept. Implementation of the overall growth concept is largely dependent on the success of these areas. For this reason, these areas are the primary focus of transportation implementation policies and infrastructure investments defined in the 1998 Regional Transportation Plan.

Central City and Regional Centers

Portland's central city already forms the hub of the regional economy. Regional centers in suburban locations such as Gresham, Beaverton and Hillsboro in the 2040 Growth Concept are complementary centers of regional economic activity. These areas are planned for region's highest development densities, the most diverse mix of land uses and the greatest concentration of commerce, offices and cultural amenities. They are planned to be the most accessible areas in the region by both auto and public transportation, and have very pedestrian-oriented streets.

In the 2040 Growth Concept, the central city is highly accessible by a high-quality public transportation system, multi-modal street network and a regional freeway system of through-routes. Light-rail lines radiate from the central city, connecting to each regional center. The street system within the central city is designed to encourage public transportation, bicycle and pedestrian travel, but also accommodate auto and freight movement. Of special importance are the bridges that connect the east and west sides of the central city and serve as critical links in the regional system.

Regional centers are also planned to feature a high-quality radial transit system serving their individual trade areas and connecting to other centers, as well as light-rail connections to the central city. In addition, a fully improved network of multi-modal streets are intended to link regional

centers to surrounding neighborhoods and nearby town centers, while regional through-routes will be designed to connect regional centers with one another and points outside the region. The street design within regional centers is planned to encourage public transportation, bicycle and pedestrian travel while also accommodating auto and freight movement.

Industrial Areas and Intermodal Facilities

Industrial areas are planned to serve as “sanctuaries” for long-term industrial activity. These areas are primarily served by a network of major street connections to both the regional freeway system and intermodal facilities. Many industrial areas are also served by freight rail, and have good access to intermodal facilities. Freight intermodal facilities, including air and marine terminals, freight rail yards and common carrier truck terminals, are an area of regional concern. Access to these areas is centered on rail, the regional freeway system, public transportation, bikeways and key roadway connections. While industrial activities often benefit from roadway improvements largely aimed at auto travel, there are roadway needs unique to freight movement that are critical to the continued vitality of industrial areas and intermodal facilities.

Town Centers, Station Communities, Main Streets and Corridors

While more locally oriented than the primary components of the 2040 Growth Concept, town centers, station communities, main streets and corridors are significant centers of urban activity. Because of their density and pedestrian-oriented design, they play a key role in promoting public transportation, bicycling and walking as viable alternatives to the automobile as well as conveniently close services for surrounding neighborhoods. As such, these secondary components are an important part of the region’s strategy for reducing per-capita automobile travel.

Station communities are located along light-rail corridors. They are planned to feature a high-quality pedestrian and bicycle environment. These communities are designed around the transportation system to best benefit from the public infrastructure. While they include some local services and employment, they are mostly residential developments that are oriented toward the central city, regional centers and other areas that can be accessed by rail for most services and employment.

Town centers function as local activity areas that provide close access to a full range of local retail and service offerings within a few miles of most residents. While town centers are not planned to compete with regional centers in scale or economic diversity, they will offer some specialty attractions of regional interest. Though the character of these centers varies greatly, each will function as strong business and civic communities excellent multi-modal arterial street access and high-quality public transportation with strong connections to regional centers and other major destinations. Main streets feature mixed-use, storefront style development that serve the same urban function as town centers, but are located in a linear pattern along a limited number of bus

corridors. Main streets feature street designs that emphasize pedestrian, public transportation and bicycle travel.

Corridors will not be as intensively planned as station communities, but similarly emphasize a high-quality bicycle and pedestrian environment and convenient access to public transportation. Transportation improvements in corridors will focus on nodes of activity - often at major street intersections - where transit and pedestrian improvements are especially important. Corridors can include auto-oriented land uses between nodes of activity, but such uses are carefully planned to preserve the pedestrian orientation and scale of the overall corridor design.

Employment Centers and Neighborhoods

Some design types in the 2040 Growth Concept are primarily of local significance, including employment centers and neighborhoods. Urban activities in these areas often impact the regional transportation system, but are best addressed through the local planning process.

Employment centers allow mixed commercial and industrial uses, including some residential development. These areas are primarily served by a network of arterial connections to both the regional freeway system and intermodal facilities. Some employment centers are also be served by freight rail. Employment centers are often located near industrial areas, and thus may benefit from freight improvements primarily directed toward industrial areas and intermodal facilities.

In recent decades, the newest neighborhoods have become the most congested largely due to a lack of street connections. A lack of street connections discourages walking and bicycling for local trips in these areas, and forces local auto trips onto the regional multi-modal arterial network. The 2040 Growth Concept envisions master street plans in all areas to increase the number of local street connections to the regional roadway network. However, new connections must be designed to discourage through-travel on local neighborhood streets.

Urban Reserves

Urban reserves, which are currently located outside the Urban Growth Boundary (UGB), are relatively undeveloped with limited transportation facilities. Urban reserves are intended to accommodate future growth and will eventually require multi-modal access to the rest of the region. Because they may be added to the urban area during the 20-year Regional Transportation Plan (RTP) planning period, they are included in the RTP functional classification scheme. General street and public transportation planning is completed prior to urbanization, as part of the RTP process, and based on specific 2040 Growth Concept land use policies for these areas. Once urban reserves are brought within the UGB, more detailed transportation system planning at the regional and local level occurs in conjunction with detailed land use planning.

Areas Outside the Region's Urban Areas

Rural reserves are undeveloped areas located outside the UGB and have very limited transportation facilities. Roadways in these areas are intended to serve rural industry and needs, and urban travel on these routes is accommodated with designs that are sensitive to their basic rural function. Rural reserves are planned to be protected from urbanization for the foreseeable future through state statutes and administrative rules, county land use ordinances, intergovernmental agreements and by limiting rural access to urban through-routes whenever possible. Urban-to-urban travel is generally discouraged on most rural routes, with the exception of a limited number of designated urban connector roads identified in the RTP. All other rural roads should serve rural purposes.

Neighboring cities are separated from the main urban area by rural reserves, but are connected to regional centers within the metropolitan area by limited-access green corridor transportation routes. In addition to highway access, green corridor routes will include bicycle and public transportation service to neighboring cities. Neighboring cities will be encouraged, through intergovernmental agreements, to balance jobs and households in order to limit travel demand on these connectors. The region also has an interest in maintaining reasonable levels of through-travel on major routes that pass through neighbor cities and function as freight corridors. Growth of neighboring cities will ultimately affect through-travel and could create a need for bypass routes. Such impacts will also be addressed through coordination with county and state agencies, as well as individual neighboring cities.

The 2040 Commodity Flow Study

As part of the Region 2040 process, the region also conducted a Commodity Flow Study. The study was designed to determine how freight moves through the region, understand the linkage between the regional economy and the transportation system and assess the implications of future freight volumes on the regional transportation system. The study concluded with these key findings:

- Goods movement has historically sparked the region's economic growth. Our region's freight market can be segmented into three distinct but complementary components: goods movement that supports local consumption, goods movement that is generated by local industries and goods movement throughout the region that is tied to a successful distribution system. Each of these depends on access to an efficient transportation network.
- The existing transportation system is adequate to support current goods movement requirements, although there are specific points of congestion, particularly within rail facilities and at some highway crossings.
- Employment in the construction, manufacturing, transportation and utilities and trade sectors of the economy account for approximately one-half of the region's jobs. Traditionally well-paid, these jobs depend on the successful movement of goods on the region's transportation system. In addition, the transportation system affects the ability of the region to maintain its competitive advantage as a warehousing and distribution center. Portland outranks similarly sized cities in its role in wholesale trade.

- Truck is the predominant mode for goods movement in the region. One out of ten vehicles on roadways in the region is a truck involved in moving freight. In 1991, 60 percent of all freight tonnage moved on trucks, and an additional portion of the rail and air traffic relied on truck for pickup and delivery.
- By the year 2040, freight volume is expected to grow by two to three times to approximately 19 million twenty-foot equivalent container units, which is faster than population growth. Of this, 80 percent is expected to be due to the region's market economy or goods that simply move through the Portland area to other destinations.
- Continued emphasis on maintaining and enhancing the transportation system is necessary to continue Portland's strong freight economy. Quick transfer between ship, rail, truck and air service is increasingly a competitive strength of any freight economy.

In conclusion, the projected growth in the flow of goods in this region is an important consideration in the region's land-use and transportation planning efforts. This significant growth points to the need to make available adequate land for expansion of intermodal facilities, manufacturing, wholesale and distribution activities and to continue maintaining and enhancing the freight transportation network. To this end, the 2040 Growth Concept identifies industrial sanctuaries for distribution and manufacturing activities as critical in terms of their significance to the regional economy. Policies contained in this element of the framework plan recognize the importance of protecting freight movement and the road, rail, air, shipping and pipeline facilities needed to facilitate this movement.

1994 Travel Behavior/Activity Survey

In 1994, Metro also conducted a travel behavior survey within the four-county boundary of Clackamas, Multnomah and Washington Counties in Oregon and Clark County, Washington. As part of this survey, approximately 6,000 households kept a diary of activities performed over a two-day period, including identification of how individuals traveled to those activities. The study was designed to focus on the relationship between an activity type and the need for travel and highlighted the importance of all activities, whether "big" or "small." Results from the study are summarized in Table 2.3 below.

Table 2.3 Summary of 1994 Metro Travel Behavior/Activity Survey Results (for all trip purposes)

Land Use Type	Mode Share					Vehicle Miles per Capita	Auto Ownership per Household
	% Auto	% Walk	% Transit	% Bike	% Other		
Areas with Good Transit/ Mixed Use In Multnomah County	58.1%	27.0%	11.5%	1.9%	1.5%	9.80	0.93
Areas With Good Transit Only In Multnomah County	74.4%	15.2%	7.9%	1.4%	1.1%	13.28	1.50
Remainder of							

Multnomah County	81.5%	9.7%	3.5%	1.6%	3.7%	17.34	1.74
Remainder of Region	87.3%	6.1%	1.2%	0.8%	4.6%	21.79	1.93

Areas with good transit service and a good mix of land uses showed the highest percentage of alternative mode use (41.9 percent combined). Conversely, the remainder of the region showed the highest percentage of automobile use (87.3 percent). This indicates that individuals are likely to use the automobile when no other choices exist, but may choose other alternatives when they are available. The results of this study support this region's effort to link land use and transportation planning as a means to provide a balanced, multi-modal transportation system.

Conclusions

Assessment of federal, state and regional mandates and analysis of data from the Region 2040 process produced the following conclusions:

Transportation Implications

- The transportation system must serve the urban form established in the 2040 Growth Concept if the region is to be successful in managing expected growth.
- In addition to supporting implementation of the 2040 Growth Concept, policy implementation must give top priority to projects or programs that maintain or preserve existing transportation infrastructure and address safety-related deficiencies, including the safety of pedestrians and cyclists.
- Transportation investment should be a priority in key target areas, particularly the central city, regional centers, industrial areas, transit corridors and station areas.
- The density of the regional street network must be expanded to accommodate planned population and employment growth, particularly in areas where significant increases in density are planned, such as regional centers. Portions of the existing street network also warrant expansion to meet new demands. These new or expanded streets must be designed as multi-modal facilities, reflecting the variety of travel demands that accompany each land-use component.
- Higher-density, mixed-use locations should be tied to the highest quality transit and should provide improved pedestrian and bicycling environments.
- Improved transit, pedestrian and bicycle travel, parking limits and other transportation demand management actions complement higher-density land use designations and will help achieve mandated 10 percent reduction in VMT per capita in the UGB by 2015 and a 20 percent reduction by 2025.
- Local governments should implement code changes that address building orientation and pedestrian access to transit, particularly in higher-density centers and corridors, consistent with requirements contained in the Oregon Transportation Planning Rule.
- Access to highway corridors that connect the region to neighboring towns must be limited to reduce urban development pressure on adjacent rural lands.
- Specific urban connector routes through rural areas outside the Metro UGB should be designated as such and designed to ensure safe, efficient travel while discouraging urban

development. Other rural routes should be limited to serve only rural needs to reduce urban development pressure.

- Parking limitations, pedestrian amenities and compact, more densely developed urban areas should be implemented to reduce vehicle miles traveled and to increase transit ridership.
- Local street connectivity must be improved for more direct local access to reduce excess demand on regional routes and to promote alternative modes.
- A balance between jobs and housing within the market areas of regional centers can minimize travel needs for both shorter commutes and closer access to retail and other commercial services.
- The projected growth in the flow of goods in this region is an important consideration in the region's land-use and transportation planning efforts. This significant growth points to the need to make available adequate land for expansion of intermodal facilities, manufacturing, wholesale and distribution activities and to continue maintaining and enhancing the freight transportation network.

Air Quality Implications

- Metro must establish minimum and maximum parking ratios consistent with air quality maintenance plans. In areas where transit is provided or other non-auto modes are convenient, less parking should be provided while allowing accessibility and mobility for all modes, including autos. See Table 2 of the Urban Growth Management Functional Plan.
- Regional transportation investment should maintain compliance with air quality standards. Investment should support regional transit service hours increases averaging at least 1.5 percent annually, completion of the west-side light rail transit facility and completion of the light rail transit facility in the South/North corridor by the year 2007.
- If greater reduction of transportation-related pollutant emissions becomes necessary to assure maintenance of the ozone standard, federal transportation funding may increasingly be diverted to trip reduction programs and transit, bike and pedestrian capital projects. Accordingly, all major roadway expansion, construction or reconstruction projects must include pedestrian and bicycle facilities.

Water Quality Implications

Impervious surfaces are hard surfaces that do not allow water to soak into the ground, and increase the amount of storm water running off into the storm water drainage system. The majority of total impervious surfaces is from roads, sidewalks, parking lots and driveways. Storm water runoff from these impervious surfaces reduces the amount of recharge of water to ground water and increases the capacity requirements of the storm water drainage system. Higher impervious surface coverage has been linked to dramatic changes in the shape of streams, water quality, water temperature and the health of the flora and fauna that live in the natural waterways. Examples of impervious surface reduction techniques include:

- consider use of open channels and swales on smaller streets and roads, as long as runoff velocities are low enough to prevent erosion;
- grade sidewalks so that storm water runs off into adjacent unpaved areas such as planting strips or landscaped private property;
- encourage the use of shared parking to reduce the size and number of parking lots;

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- consider reducing commercial, industrial and multi-family use parking requirements to reduce impervious surface coverage;
- encourage shared driveways between adjacent development projects;
- follow guidelines for erosion control techniques during construction of regional streets and adjacent development projects.

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Table 2.4 Level-of-Service (LOS) Definitions for Freeways, Arterials and Signalized Intersections

LOS	Freeways (average travel speed assuming 70 mph design speed)	Arterials (average travel speed assuming a typical free flow speed of 40 mph)	Signalized Intersections (stopped delay per vehicle)	Traffic Flow Characteristics
A	Greater than 60 mph Average spacing: 22 car-lengths	Greater than 35 mph	Less than 5 seconds; most vehicles do not stop at all	Virtually free flow; completely unimpeded Volume/capacity ratio less than or equal to .60
B	57 to 60 mph Average spacing: 13 car-lengths	28 to 35 mph	5.1 to 15 seconds; more vehicles stop than for LOS A	Stable flow with slight delays; reasonably unimpeded Volume/capacity ratio .61 to .70
C	54 to 57 mph Average spacing: 9 car-lengths	22 to 28 mph	15.1 to 25 seconds; individual cycle failures may begin to appear	Stable flow with delays; less freedom to maneuver Volume/capacity ratio of .71 to .80
D	46 to 54 mph Average spacing: 6 car-lengths	17 to 22 mph	25.1 to 40 seconds; individual cycle failures are noticeable	High density, but stable flow Volume/capacity ratio of .81 to .90
E	30 to 46 mph Average spacing: 4 car-lengths	13 to 17 mph	40.1 to 60 seconds; individual cycle failures are frequent; poor progression	Operating conditions at or near capacity; unstable flow
F	Less than 30 mph Average spacing: bumper-to-bumper	Less than 13 mph	Greater than 60 seconds; not acceptable for most drivers	Forced flow, breakdown conditions Volume/capacity ratio of greater than 1.00
>F	Demand exceeds roadway capacity, limiting volume that can be carried, forcing excess demand onto parallel routes and extending the peak period			Demand/capacity ratios of greater than 1.10

Source: 1985 Highway Capacity Manual (A through F descriptions)
Metro (>F description)

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Parks & Openspaces

Chapter 3 Parks, Natural Areas, Open Spaces And Recreational Facilities

Overview

Parks, natural areas, open space, trails, greenways and associated recreational services provide important benefits to the visitors and citizens of the Portland metropolitan region including:

- Personal health benefits from leisure and fitness activities in local parks and open spaces (e.g., hiking, biking, field sports, playgrounds, swimming, picnicking, fishing, wildlife viewing). Recreational pursuits are vital to the social development of youth and the mental and emotional health of adults.
- Community benefits such as park access close to home, environmental education opportunities and community involvement in the planning and management of facilities. Parks and natural areas also provide unique landscape characteristics in the community.
- Economic benefits related to tourism and recreation industries and enhanced property values.
- Environmental benefits helping to maintain air and water resources, providing flood control and protecting fish and wildlife habitat.

Citizens throughout the region have demonstrated the importance of parks, natural areas and recreation services through their support in elections, opinion surveys, recreational activities and volunteer community service. Today, over 700 publicly-owned parks exist within and adjacent to the metropolitan region ranging from Mill End Park (18-inches in diameter) to Forest Park (4,683 acres). These facilities are managed by over 25 public park and recreation service providers. Metro currently manages more than 6,500 acres of land at more than 40 locations.

With increasing growth in the region, the demand for park facilities and recreational services has also increased. But the supply of facilities and services has not kept pace. The ability of parks providers to maintain existing parks is increasingly strained. Resources to acquire, develop, operate and maintain new parks are scarce. This is due to a variety of factors including an exclusive dedication of gas tax revenues to highway needs, significant reductions in federal appropriations for federal, state and local parks programs (e.g., Land and Water Conservation Fund), reductions in federal timber harvest receipts to counties, and property tax reduction measures.

Metro recognizes the desire of citizens to have quality natural areas and parks close to home. Metro is working with federal, state, and local governments to address and meet the park and recreation needs of the Portland metropolitan area. The Metro Charter, approved by voters of the region in 1992, authorizes Metro to acquire, develop, maintain, and operate a system of parks, open space, and recreational facilities of metropolitan concern.

The policies and implementation of the parks, open spaces and recreation component of the Regional Framework Plan is based upon the Metropolitan Greenspaces Master Plan, adopted by Metro Council in 1992. The Greenspaces Master Plan describes goals and policies related to establishing an interconnected system of natural areas, open space, trails, and greenways for wildlife and people throughout the metropolitan area. The master plan relates to a number of Regional Urban Growth Goals and Objectives (RUGGOs), particularly Objective 15 which calls for protection of natural areas, parks and fish and wildlife habitat.

This chapter of the Regional Framework Plan outlines the policies that guide Metro in providing services related to the provision of parks, open spaces, and recreational services. The policies reflect the importance of parks, natural areas and recreational facilities in the urban fabric of communities throughout the region, and offer measures to ensure that natural resources are protected and citizens are provided appropriate recreational opportunities and facilities, close to where they live. This chapter also directs Metro to develop a functional plan that will provide specific requirements for cities and counties related to the need for specific comprehensive plans and implementing ordinances that recognize the need for park and open space planning.

Policies (Goals and Objectives)

Metro policies related to parks, open spaces, and recreational services address inventory, protection, management and use of these resources at the regional and local levels. These policies have been derived from the Greenspaces Master Plan, the RUGGOs, the Future Vision Report, and recommendations from MPAC, the Greenspaces Technical Advisory Committee, and from citizens of the region.

3.1 Inventory of Park Facilities and Identification and Inventory of Regionally Significant Parks, Natural Areas, Open Spaces, Trails and Greenways

- 3.1.1 Metro will inventory and identify regionally significant parks, natural areas, open spaces, vacant lands, trails and greenways at the watershed level using topographical, geologic and biologic functions and features, i.e., "landscape ecology," to ensure coordinated protection and enhancement of natural functions such as water quality and wildlife habitat across jurisdictional boundaries.
- 3.1.2 Metro will identify natural corridors that connect regionally significant parks, natural areas, open spaces, trails and greenways. River and stream corridors, utility corridors, abandoned roads, and railroad rights-of-way will provide primary linkages.
- 3.1.3 Metro will inventory lands outside the Urban Growth Boundary and Metro's jurisdictional boundary and identify them as prospective components of the Regional System when protection of these lands are determined to be of direct benefit to the region.

- 3.1.4 Metro shall identify urban areas which are deficient in natural areas and identify opportunities for acquisition and restoration.
- 3.1.5 Metro, with the assistance of local governments shall update the parks inventory which was completed in 1988. The inventory shall include acreage, facilities, environmental education programs, cultural resources, existing school sites and other information as determined by Metro and the Greenspaces Technical Advisory Committee. This inventory should be updated at five (5) year intervals.
- 3.1.6 Using appropriate landscape level techniques, such as remote sensing or aerial photo interpretation, Metro will inventory the urban forestry canopy on a periodic basis and will provide inventory information to local jurisdictions.

3.2 Protection of Regionally Significant Parks, Natural Areas, Open Spaces, Trails and Greenways

- 3.2.1 Metro will continue to develop a Regional System of Parks, Natural Areas, Open Spaces, Trails, and Greenways (the Regional System) to achieve the following objectives:
 - a) protect the region's biodiversity;
 - b) provide citizens opportunities for, primarily, natural resource dependent recreation and education;
 - c) contribute to the protection of air and water quality; and
 - d) provide natural buffers and connections between communities.
- 3.2.2 Metro, upon the advice of citizens, and in coordination with local governments and state and federal resource agencies and appropriate non-profit organizations, will finance and coordinate protection and management of the Regional System across jurisdictional boundaries.
- 3.2.3 Strategies to protect and manage the Regional System and regional Goal 5 resources will include, but not be limited to, acquisition, education, incentives, land use and environmental regulations.
- 3.2.4 Lands inside and outside the Urban Growth Boundary and Metro's jurisdiction will be included in the Regional System when protection of these lands are determined to be of direct benefit to the region.
- 3.2.5 Metro shall collect and evaluate baseline data related to natural resource values of the regional system to identify trends and to guide management decisions.
- 3.2.6 New transportation and utility projects shall seek to avoid fragmentation and degradation of components of the Regional System. If avoidance is infeasible, impacts shall be minimized and mitigated.

- 3.2.7 Metro, in conjunction with affected local governments will work with the State to update, reinvigorate and implement a Willamette River Greenway Plan for the metropolitan region.

3.3 Management of the Publicly-Owned Portion of the Regional System of Parks, Natural Areas, Open Spaces, Trails and Greenways

- 3.3.1 Metro will assume management responsibility for elements of the publicly owned portion of the Regional System, as outlined in a functional plan to be developed.
- 3.3.2 Metro will assume financial responsibility related to those portions of the publicly owned system which are managed by Metro.
- 3.3.3 Local governments shall be given an opportunity to transfer existing publicly owned components of the Regional System to Metro and to acquire components of the Regional System with local resources.
- 3.3.4 The publicly owned portion of the Regional System shall be managed to protect fish, wildlife, and botanic values and to provide, primarily, natural resource dependent recreational and educational opportunities.
- 3.3.5 Metro will acquire portions of the Regional System as financial resources allow. Metro will negotiate acquisition agreements primarily with willing sellers. Power of eminent domain will be used only in extraordinary circumstances.
- 3.3.6 Master/Management plans shall be developed for each component of the Regional system to insure public use is compatible with natural and cultural resource protection. Master/Management plans shall be completed prior to formal public use.
- 3.3.7 Metro and local government cooperators in the Regional System shall be responsive to recreation demands and trends identified in the State Comprehensive Outdoor Recreation Plan (SCORP).
- 3.3.8 Metro shall develop master planning guidelines to assure consistency in the management of the Regional System.
- 3.3.9 From time to time, or in conjunction with the periodic up-date of the region wide parks inventory, Metro shall convene local government park providers to share information, review and analyze issues, and if appropriate develop recommendations related to:
1. roles and responsibilities
 2. funding
 3. levels of service
 4. information needs
 5. user trends and preferences
 6. technical assistance

7. interagency coordination
 8. public involvement
 9. other topics as determined by Metro and local park providers
- 3.3.10 Metro, in cooperation with local governments, shall pursue the identification and implementation of a long term, stable funding source to support the planning, acquisition, development, management and maintenance of the Regional System.

3.4 Protection, Establishment and Management of a Regional Trails System

- 3.4.1 Metro will identify a Regional Trails System which shall be included in the Regional Transportation Plan.
- 3.4.2 The Regional Trail System shall provide access to publicly owned parks, natural areas, open spaces, and greenways, where appropriate.
- 3.4.3 Metro will coordinate planning for the Regional Trail System with local governments, federal and state agencies, utility providers, and appropriate non-profit organizations
- 3.4.4 Metro will cooperate with citizens and other trail providers to identify and secure funding for development and operation of the Regional Trails System.
- 3.4.5 Metro shall encourage local governments to integrate local and neighborhood trail systems with the Regional Trail System.

3.5 Provision of Community and Neighborhood Parks, Open Spaces, Natural Areas, Trails and Recreation Programs

- 3.5.1 Metro shall recognize that local governments shall remain responsible for the planning and provision of community and neighborhood parks, local open spaces, natural areas, sports fields, recreational centers, trails, and associated programs within their jurisdictions.
- 3.5.2 Pending adoption and implementation of the functional plan referenced in section 3.5.8, Metro shall encourage local governments to (I) adopt level of service standards for provision of parks, natural areas, trails, and recreational facilities in their local comprehensive plans and (II) locate and orient such parks, open spaces, natural areas, trails, etc., to the extent practical, in a manner which promotes non-vehicular access. "Level of service standards" means: a formally adopted, measurable goal or set of goals related to the provision of parks and recreation services, based on community need that could include but not be limited to: 1) park acreage per 1,000 population; 2) park facility type per 1,000 population; 3) percentage of total land base, dedicated to parks, trails and open spaces; 4) spatial distribution of park facilities.
- 3.5.3 Metro shall encourage local governments to be responsive to recreation demand trends identified in the State Comprehensive Outdoor Recreation Plan (SCORP).

- 3.5.4 Metro shall encourage local governments to develop, adopt and implement Master Plans for local parks and trail systems, natural areas, and recreational programs.
- 3.5.5 Metro, in cooperation with local governments, state government, and private industry shall work to establish a supplemental funding source for parks and open space acquisition, operations and maintenance.
- 3.5.6 Metro shall encourage local governments to identify opportunities for cooperation and cost efficiencies with non-profit organizations, other governmental entities, and local school districts.
- 3.5.7 Urban Reserve master plans shall demonstrate that planning requirements for the acquisition and protection of adequate land to meet or exceed locally adopted levels of service standards for the provision of public parks, natural areas, trails, and recreational facilities, will be adopted in the local comprehensive plans. Lands which are undevelopable due to natural hazards or environmental protection purposes (i.e., steep slopes, floodways, riparian corridors, wetlands, etc.) shall not be considered to meet the natural area level of service standards unless the land will be preserved in perpetuity for public benefit. Proposed public parks, open spaces, natural areas, trails, etc. shall be located in a manner which promotes non-vehicular traffic. No urban reserve area shall be brought within the Urban Growth Boundary unless the requirements set out in this subsection 3.5.7 are met.
- 3.5.8 Metro, in cooperation with local governments shall develop a functional plan which establishes the criteria which local governments shall address in adopting a locally determined "level of service standard." The functional plan shall also establish region-wide goals for the provision of parks and open space in various urban design types identified in the 2040 regional growth concept. The functional plan shall apply to the portion of the region within the Urban Growth Boundary and the urban reserves within Metro's jurisdiction when urban reserve conceptual plans are approved.
- 3.5.9 Metro will work with local governments to promote a broader understanding of the importance of open space to the success of the 2040 Growth Concept and to develop tools to assess open space on a parity with jobs, housing, and transportation targets in the Regional Framework Plan.

3.6 Participation of Citizens in Environmental Education, Planning, Stewardship Activities, and Recreational Services.

- 3.6.1 Metro will encourage public participation in natural, cultural and recreation resource management decisions related to the Regional System.
- 3.6.2 Metro will provide educational opportunities to enhance understanding, enjoyment and informed use of natural, cultural, and recreational resources.

- 3.6.3 Metro will provide and promote opportunities for the public to engage in stewardship activities on publicly owned natural resource lands. Cooperative efforts between Metro and private non-profit groups, community groups, schools and other public agencies should be encouraged.
- 3.6.4 Metro should provide opportunities for technical assistance to private owners for stewardship of components of the Regional System.
- 3.6.5 Metro and local governments should work with state, federal, non-profit and private partners to facilitate stewardship and educational opportunities on publicly owned natural resource lands.
- 3.6.6 Metro shall encourage local governments to provide opportunities for public involvement in the planning and delivery of recreational facilities and services.
- 3.6.7 Metro will follow and promote the citizen participation values inherent in RUGGO Goal 1, Objective 1 and the Metro Citizen Involvement Principles.

Requirements

This Regional Framework Plan requires Metro in conjunction with local governments to develop a functional plan that will address land use planning requirements that:

- identify and delineate an interconnected regional system of parks, natural areas, open spaces, trails and greenways (the Regional System);
- identify implementation measures to protect and manage the Regional System; and
- establish local government land use planning criteria and goals for parks consistent with policy 3.5.8.

Background

For decades, parks have played a vital role in the quality of life in the metropolitan region. In 1903, visiting landscape architects Frederick Law Olmsted, Jr. and John Charles Olmsted discussed a newly-emerging American notion of making nature urbane and, thus, naturalizing the city. In their report to the Portland Parks Board, the Olmsteds noted, "While there are many things, both small and great, which may contribute to the beauty of a great city, unquestionably one of the greatest is a comprehensive system of parks and parkways."

From the time of the Olmsteds' report through the 1960s, the city of Portland was the primary population center and primary parks provider in the region. With continuing urban growth through the 1970s, suburban communities outside the central city established new and expanded parks and recreation programs. A primary emphasis of these programs was, and continues to be, the provision of facilities for active recreation such as sports fields, swimming pools, playgrounds and associated recreation programs.

In 1974, the State of Oregon issued the Willamette River Greenway Plan outlining protection and acquisition proposals for the Willamette River from Cottage Grove to its confluence with the Columbia River. The Plan directs development away from the river, establishes a greenway setback line, requires inventories be completed and requires protection of significant fish and wildlife habitats, vegetative fringe, scenic qualities and viewpoints.

The State of Oregon requires all cities and counties to develop comprehensive plans. These comprehensive plans must address State Land Use Planning Goals including: Goal 5, Open Spaces, Scenic and Historic Areas and Natural Resources; Goal 6, Air, Water and Land Resources Quality; Goal 8, Recreational needs and Goal 15, the Willamette River Greenway. Metro, as well as the cities and counties, must show that land use plans are consistent with these goals.

In 1989, Metro published the Metro Recreation Resource Study in a cooperative effort with other park providers in the region. The purpose of the study was to:

- identify existing public parks, natural areas and other recreational resources in the region;
- describe the general issues, problems, and opportunities relating to these resources;
- identify needed actions to provide adequate park facilities and services in the Portland metropolitan region.

The study identified the need to increase the inventory of park facilities and services and address the need for additional natural area park facilities in the metropolitan region, in response to the growing demand for natural resource-based recreational opportunities (e.g., hiking, biking, fishing, boating, camping, wildlife watching) close to home. Publicly-owned and managed natural areas were found to be limited to, primarily, Forest Park, Oxbow Park and Tryon Creek State Park. A regional, cooperative planning approach was recommended to address this issue.

In 1990, the Metro Council established two advisory committees to coordinate development of a regional natural areas master plan to guide protection and management of regionally significant natural areas in the region. The Greenspaces Technical Advisory Committee is composed of parks and natural resource professionals in local jurisdictions, state and federal agencies and representatives of nonprofit advocacy groups for parks, natural areas, open spaces, trails and greenways.

A Greenspaces Policy Advisory Committee consisting of elected officials from local jurisdictions in the region, including Clark County, oversaw development of the Metropolitan Greenspaces Master Plan, which the Metro Council adopted in 1992. The Greenspaces Policy Advisory Committee was replaced by a citizen-based Regional Parks and Greenspaces Advisory Committee in 1995 to advise the Metro Council, Metro Executive Officer and the Metro Regional Parks and Greenspaces Department on a variety of issues affecting regional parks and natural area facilities and services.

In 1993, Multnomah County approached Metro concerning the possible consolidation of its Parks Services Division with Metro's Greenspaces Program. The consolidation was consistent with each agency's desire to support its own mission (e.g., growth management for Metro; social services for Multnomah County) and was expected to further the regional vision embodied in the Metropolitan

Greenspaces Master Plan. In December 1993, Metro Council approved the merger of the Multnomah County Parks Division with Metro's Greenspaces program, creating the Metro Regional Parks and Greenspaces Department.

The new department began operations in January 1994. Combining Metro's planning experience with park management experience greatly enhanced Metro's ability to acquire, develop, maintain, and operate a system of parks, natural areas, and recreational facilities of regional significance. It also put Metro in a position to better support local parks providers in coordination and planning activities. The parks merger allowed Metro to address and coordinate issues common to all local park providers. For example, Metro coordinated the identification of 90 local park acquisition and improvement projects which were included in the 1995 open space, parks, and streams bond measure.

In 1995, Metro referred a \$135.6 million bond measure to voters of the region that identified 14 regional acquisition target areas, 6 regional greenway and trail projects and 90 local natural area acquisition and development projects that supported the goals of the Metropolitan Greenspaces Master Plan. Voters of the Portland metropolitan region approved Measure 26-26 in May 1995. Metro's goal is to acquire approximately 6,000 acres within the 14 regional target acquisition areas and corridors.

The Future Vision Report (1995) required by the Metro Charter also identifies parks and natural areas as valuable components of a livable community. The report states that:

- "We value a life close to nature incorporated in the urban landscape."
- "We value nature for its own sake, and recognize our responsibility as stewards of the region's natural resources."
- "...this region is recognized as a unique ecosystem...which seeks to:
 - improve air and water quality, and increase biodiversity;
 - protect views of Mt. Hood, Mt. St. Helens, Mt. Rainier, Mt. Adams, Mt. Jefferson, and other Cascade and coastal peaks;
 - provide greenspaces and parks within walking distance of every household;
 - assure a close and supportive relationship among natural resources, landscape, the built environment, and the economy of the region; and
 - restore ecosystems, complemented by planning and development initiatives that preserve the fruits of those labors."

In addition, the RUGGOs state under Objective 15 that:

"Sufficient open space in the urban region shall be acquired, or otherwise protected, and managed to provide reasonable and convenient access to sites for passive and active recreation. An open space system capable of sustaining or enhancing native wildlife and plant populations should be established."

"15.1 Quantifiable targets for setting aside certain amounts and types of open space should be identified.

- 15.2 Corridor Systems- The regional planning process shall be used to coordinate the development of interconnected recreational and wildlife corridors within the metropolitan region
- 15.2.1 A region-wide system of trails should be developed to link public and private open space resources within and between jurisdictions.
- 15.2.2 A region-wide system of linked significant wildlife habitats should be developed. This system should be preserved, restored where appropriate, and managed to maintain the region's biodiversity (number of species and plants and animals).
- 15.2.3 A Willamette River Greenway Plan for the region should be implemented by the turn of the century."

The policies in this chapter capture the intent of the RUGGOs, Future Vision and Metropolitan Greenspaces Master Plan related to providing an adequate and viable system of parks, natural areas, trails, greenways and recreational programs and services in the Portland metropolitan region.

Analysis

A key element of the 2040 Growth Concept for accommodating future urban growth in the region includes encouraging a compact urban design. This means smaller lots in much of the new development and where transit service levels are high, such as in regional and town centers, mainstreets and station communities, residential development types including rowhouses and multi-family development.

New neighborhoods and communities should include adequate parks and open spaces. Planning for the acquisition and protection of land for parks and open spaces should be included in planning for future urbanization inside and outside the Urban Growth Boundary. A crucial issue related to parks, natural areas and recreation in the region is how communities will work together to plan for the provision of these important public facilities and services.

Identification and Inventory of the Regional System

The development of the Metropolitan Greenspaces Master Plan required the systematic, scientific identification, inventory and assessment of natural area features in the metropolitan region. A consultant team was assembled by Metro in 1989 to conduct the inventory and analysis of the Portland metropolitan region to identify regionally significant natural areas and corridors for fish, wildlife and natural resource dependent recreation.

The natural areas inventory was based on aerial photography of the total study area (372,682 acres) with biological field checks of seven percent of the natural areas mapped. Periodic updates of the inventory will be necessary to assess the status of regionally significant natural areas, monitor trends and to support future planning and management efforts. Future work will be based on systematic and scientific methods of identifying and delineating natural resource lands and maintaining and managing links between them on a landscape level.

New inventories are needed in order to accomplish the following:

- Reevaluate protection priorities established in the Metropolitan Greenspaces Master Plan. Some sites identified may no longer be considered regionally significant. New sites may be added to the regionally significant inventory once updated data are available.
- Delineate regionally significant natural areas; research and document the natural resources values for which protection should be justified and supported.
- Delineate and conduct field assessments of biological corridors that interconnect regionally significant sites.
- Assure that the regional system of parks, natural areas, open spaces, trails and greenways contributes to the maximum extent, based on scientific data, to the protection of water quality, fish, wildlife and botanic diversity within the region.
- Inventory existing park facilities, recreational capacity and analysis of park service needs and consistency with the 2040 Growth Concept.

Protection of the Regional System

Ecological principles are important in establishing protection priorities including:

- Maintaining biological diversity by protecting and enhancing a variety of habitats such as wetlands, riparian corridors, forests, and agricultural lands distributed throughout the metropolitan area;
- Consolidating natural areas to create or maintain relatively large contiguous acreages connected to natural habitats outside the urban environment to avoid habitat fragmentation and species isolation;
- Protecting, restoring, and recreating stream corridor vegetation by replacing riparian vegetation where it is lacking or dominated by exotic species and removing barriers, where possible, to maintain connections with adjacent upland habitats;
- Protecting or restoring naturally vegetated connections between watersheds at headwaters or other appropriate locations; and
- Planning for capital improvements to provide appropriate access and use of parks and natural areas.

A variety of strategies will be used to protect and manage the regional system of parks, natural areas, trails and greenways to support fish and wildlife populations as well as provide a variety of recreational opportunities. These include:

1. Acquisition;
2. Environmental education, stewardship and landowner incentives;
3. Land use and environmental regulations.

Acquisition

One effective means of natural resource protection is public acquisition from willing sellers. The Open Spaces Parks and Streams Bond Measure 26-26, approved by voters in 1995, provided funds for the acquisition of open space in 14 regional areas and 6 regional greenway and trail corridors.

The measure also provided funds for up to 90 local greenspace projects which support or complement the Metropolitan Greenspaces Master Plan.

Since 1990, voters in Gresham, Lake Oswego, Portland, Tualatin, Tualatin Hills Park and Recreation District and other jurisdictions have approved general obligation bond issues which support, in part, elements of the Metropolitan Greenspaces Master Plan and other active recreation facilities and services needs.

More than \$6 million in federal transportation funding under the Intermodal Surface Transportation Efficiency Act of 1991 has been invested in trail projects in the region. Land acquisition can also be supported through donations of land, conservation easements and dedication of land as open space.

Environmental education and incentive programs

Environmental education and incentive programs have the capacity to provide a level of protection for park and natural areas. Building an increased understanding and awareness of metropolitan natural resource values and the benefits of parks in general leads to informed management decisions and increased public participation in volunteer stewardship activities. An informed public uses parks and natural areas in ways that help reduce maintenance costs. Incentive programs (e.g., grants, tax reductions, technical support) provide public agencies and private parties support in the restoration, enhancement, and management of natural areas.

Land Use and Environmental Regulations

Oregon land use policies and regulations provide limited protection of natural resources in the metropolitan region. Local governments can use the comprehensive land use planning process to establish protective zoning standards to protect natural resources within their jurisdictions, but often apply them inconsistently. Natural resource management on a regional basis offers the opportunity for uniform standards to protect these resource values. Coordinated local planning efforts are needed to assure that an adequate supply of park land is available to meet the future demand for community and neighborhoods parks, sports fields, recreation centers and locally significant open space trails and greenways.

Title 3 of Metro's Urban Growth Management Functional Plan is a first step towards protecting water quality and water features such as streams and wetlands from human disturbances by requiring vegetated buffers. Title 3 also requires Metro to conduct a regional assessment for identification and protection of Goal 5 resources (see section under Goal 5).

A combination of strategies will be required to protect and connect a regional system of parks, natural areas, trails and greenways for fish, wildlife and people. Metro will work with local governments, state and federal agencies, conservation organizations, businesses and citizens to review, refine and further implement these protection strategies.

Management of the Regional System

The Metro Charter provides for Metro to serve as a regional provider of parks, natural areas, and recreational facilities. The 1994 City Club of Portland report, Portland Metropolitan Area Parks, cites the value of a regional parks authority. A cooperative, regional management approach can result in equitable distribution of facilities, funding equity, consistency in planning, management and operation of facilities and user benefits.

Currently, regionally significant parks, natural areas and trails are managed by a variety of public entities with a variety of financial resources. There is little consistency in development, operation and management standards and little or no integration regarding funding, user fees, or visitor services. Tax reform initiatives may have serious implications for local and state agencies' abilities to operate and maintain existing parks for the region's growing population. Local governments, in particular, may at some point wish to transfer management of regionally significant facilities to Metro, to address funding equity issues and allow local providers to focus on community and neighborhood parks and other facilities and programs related to active recreation.

Site specific management begins with the preparation of master/management plans. The primary purpose of a master plan is to articulate management, development and operation guidelines. Master/management plans should be prepared for the system of regional parks, natural areas, open spaces, trails and greenways. Metro will prepare guidelines for master planning to ensure consistency in management of the Regional System.. Sites which lack master/management plans will be "landbanked" and public use limited until appropriate facilities and services can be planned, developed and maintained.

Metro should provide the forum for addressing issues related to the coordination and integration of management, and of service delivery related to parks, open spaces and recreation. Metro should lead an effort to study and evaluate how park and recreation services are provided and recommend actions which will improve funding stability and equity, operational efficiency, customer service, management integration, coordination, and continuity.

Regional Trail and Greenway System

In their report to the Portland Parks Board in 1903, the Olmsted brothers observed that a system of interconnected parks serves the public far better than a collection of isolated pieces of land. Trails and greenways provide the connective network necessary to link the region's parks and natural areas, while providing public access and corridors to support movement of fish and wildlife. Trails and greenways also link communities and connect the Metro urban area to the Pacific Coast, Cascade Mountains and Washington state.

Since 1988, Metro has staffed a Regional Trails and Greenways Working Group composed of parks/trails/bike planners from local, regional, state and federal agencies, and nonprofit trail organizations. The working group assisted Metro in developing the trails and greenways component

of the Greenspaces Master Plan. Thirty-five trail and greenway corridors are identified in the master plan.

Refinement of the trails and greenways component has been ongoing since the Greenspaces Master Plan was adopted in 1992. Citizen involvement plays an important role in trail planning. For example, the Peninsula Crossing Trail was added to the Regional Trail System in 1993 at the request of residents of North Portland. Many of the trails and greenways segments support local comprehensive plans and/or local parks and trails master plans.

In 1996, Metro commissioned a Rails and Trails Strategic Plan which inventoried rail right-of-ways throughout the region and identified those having trail potential, should abandonment occur. Abandoned rail lines provide outstanding trail opportunities. The Springwater Corridor Trail, for example, was envisioned to link the metropolitan area with Mt. Hood National Forest. Constructed segments now link S.E. McLoughlin in Portland with the city of Gresham and provide 16.8 miles of trail, utilized by an estimated 500-600 thousand people per year.

Public planning and transportation agencies incorporate elements of the Regional Trails Plan into state, regional, and local transportation projects and urban development projects (e.g., Mt. Hood Parkway, Sunrise Corridor, Hwy. 30 Corridor Study; Multnomah County West Hills Study).

Provision of Community and Neighborhood Parks, Open Spaces, Trails and Recreation Programs

Cities and two special districts (i.e., Tualatin Park and Recreation District; North Clackamas Park and Recreation District) in the region are responsible for community and neighborhood parks, open spaces, trails, and recreation programs. The 1994 City Club of Portland report, *Portland Metropolitan Area Parks*, assessed and considered a vision for parks in the region. The report concluded that the size and configuration of the current parks and recreation system is inadequate to meet current and future demand. In order to address this perceived inadequacy, the "completion ... of the core system" was envisioned.

In essence, a core system of parks would ensure that a "minimum level of parks and recreation facilities ... be available to all citizens regardless of income or geography in the metro area." The approach was based on assessing local community values and making adjustments to reflect "separate social goals... held by a specific community." Not surprisingly, neighborhood and community parks were the first element of this system.

The City Club report recommended the provision of parks be coordinated with other basic services including schools, public safety, land use and transportation planning, and watershed management. Citing Portland as an example, the survey concluded that a "multi-generational community center at each middle school" should provide local communities in the region with a place of education, recreation, and congregation.

Local governments and park and recreation districts have been and will continue to be the primary providers of community and neighborhood parks, open space, trails, sports fields, recreation centers and recreation programs. These facilities and programs provide important opportunities for active and passive recreation in closest proximity to where citizens live.

Local governments should be encouraged to prepare park and recreation master plans which provide a framework for community level park and recreation facilities, trails and recreation programs.

Master plans should:

- Identify parks deficient areas and include strategies for addressing these deficiencies;
- Integrate local trail systems with the regional trails system;
- Identify opportunities for cooperation and cost efficiencies between communities, schools, and quasi-public organizations such as the YMCA;
- Provide for citizen involvement in the development and implementation of master plans;
- Identify funding strategies and implementation schedules;
- Be responsive to the State Comprehensive Outdoor Recreation Plan (SCORP);
- Complement the Regional System.

Metro should identify and evaluate opportunities to assist local governments and park and recreation districts with development and implementation of master plans. Potential opportunities include:

- Develop a functional plan, in conjunction with local governments which will address needed land use planning for parks, open spaces, natural areas, trails and recreation programs. Land use planning should reflect that locally chosen "levels of service" in terms of parks per population or per acre should be used to guide the need for additional resources;
- Provide mapping and information services through the agency's Data Resources Center to support local planning efforts;
- Provide forums for the exchange of ideas, information, strategies and development of partnerships between providers, schools, and quasi-public organizations;
- Provide funding support by incorporating local parks components in regional funding strategies and continuing the restoration and education grants program;
- Advocate for the identification and implementation of state and federal funding sources which provide financial resources to supplement local investments in parks, open spaces, trails, recreation facilities and programs;

Participation of Citizens in Planning, Stewardship, Environmental Education and Recreational Activities

"What is not understood is not valued, what is not valued will not be protected, what is not protected will be lost." Charles Jordan, Portland Bureau of Parks and Recreation.

Public understanding and participation in the planning and protection of the region's parks, natural areas, open spaces, trails, greenways and recreational facilities are the foundation of successful parks and recreation services. Meaningful citizen involvement is fundamental to an effective response to community needs, it results in more responsive management through identification of appropriate

priorities, and enhances financial and volunteer support. Metro, local governments, businesses and citizens working together must build a stewardship ethic and provide meaningful opportunities for public participation to assure parks and recreational services meet the needs of the metropolitan region and ensure the protection of natural resources.

As members of the public gain a comprehensive understanding of parks and natural area needs and opportunities, they will become active partners in efforts to determine future planning choices, and conduct periodic public review of local master plans and other related plans. Citizens can provide guidance through forums, participation on advisory committees, and in various other capacities.

Goal 5

In Oregon, local governments carry out planning to protect natural areas consistent with the State Land Use Planning Program. This land use program requires local governments to conform with up to nineteen statewide planning goals. Goal 5, Open Spaces, Scenic and Historic Area and Natural Resources is one of the key goals which can result in tools for protecting urban natural areas at the local level in the metropolitan region. A study, *To Save or to Pave; Planning for the Protection of Urban Natural Areas*, by the Portland Audubon Society and 1000 Friends of Oregon (1994), analyzed and evaluated the implementation of Goal 5 in the metropolitan region in protecting urban natural resources during the last decade. Some of the important findings from the study are listed below:

- Over three-fourths of local decisions examined allowed degradation of natural and scenic resources.
- Goal 5's rules were site specific and did not protect resources on an ecosystem or landscape level.
- Local governments employed a variety of regulatory and non-regulatory techniques with no overall consistency in an area.
- Goal 5 does not require standardized inventories or methods of data collection. As a result, important areas were omitted from consideration for protection, and inventories did not contain enough information to guide local planning decisions.
- Enforcement of local Goal 5 programs is difficult, inadequate and too reliant on citizen efforts.
- Upland forests are the least protected resource, and are vulnerable to destruction.

Metro has addressed natural resource issues in three policy documents: 1) the Metropolitan Greenspaces Master Plan (1992), 2) the Regional Urban Growth Goals and Objectives (RUGGOs) (1995), and 3) Title 3 of the Urban Growth Management Functional Plan (1996).

The Greenspaces Master Plan, adopted in 1992, through a mapping and public process, identified 57 sites in our metropolitan area that retained significant natural biological characteristics. Seventeen of these 57 sites are in the process of been acquired through the Open Spaces Parks and Streams Bond Measure 26-26. The remaining 40 sites are in private ownership, and are being lost to development at the rate of 6 percent per year. These sites are all Goal 5 areas and effective land use regulations under the Goal 5 rule help protect these regionally significant sites.

Title 3 of the Urban Growth Management Functional Plan (Water Quality and Floodplain Management Conservation) could set performance standards to protect streams, wetlands and floodplains by limiting or mitigating the impacts of development activities. Title 3 addresses Goal 6 and 7 and does not currently address Goal 5. Title 3 (Section 5 Fish and Wildlife Conservation Area) recommends local governments to address fish and wildlife habitat, but does not mandate any protection of these resources at this time. Title 3 does, however, require that Metro conduct a regional assessment of regionally significant Goal 5 resources and evaluate the protection of these resources. Based on this analysis, Metro will develop a strategy and action plan to address inadequacies in the protection of regional Goal 5 resources. This plan will be carried out by Metro. Local jurisdictions may be required to also adopt protective measures through amendments to the Functional Plan.

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Water Management

Chapter 4 Water

This Chapter is divided into two sections: Part 1, Urban Water Supply and Part 2, Watershed Management and Water Quality.

Part 1 Urban Water Supply

Overview

Clean and sufficient quantities of water are essential to the people of the region, as well as their commerce, agriculture and economic viability. It is not only important, however, to have adequate supply, but that supply must be able to reach where people are living throughout the region. How water is supplied to the region can also have impacts on the natural environment, including whether there is sufficient water for fish and wildlife habitats. This highlights the important linkage between growth management planning and planning for the provision of water supply and its related infrastructure.

This section of the Regional Framework Plan sets out the policies, their background and analysis implications, and the implementation plan and regulations concerning urban water supply and storage.

Policies (Goals and Objectives)

4.1 General Policy Direction

The Metro Council has communicated to the region's water providers that its main interests in water supply planning and implementation focus on water conservation and the link between land use and water supply. Metro has not assumed any function related to transmission, storage and distribution of drinking water. Based on this, future Metro policies will primarily concentrate on:

- promoting and achieving regional water conservation and demand management goals as defined in the Regional Water Supply Plan;
- promoting the coordination between regional growth management programs and water supply planning;
- promoting the coordination between land use planning and achieving the goals of the Regional Water Supply Plan; and
- setting benchmarks and evaluating achievement of the targets and goals established in the Regional Water Supply Plan in coordination with the region's water providers.

4.2 Process

The regional planning process shall be used to continue coordination with the implementation of the adopted RWSP and any future updates of that plan to ensure that future needs for water supply are appropriately met.

A regional strategy and plan for the Regional Framework Plan element linking demand management, water supply sources and storage shall be developed to address future growth in cooperation with the Regional Water Providers Consortium and the region's water providers.

The regional strategy and plan element shall be based upon the adopted 1996 Regional Water Supply Plan, which contain integrated regional strategies for demand management, new water sources and storage/transmission linkages. Metro shall evaluate its future role in encouraging conservation on a regional basis to promote the efficient use of water resources and develop any necessary regional plans/programs to address Metro's future role in coordination with the region's water providers.

Participants in the RWSP as members of the Regional Water Providers Consortium have endorsed the following policy objectives to guide their cooperative efforts in regional water supply planning. These same policy objectives appear in the RWSP where they are intended to provide guidance for weighing and balancing the strategies contained in the plan and for any future updates of the plan. All Consortium participants have agreed to collaborate and coordinate on regional water supply planning; however, the regional water providers have reserved the power to make their own determinations of how to carry out these policies.

Specific policy directions identified in the RWSP include the following:

4.3 Efficient Use of Water

- Maximize the efficient use of water resources, taking in to account current and emerging conservation opportunities, availability of supplies, practicality, and relative cost-effectiveness of the options.
- Make the best use of available supplies before developing new ones.

4.4 Water Supply Shortages

- Minimize the frequency, magnitude, and duration of water shortages through a variety of methods including development and operation of efficient water supply systems, watershed protection and water conservation.
- Ensure that the frequency, duration and magnitude of shortages can be managed.
- Ensure that decision makers retain the flexibility to select appropriate risk levels for peak event water shortages given applicable future conditions, constraints, and community values.

4.5 Impacts of Catastrophic Events

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

4.6 Water Quality

- Meet or surpass all current federal and state water quality standards for finished water.
- Utilize sources with the highest raw water quality.
- Maximize the ability to protect water quality in the future, including support for and participation in watershed-protection and pollution-prevention based approaches.
- Maximize the ability to deal with aesthetic factors, such as taste, color, hardness and odor.

4.7 Economic Costs and Cost Equity

- Minimize the economic impact of capital and operating costs of new water resources on customers.
- Ensure the ability to allocate capital and operating costs (e.g., rate impacts) for new water supply, related infrastructure, and conservation water savings, among existing customers, future customers, and other customer groups, proportional to benefits derived by the respective customer group(s).
- Maximize cooperative partnerships to co-sponsor projects and programs that provide mutual and multiple benefits.

4.8 Environmental Stewardship

- Minimize (i.e., avoid, reduce and/or mitigate) the impact of water resource development on the natural and human environments.
- Foster protection of environmental values through water source protection and enhancement efforts, and conservation.

4.9 Growth and Land Use Planning

- Be consistent with Metro's regional growth strategy and local land-use plans.
- Facilitate and promote effective Regional Water Supply Plan implementation through local and regional land use planning and growth management programs.

4.10 Flexibility to Deal with Future Uncertainty

- Maximize the ability to anticipate and respond to unforeseen future events and changes in forecasted trends. All potential water supplies will be kept as potential sources, including the Willamette River.

4.11 Ease of Implementation

- Maximize the ability to address current and future local, state, and federal legislative and regulatory requirements in a timely manner.

4.12 Operational Flexibility

- Maximize operational flexibility to best meet the needs of the region, including the ability to move water around the region and to rely on backup sources as necessary.

Ensure that the plan includes flexible strategies for meeting both sub-regional and regional water demands in the near-term and beyond

Background

Metro's involvement in regional water resource planning extends back to the 1960's and 1970's when Metro's predecessor, the Columbia Regional Area Government (CRAG) compiled water and sewer infrastructure needs, and met federal reporting mandates. This work coincided, in part, with a rapid surge of suburban growth in Oregon dating back to the 1950's. During the decade of the 1960's, residents in the Willamette Valley began to regard higher costs for services imposed on governments and urban development patterns with concern. Combined with an outspoken and environmentally-minded governor, Tom McCall, the late-1960's direction in Oregon was to protect the state from the "grasping wastrels of the land." The state established the Oregon Department of Environmental Quality (DEQ) in 1969 to administer and monitor statewide environmental standards associated with existing federal mandates.

In 1973, the Legislature passed Senate Bill 100, calling for the formation of the Land Conservation and Development Commission (LCDC) to monitor compliance of local plans with state goals. State planning goals were written to link concerns about urban development with environmental protection measures. Goal 14 established the concept of urban growth boundaries (UGB) to separate urban from rural lands. The establishment of the UGB was considered not only a tool to reduce land extensive development, but also as a way to help minimize costs of extending public services and facilities, such as water and its transmission piping.

At the national level there was a parallel course of events that led to the of the enactment of the Clean Water Act (CWA) in 1972, and the formation of the Environmental Protection Agency (EPA) to track progress towards the goals of the CWA.