

***TransPlan* Transportation Demand Management Element Refinement**

Preliminary Draft

And Related Background Materials

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Note – This Preliminary Draft serves as a beginning point for the development of the TDM element of the three-year update of the Regional Transportation Plan. As part of the update process, the draft presented in May could undergo significant change depending on other elements of the update, public input, and policy direction from MPC.

May 2003

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The contents of this document do not necessarily reflect views or policies of the State of Oregon.

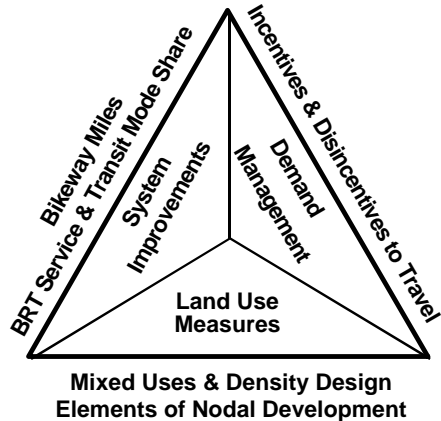
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Introduction

Transportation Demand Management (TDM) is one of three fundamental components of transportation planning used to structure TransPlan. This component is supported by policies and a program of strategies that strive to reduce demand on the transportation system. As indicated in Chapter 4 of TransPlan, while Population and employment increase by 41% and 43% respectively, congested miles of travel is expected to increase by 81% over the planning horizon. Given this, the TransPlan TDM strategies play a critical role in the region's efforts to meet its transportation goals.

TDM is also an essential complimentary element to successful implementation of TransPlan's core strategies of Nodal Development and BRT. The diagram below depicts the synergistic relationship that exists between the key elements of TransPlan and their combined ability to reduce automobile dependency. The effectiveness of combining Transportation System Improvements (TSI), TDM and Land Use policies, programs and services is relative to the degree in which auto dependency is diminished.



As residential, retail and commercial densities increase in specific areas, urban design features can be implemented that give more emphasis to the mobility of pedestrian, bicycle and transit modes. The addition of parking constraints within a limited area further affects the use of the automobile. Connecting nodal developments with a fixed, frequent transit service provides competition for similar trips that would have originally been made using an automobile.

While TDM strategies in and of themselves, BRT and nodal development are further enhanced through the strategies and techniques of a regional TDM program. TDM strategies and actions provide comprehensive information about and incentives to use alternative transportation programs, services and facilities to residents and employees in nodal developments.

Purpose of TDM Refinement Plan

The currently adopted TransPlan has a TDM element that provides policy guidance and outlines a range of potential strategies for implementation. However, the current TDM elements in TransPlan do not specify the TDM implementation actions that will be undertaken. Currently, Commuter Solutions, housed at LTD, manages the regional TDM program and has developed a strategic plan ("*Commuter Solutions 2000-2005 Strategic Plan*") containing the specific strategies and actions anticipated over the next 4 years based on funding currently programmed in the Statewide Transportation Improvement Program (STIP). At this point, the Strategic Plan has only been reviewed by the TDM Subcommittee (who crafted it) and the LTD Board and is not a formal part of TransPlan.

Because the details of the current TDM program are not included in TransPlan, the adopting officials and community at large are not aware of the accomplishments of the current program and future funding needs for the program. Nor are the specific actions in the strategic plan tied to implementation of nodal development or BRT. TransPlan anticipates the capacity to expand the existing TDM program. However, to do so there is a need to diversify the funding (primarily State with match shared by Eugene, Springfield, Lane County, and LTD), increase the knowledge and support of the local adopting agencies and detail implementation projects.

This Preliminary Draft begins to address these problems through a refinement of the TDM element of TransPlan. The intent of the Refinement Plan is to take the detail included in the Commuter Solutions Strategic Plan and extend and add to that to cover the full planning horizon (2030) to be used in the next update of the Regional Transportation Plan. It will identify specific implementation measures needed to support the TDM policies in TransPlan based on LTD's *Commuter Solutions 2000-2005 Strategic Plan* and additional measures needed to specifically support the implementation of Nodal Development and BRT. Background materials developed in the course of preparing this draft have been attached as Appendices.

TDM Policies

TransPlan transportation demand management (TDM) policies direct the development and implementation of actions that encourage the use of modes other than single-occupant vehicles to meet daily travel needs. The TDM policies support changes in travel behavior to reduce traffic congestion and the need for additional road capacity and parking and to support desired patterns of development.

The policies listed below are the policies included in the currently adopted version of TransPlan.

TDM Policy #1: TDM Program Development

Expand existing TDM programs and develop new TDM programs. Establish TDM bench marks and if the benchmarks are not achieved, mandatory programs may be established.

Policy Definition/Intent: This policy supports expansion and development of a broad spectrum of local and regional TDM programs at varying levels of implementation. TDM programs will focus on reducing trips for nonwork purposes, as well as for work commutes. Voluntary participation in TDM programs will be encouraged through marketing and incentives to target audiences, including the general public, developers, employers, employees, school administrators, and students. An adequate funding program must be developed to support implementation of TDM programs. This policy also supports the exploration of opportunities to establish a market-based, user-oriented approach to TDM through the use of transportation pricing measures.

Reference: *TransPlan* 1986, Policies AM3, AM7, TSM2; Decision Package, November 1996, Strategy 2; TPR 660-12-045(5)(b).

TDM Policy #2: Parking Management

Increase the use of motor vehicle parking management strategies in selected areas throughout the Eugene-Springfield metropolitan area.

Policy Definition/Intent: Parking management strategies address both the supply and demand for vehicle parking. They contribute to balancing travel demand within the region among the various modes of transportation available. To promote parking equity in the region, consideration should be given to applying parking management strategies at a region-wide level, in addition to downtown centers.

Reference: *TransPlan* 1986 Parking Policy section; Decision Package, November 1996, Strategy 4; TPR 660-12-045(5)(c).

TDM Policy #3: Congestion Management

Implement TDM strategies to manage demand at congested locations.

Policy Definition/Intent: Encouraging the use of alternative modes will become more important as the region grows and traffic congestion levels increase. A variety of strategies can be employed to help maintain mobility in congested locations as the area develops. TDM strategies implemented to manage demand at congested locations will be coordinated with other types of congestion management strategies, such as access management. This policy supports selective application of mandatory TDM strategies to manage demand at congested locations. For example, local jurisdictions could be allowed to require employers to designate an employee transportation coordinator and to implement programs that encourage employees to use alternative modes.

Reference: Based on Decision Package, November 1996, Strategy 2.

TDM Implementation Actions

Overview of Existing TDM Program

TDM programs have been implemented at various levels by local agencies for several years. A summary of the history of TDM efforts in the region is provided in [Appendix 1](#). Ongoing TDM planning efforts include coordination by local jurisdiction staff subcommittee of the TPC. The committee's purpose includes TDM project development; monitoring the performance of the TDM program; and educating local agency staff on current TDM programs region, state, and nationwide. In addition, LCOG provides technical analysis of the impacts of various TDM actions as part of the planning process.

Commuter Solutions implements the TDM projects and reports the progress and results of the TDM program to the committee. LTD formalized its TDM program in fall 1994, when it started a new program called Commuter Solutions. Commuter Solutions offers area businesses, organizations, and educational institutions a comprehensive set of transportation programs for their employees and students. TDM strategies incorporated in the Commuter Solutions Program include discounted group bus pass programs, parking management, guaranteed ride home programs, transit vouchers, carpools and vanpools, Park-and-Ride facilities, bicycling, walking, telecommuting, and creative work scheduling. Commuter Solutions' TDM programs are described below.

Transit Incentives

Commuter Club Program

Commuter Solutions offers a transit voucher program called the Commuter Club. Businesses request transit vouchers from LTD to distribute to their employees who purchase monthly LTD bus passes. The employee pays 50 percent of the cost of the bus pass and the employer is invoiced for the remaining amount. With the new federal transportation fringe benefit tax law, costs for the purchase of transit passes or vouchers (up to a maximum of \$100 per employee per month) are a business expense, and the employee benefit is tax-free. LTD's monthly bus passes are only \$35 (prices effective September 2002); therefore, an employer can fully fund bus passes for employees and not reach the maximum allowable expenditure under federal law.

Group Pass Programs

Commuter Solutions Program offers employers with at least 10 employees a discounted bus pass program called the Group Pass Program. Group Pass Program participants sign an annual contract with LTD, and photo identification for each employee is required. Transportation education fairs and employee surveys are conducted annually at each work site to maintain visibility and encourage increased participation in alternative modes programs. The total number of local area employees with group pass benefits is approximately 32,000.

Guaranteed Ride Home Program

Commuter Solutions' Guaranteed Ride Home Program provides transportation in case of a family emergency or sudden illness for employees who use alternative modes of transportation for their work commute. Research has shown that the desire to have a vehicle at work in case of a family emergency is the main reason workers continue to drive alone. Usually a taxi voucher is supplied to designated staff, and the voucher is signed for the employee needing the taxi ride. The taxi company then completes and signs the voucher, keeping a copy, and bills the employer for the taxi ride. Most employers participating in a Guaranteed Ride Home Program in our area provide four (4) emergency taxi rides per person per year; however, actual usage has been minimal. Instead of using a taxi, some employers either provide a vehicle for the employee or allow a coworker to take the employee to his or her destination. For the employee who is considering riding the bus, carpooling, vanpooling, biking, or walking, the Guaranteed Ride Home Program provides an answer to the question of what if?

School Trip Management

LTD currently sells an average of 1,900 passes each month to Eugene area middle and high school students.

Bicycle Programs

Bicycle Commuting Programs

Programs and assistance are available to employers on how to facilitate the needs of bicycle commuters as well as how to promote and encourage bicycling as an alternative to the solo auto commute. LTD works closely with the City of Eugene's Bicycle Coordinator and with the City of Springfield's transportation planning staff to encourage safe bicycle access and secure bicycle parking facilities.

Bicycles on Buses Program

LTD added bicycle racks to all LTD buses in June 1996. Bicycle racks on transit buses encourage bicycle use in our community by meeting the needs of bicycle riders. Increased bicycle use reduces the number of VMT in the area, is one of the cleanest and healthiest ways to get around, and is rapidly becoming a way to get to work. LTD currently transports 15,000 bicycles monthly.

Bicycle Cages Available

New bicycle cages are now available at three locations: River Road Station, Thurston Station, and Amazon Station. Each location has a cluster of nine separate bicycle cages. Bicycle riders need to supply their own locks.

Parking

Parking Management

Parking Management and Transportation Management staff from the cities of Eugene and Springfield and LTD work closely on transportation management strategies to encourage the use of alternative modes of transportation in our metropolitan area. LTD works with local agencies to ensure that adequate carpool spaces are available in new and upgraded parking lots and reviews development plans for transit access, bicycle and pedestrian access, and parking needs. The City of Eugene, University of Oregon, and Sacred Heart also provides preferential carpool spaces in their parking garages.

Park-and-Ride Program

LTD operates more than 24 Park-and-Ride locations throughout the area. Park-and-Ride lots are conveniently located along major bus routes, and many locations are served by express or direct bus service, limiting the travel time to one's destination. Park-and-Ride lots also are popular meeting places for carpools and vanpools.

Commuter Solutions Outreach and Marketing

Employer/Employee Outreach

The primary mission of the Commuter Solutions Program is business outreach, education, and providing alternative transportation services to solo drivers. The benefits, both to the individual and the business/organization, are magnified in the results the community receives from successful alternative transportation programs. Outreach methods include direct mail, business referrals, newsletter and media coverage, leads from local planning staff, public service campaigns, advertising, presentations, and individual telephone contact. As a result of outreach efforts, Commuter Solutions information packets have been mailed to over 400 businesses in the Eugene-Springfield area.

Marketing

Marketing the services provided by the Commuter Solutions Program is critical to the success of the program. Employer/employee participants and potential participants need to be informed of the services provided by Commuter Solutions and of the benefits received by participating; personally, locally, and globally. Marketing efforts include direct mail, telephone contact, news releases, newsletter articles, site visits, paid print advertising, group presentations, referrals, and public service announcements (television, radio, and print). Additionally, internal research, marketing, and incentive programs are conducted at participating work sites.

Creative Work Weeks

Commuter Solutions staff assists and helps educate employers and employees on creative work schedules that can result in reduced peak-hour travel demand. Creative work schedules are an effective congestion management strategy. Elements in the program include staggered work hours, compressed work weeks, and flex-time. Encouraging an employer to consider on-site day care, food services, and shopping services is also an element in the Commuter Solutions Program.

Telecommuting

Telecommuting is using telephones, computers, and other equipment to work at home, usually one to three days a week. Commuter Solutions offers information and referral services to businesses and individuals inquiring about telecommuting. Business and individual tax credit information also is available.

Ride Matching Services

Carpool Matching Services

When the Commuter Solutions Program was created at LTD in 1994, funding was made available to install and operate a new carpool matching software program.

In December 1995 and January 1996, Commuter Solutions staff conducted carpool registration drives at several employer work sites. LTD currently has over 300 applicants in the carpool database and is

working to match carpoolers and to track the number of carpools formed.

Vanpool Matching Services and Support

Commuter Solutions provides assistance for any group of individuals or any employer wishing to form a vanpool. Vanpool participants are matched by Commuter Solutions staff and assistance and guidelines are provided to help get the vanpool operational. Vanpools are cost effective to operate if the daily work commute is more than 20 miles and six or more individuals join the vanpool.

TDM Implementation Process

Funding for the programs described above is primarily provided through the STIP process and by LTD. Priorities for STIP funding are coordinated by LCOG through the metropolitan planning process required by ISTEA and TEA 21. The TDM committee develops and prioritizes the projects. TPC makes a formal recommendation to the Metropolitan Policy Committee (MPC). priorities are forwarded to ODOT's Region 2 Manager for programming consideration. The OTC makes the final determination on which TDM projects are funded by ODOT. Historically, ODOT has allocated approximately \$60-\$200,000 per year to TDM programs with local match provided by Eugene, Springfield, Lane County, and LTD. The funding is primarily for operating expenses, though a part is eligible for capital grant expenditures. Successful implementation of TDM requires additional funds above what is currently spent.

Alternative TDM Scenarios

Because this is a preliminary draft which will be further refined, a single scenario is not presented. Rather, two scenarios are presented to carry into the RTP update. Evaluation of the alternative scenarios led to selection of two of the scenarios – the existing program and a regulatory scenario – representing a range of potential directions to consider in the RTP update for the TDM program. This section describes the approach used in developing the alternatives. The two alternative scenarios are further described in the sections that follow.

The underlying intent of the TDM Refinement Plan is to provide more specific TDM activities in the framework of the overall regional transportation plan. For purposes of analyzing the effectiveness of alternative packages of TDM strategies, staff developed six alternative TDM scenarios consisting of three budget levels in both a voluntary and regulatory environment. These alternative scenarios are presented in Appendix 3

Alternative Budget Levels

The three budget levels include:

1. 50 percent of current funding: The FY2002-2005 Statewide Transportation Improvement Plan provides for \$111,000 annually from ODOT which is equivalent to 50 percent of current funding.
2. Current funding level: Existing funding level.

3. Three times existing budget: This budget scenario is meant to provide insight on what an additional investment in TDM might yield.

Table 1 in Appendix 3 describes the six scenarios of TDM alternative strategies. Under each scenario, packages of strategies are grouped according to Commuter Solutions program components.

Voluntary and Regulatory Environments

TDM strategies can be implemented along a spectrum ranging from voluntary to regulatory. The TDM policies included in TransPlan call for an expansion of current activities within the voluntary part of the spectrum. Policy #1 also includes language calling for the establishment of TDM benchmarks. Policy #1 goes on to say that “mandatory programs may be established,” should those benchmarks not be met. However, mandatory, or regulatory TDM strategies can range in regulatory intensity from the Employee Commute Option (ECO) strategy currently in place in Portland to no-drive days, bridge tolls, and congestion pricing.

Staff discussed the factors which might prompt the region or individual jurisdictions within the region to move to a more regulatory environment. The primary factor staff considered was whether or not the region could achieve the TransPlan goals and associated local goals, or state and federal requirements. For example, the ECO strategy is in place in Portland in order for that region to come in to compliance with federal air quality standards. More regulatory strategies might be implemented to address state requirements related to mobility. Finally, regulatory TDM measures might be used by an individual jurisdiction to achieve specific local goals. For purposes of this preliminary draft , it is assumed that, in the regulatory scenarios, the focus of regulation is on the more moderate regulatory strategies associated with ECO strategies.

TDM Implementation Actions

TDM strategies differ from other types of investments proposed in TransPlan. Whereas an improvement to the roadway system or the addition of a bikeway are meant to be long-lasting and address multiple purposes, TDM strategies are most effective when they can be applied in the context of specific, short-run transportation problems. In other words, they can and should be tailored to fit specific problems. For that reason, TDM strategies are categorized into broader, programmatic elements (Education and awareness, Technical Assistance, and Research). Within these specific elements, certain strategies may be used over the planning period to address different, geographically-specific issues. For example, the formation of a Transportation Management Area is currently being developed in the Gateway area. This strategy, which brings together the businesses in a specific area, can be applied over time to several other areas in the region depending on need.

To best integrate TDM actions with other implementation strategies in TransPlan, they should be applied along congested corridors, in nodal development areas, along BRT routes, and in support of Priority Bikeways. The attached map illustrates the areas in which TDM actions would be applied over the planning period. The map identifies currently congested corridors, the proposed BRT routing, Priority Bikeways, nodal development areas, and existing and potential special

project areas (e.g., the Gateway area). Also included on the map are the locations of businesses currently participating in the Commuter Solutions program.

TDM Action Project List

The following project categories are included in the TDM Implementation Action Projects list:

1. **Education & Awareness** - Commuter Solutions' provides educational programs and marketing services that encourage, promote, and inform businesses owners, employees, schools, and general public on TDM strategies and programs' benefits.
2. **Technical Assistance & Services** - Commuter Solutions' offers programs, services, and strategies to the region's communities, businesses, and school districts to assist in the establishment of TDM programs. services, and strategies.
3. **Research** - Commuter Solutions' evaluates programs, services, and strategies to areas of high congestion prior to implementation. Performance measurements are employed to monitor programs, services, and strategies effectiveness.

The table below summarizes total estimated cost for TDM Implementation Actions over the course of the planning horizon (to 2030).

Summary of TDM Implementation Actions		
(2005-2030)		
	<i>Total Estimated Cost</i>	
<i>Action Category</i>	<i>Current Program</i>	<i>Regulatory 3X Budget</i>
1. Education & Awareness	\$ 1,755,000	\$ 5,265,000
2. Technical Assistance & Services	\$ 2,873,000	\$ 8,619,000
3. Research	\$ 949,000	\$ 2,847,000
Total TDM Implementation Actions	\$ 5,577,000	\$ 16,731,000

Table 1 provides a listing of the specific TDM actions that would be accomplished under each of the two alternative TDM Scenarios described in this Preliminary Draft Refinement Plan. Table 1A provides the listing of TDM actions for the Current Budget Scenario. Table 1B provides the listing of TDM actions for the Regulatory 3X Budget Scenario. In each table each action is described and cost estimates are provided for 3 time periods. The first 5 years of the plan are represented in the Short-Term (2005-2009). The second 10 years are represented in the Medium-Term (2010-2019). The final 11 years of the planning period are represented in the Long-Term (2020-2030). The Current Budget Scenario is based on an annual TDM budget of \$214,000; which represents the current annual budget level. The Regulatory 3X Budget Scenario is based on a budget 3 times the existing annual budget - \$643,500 annually.

TDM Planning and Program Actions

Planning and Program Actions represent a range of regionally significant planning, administrative, and support actions that might be used to implement *TransPlan* policies. Local

jurisdictions will use their discretion to evaluate and prioritize Planning and Program Action implementation. The Planning and Program Actions are not adopted, meaning they are not binding or limiting to any implementing jurisdiction. TDM planning and program actions encourage the use of transportation modes other than single-occupant vehicles to achieve reductions in VMT and reduce reliance on the automobile. The success of TDM efforts is dependent upon the availability and quality of alternative mode infrastructure. Thus, TDM Planning and Program Actions will be closely coordinated with the transit and bicycle/pedestrian Capital Investment Actions and the implementation of nodal development.

Table 2 presents TDM planning and program actions for both the Current Budget and Regulatory 3X Existing Budget scenarios. The table outlines which of the planning and program actions contained in the currently adopted version of TransPlan might be used under each TDM scenario.

TDM Parking Management Plan

This section presents Planning and Program Actions related to parking management that meet the parking requirements of the TPR, while maintaining a parking supply that supports the economic health of the community. Parking management needs to be looked at regionally, while providing jurisdictional flexibility.

Parking management strategies are an important part of an integrated set of implementation actions that support nodal development, system improvements, and demand management. A vast supply of free and subsidized parking can encourage automobile use over use of alternative modes. A limited, rather than abundant supply of parking can encourage use of non-auto modes, especially transit. There is also a direct relationship between the price of parking and the use of public transit.

Parking management strategies address both the supply and demand for vehicle parking. They contribute to balancing travel demand with the region among the various modes of transportation available. Parking management strategies are effective in increasing the use of alternative modes, especially when combined with other TDM strategies. Supportive TDM programs include carpool/vanpool programs, preferential parking and reserved spaces for carpooling, and parking pricing.

TPR Requirements for Parking Space Reduction

The TPR requires a parking plan that achieves a 10 percent reduction in the number of parking spaces per capita in the metropolitan area over the 20-year planning period. For the Eugene-Springfield region, the TPR reduction goal is .514. If the level of parking density (spaces per developed acre) remains constant and land development and population forecasts are accurate, then the level of parking spaces per capita will be reduced by more than the 10 percent reduction required by the TPR.

Estimated Parking Supply 1995 to 2015

Zone/Plan Designation	1995		2015		2015 TPR Goal	
	Total Spaces	Spaces Per Capita	Total Spaces	Spaces Per Capita	Total Spaces	Spaces Per Capita
Commercial	51,259	.229	57,865	.194	61,618	.207
Industrial	27,622	.124	30,200	.101	33,205	.111
Institutional	48,692	.218	49,067	.165	58,534	.196
Total	127,573	.571	137,132	.460	153,357	.514

Capital Investment Actions

Capital Investment Actions that support non-auto modes have an indirect impact on parking needs by lowering the demand for spaces in higher density areas. For example, Park-and-Ride facilities can contribute to lowering the demand for parking in downtown areas. Transit Capital Investment Actions call for the establishment of Park-and-Ride facilities throughout the Eugene-Springfield area.

Parking Management Planning and Program Actions

TransPlan policy #2 supports increased use of motor vehicle parking management strategies in selected areas throughout the Eugene-Springfield metropolitan area.

TDM Policy #2: Parking Management

Increase the use of motor vehicle parking management strategies in selected areas throughout the Eugene-Springfield metropolitan area.

The City of Eugene established policy that made specific recommendations regarding parking reduction within the Eugene city limits through the adoption of the CATS and the Transportation rule Implementation Project (TRIP). CATS recommended a range of parking policies and TRIP refined and implemented several of these strategies.

1. Supply Strategies

- 1.1. Establish maximum allotments for parking. (TPR 660-12-045(5)(c))
- 1.2. Increase the use of Park-and-Ride lots to reduce parking demand in the city centers and other intensely developed areas.
- 1.3. Allow parking exemptions.
- 1.4. Lower or eliminate minimum parking requirements. (*TransPlan* 1986 Policy PK3; TPR 660-12-045(5)(c))
- 1.5. Encourage construction of parking structures rather than surface parking.
- 1.6. Expand the number of carpool/vanpool parking spaces in City-owned lots and provide financial incentives to use those spaces.

2. Demand Strategies

- 2.1. Provide incentives, such as employer payroll tax reductions and automobile parking requirement reductions, to employers who implement preferential parking

- for carpools and vanpools in new developments with designated employee parking areas, transit pass programs or other alternative modes employee benefits.
- 2.2. Shift free parking areas to paid parking where appropriate.
 - 2.3. Encourage employers to charge fair market prices for employee parking. (*TransPlan* 1986 Policy PK6.)
 - 2.4. Provide preferential parking for carpools and vanpools in new developments with designated employee parking areas. (TPR 660-12-045(4)(d))
 - 2.5. Manage overflow parking impacts in residential areas through residential parking permit programs. (Based on *TransPlan* 1986 Policy PK7.)
 - 2.6. Encourage adherence to parking regulations by expanding enforcement programs and increasing parking fines. (*TransPlan* 1986 Policy PK9.)
 - 2.7. Establish shorter time limits on parking in high demand areas, such as on-street parking near employment centers. (*TransPlan* 1986 Policy PK8.)

Work Program for Integration of TDM Refinement Plan into 3-year RTP Update

Over the course of the development of TransPlan (1992-2002); TDM, as it is implemented in the Eugene-Springfield area, saw a significant change in scope and sophistication. With the establishment of the Commuter Solutions Program in 1995, a program of TDM strategies have been provided including discounted group pass programs, transit vouchers, guaranteed ride home programs, information on telecommuting and the associated tax benefits, Park & Rides, carpool/vanpool matching, support services, and parking management information.

As indicated in the Introduction, because the details of the current Commuter Solutions program are not included in TransPlan, the adopting officials and community at large are not aware of the accomplishments of the current program and future funding needs for the program. Nor are the specific actions in the strategic plan tied to implementation of nodal development or BRT or other elements of TransPlan. TransPlan anticipates the capacity to expand the existing TDM program. However, to do so there is a need to meet the following objectives:

1. Expand the local policy awareness of and support for regional TDM efforts,
2. Diversify the funding (currently State with match shared by Eugene, Springfield, Lane County, and LTD),
3. Increase the knowledge and support of the local adopting agencies and
4. Detail implementation projects.

This Preliminary Draft of the TDM Refinement Plan provides a starting point for addressing the actions identified above. The effort incorporated in this draft to identify specific ways in which TDM can support the implementation of BRT and Nodal Development, the development of two alternative TDM scenarios each with a long-range set of TDM Implementation Actions significantly increase the integration of TDM with other parts of TransPlan.

This effort needs to be built upon during the three-year update of the Regional Transportation Plan (RTP). To integrate this work into the RTP Update, the following steps are needed:

- a) Incorporate products of the Refinement Plan process into RTP Update scope of work – the RTP Update scope of work will not need to include tasks that would duplicate work already completed as part of the Refinement Plan process. For example, the research done to establish the framework of strategies (described in Appendix 2), the staff work done to compile the TDM measures supportive of BRT and Nodal Development, and the update of specific information on the Commuter Solutions program contained in the Refinement Plan can be taken in to the RTP Update with little additional work. The RTP scope of work will incorporate products of the Refinement Plan process.
- b) Incorporate TDM options into overall plan alternative evaluation process – the alternatives evaluated as a part of the three year update can incorporate the TDM alternative scenarios developed as part of the Refinement Plan.

- c) Develop TDM performance measures to be included in plan update – It will be important for the next RTP Update to include a set of performance measures for Regional TDM actions. Without those measures, it is difficult to determine the relative effectiveness of TDM actions, both in terms of which TDM measures are most effective and how specific TDM actions compare to other possible actions and investments included in the RTP.

Appendices – TDM Refinement Plan Background Materials

Overview of Background Materials

In Metropolitan Planning Organization areas using alternative performance measures to meet Transportation Planning Rule (TPR) requirements, the TPR requires development of an Integrated Land Use Transportation Plan including:

A transportation demand management plan that includes significant new transportation demand management measures.

In addition, TDM is an essential complimentary element to successful implementation of TransPlan's core strategies of Nodal Development and BRT.

Through use of a TGM grant, LCOG developed a TDM Refinement Plan to respond to the TPR requirement and to better integrate TDM activities in the region with the implementation of Nodal Development and BRT. These appendices provide some of the background materials used to develop the Preliminary Draft of the TransPlan TDM Element Refinement.

- **Appendix 1** details the history of the regional TDM program
- **Appendix 2** describes the framework used to integrate TDM with other elements of TransPlan. It categorizes the range of TDM strategies and summarizes the technical evaluation of those strategies. This appendix also provides a summary of discussions held with nodal development and BRT planners identifying ways in which TDM strategies can be used to support implementation of BRT and nodal development.
- **Appendix 3** summarizes the development of the alternative TDM scenarios
- **Appendix 4** provides a copy of the TDM Findings used in the currently adopted version of TransPlan.

Appendix 1. History of TDM Efforts in Eugene-Springfield

This section provides the history of the regional TDM programs. It reviews former and current regional programs, services, and land use actions.

Bicycling / Walking

Targeted planning to enhance bike use in the Eugene-Springfield area began early in the 1970s. The Eugene Bicycle Committee, formed in 1970, took the lead in this effort. By 1975, the Committee completed - and governing officials adopted - the Eugene Bikeways Master Plan and the Metropolitan Bikeway Master Plan. The City hired a full time Bicycle Coordinator to assist with plan implementation. Eugene quickly implemented both on and off street bikeways. By 1980, nearly 50 miles of bikeways had been completed, including over 10 miles of off-street paths, 20 miles of striped bicycle lanes, and 13 miles of signed bikeways. Presently a core system of 115 miles bikeways exist in Eugene. Springfield has paths and central city bikeways equaling 48 miles.

The Bicycle Committee disbanded in the early 1990s and the Eugene Bicycle Coalition replaced it. In the early 1980s, the City of Eugene expanded the staff's role from Bicycle Coordinator to Bikes/Alternative Modes Coordinator to include walking.

Since 1978 the region has collected systems development charges to help our infrastructure expand to meet development needs. Included in those fees are some designated to provide paths and their lighting. In addition, federal and state funds have been used for adding paths or upgrading (to City standards) streets with bike facilities.

TakePart:

In the late 1970s The City of Eugene received a federal grant to implement a carpool program. The program, TakePart, included a car and vanpool matching service and marketing. The program successfully provided van pool matching services for commuters between Eugene and Salem.

Upon implementation of TakePart's carpool program, the City of Eugene contributed in kind services by providing free carpool parking to carpools of three or more who commuted to and from work at least four days a week. In addition, two-person carpools were given a 20% reduction in monthly parking fees. At the height of the program. the city offered and reserved 100 spaces for carpooling citizens. This included on street carpool reserved spaces at the University of Oregon and Sacred Heart Hospital. Due to lack of participation and the need to free up spaces, the number has dwindled to less than 50 spaces.

Commuter Solutions

In 1995, Lane Transit District assumed the role of regional TDM coordination through a grant by the Federal Transit Administration . The new program, Commuter Solutions, offered regional employers, organizations and educational institutions transportation management strategies including discounted group pass programs, transit vouchers, guaranteed ride home programs,

information on teleworking and association tax benefits, Park and Rides, carpool/vanpool matching supporting services and parking management information.

Growth of the program has been steady. The Commuter Solutions Group Pass Program, a monthly transit pass benefit program, saw an increase in participation from six initial employers in 1995 to over 35 in 2002. Regionally this represents 32,000 employees and students.

Commuter Solutions' car and vanpool matching service links van commuters to Eugene, Springfield, Salem, Corvallis, Cottage Grove, Creswell and Oakridge. Trans-Match, the regional carpool matching database, serves 300 carpoolers within the metropolitan area. Commuter Solutions also offers on-line carpool registration.

Regional Coordination Efforts:

Commuter Solutions is directed by a committee made up of the region's jurisdictions and governing bodies (City of Eugene, City of Springfield, Lane Council of Governments, Lane Transit District, Lane County, Lane Regional Air Pollution Authority). This representation allows for regional multi-modal planning within the Eugene-Springfield metropolitan area.

Moreover, Commuter Solutions provides technical assistance to other regional communities with critical congestion. Currently the program is collaborating with businesses and Coburg City officials to create TDM solutions to congestion safety concerns. Other regional support includes an intercity rural vanpool program between Oakridge and the Eugene - Springfield metropolitan area.

HISTORICAL TDM PERFORMANCE

The following table provides a 30-year overview of TDM performance in the Eugene-Springfield metropolitan area. Economical and social events had impacts on carpooling. The gas crisis of the 1970s spurred people to sign up for carpooling. Once gas prices fell, so did the numbers of registered carpoolers. During this time, LTD assumed responsibility for carpool matching and instituted a new data base program. The level of public agency support for carpooling also decreased after an initial offering available city parking spaces.

EUGENE/SPRINGFIELD TDM PERFORMANCE REVIEW				
	1970	1980	1990	2000
Bikeway miles	---	66	73	112
Bike commute mode split	---	8%	5.9%	6.1%
Annual Bus Ridership	613,000	4,358,051	4,505,340	5,997,120
Bus Passes	N/A	N/A	12,871	35,454
# in Carpool Matching Data Base	5,000	N/A	150	300

Summary

The initial TDM program, TakePart, focused on car and van pool matching services in Lane County. Employer outreach mainly occurred in Eugene. With parking management support through the City of Eugene coupled with the gas crisis of the 1970s, the program had moderate to good success. Efforts to encourage and support bicycling centered on the development of bikeways within Eugene/Springfield. The City of Eugene expanded the focus on alternative modes to include walking.

Appendix 2. TDM Integration Framework

TDM consists of a broad set of actions oriented toward encouraging the use of modes other than the single-occupant vehicle to reduce VMT and reliance on the auto. The Vancouver Transport Policy Institute's *TDM Encyclopedia* provides a useful categorization of these actions. TDM strategies can be assigned to one or more of these categories:

1. *Improved Transportation Choice.* These strategies improve the range and quality of transportation services available to target populations.
2. *Incentives To Use Alternative Modes and Reduce Driving.* These strategies include various incentives that encourage people to shift to more efficient transportation options.
3. *Parking Management.* These strategies focus on increasing the efficiency of auto parking and also include the provision of bicycle parking.
4. *Policy And Institutional Reforms.* These are organizational changes that overcome barriers and provide support for TDM implementation.
5. *Land Use Management.* These strategies result in more accessible land use patterns that reduce the need for travel and make alternative modes more convenient.
6. *TDM Programs and Program Support.* A program implements a suitable combination of complementary TDM strategies. Programs have specific goals and objectives, responsibilities and activities, staff and budgets.

Table 1 provides a listing of the specific strategies in the TDM Encyclopedia, organized by category. An analysis has been conducted to compare this listing of strategies with the actions identified as part of the TransPlan Update process. The analysis indicates that the listing in Table 1 is inclusive of the set of strategies identified during the TransPlan Update. Given that result, the listing of 62 strategies in Table 1 constitutes the universe of potential strategies to be used in the development of the preliminary TDM Refinement Plan.¹

Project staff met with land use planning staff from Eugene and Springfield to identify TDM strategies that might support the implementation of nodal development. Staff also met separately with BRT planners to discuss those TDM activities that might best support implementation of BRT. The results of these meetings provided a focus to the development of a list of TDM projects that would best integrate with the rest of TransPlan. A brief summary of those meetings is provided below.

TDM Strategies Supporting the Implementation of Nodal Development

TDM measures that are expected to be most effective in supporting the implementation of nodal development were identified in a meeting with land use planners involved with the Eugene and Springfield's efforts to implement nodal development. These measures were categorized into 4 areas – capital improvements, parking management, education, and incentives as follows:

Capital Improvements

¹ It should be noted that there may be several different ways that a particular strategy can be implemented. For example, Parking Management can include several specific actions (allowing parking minimums, shared parking, parking pricing, etc.).

- Off-street bike paths
- Ped/bike bridges

Parking Management

- Long-term vehicle storage
- Reduced onsite parking requirements
- Reduced or eliminated parking minimums

Education/Coordination

- Possible brochure on “How To Benefit From Living In A Node”
- Transportation Management Areas (TMAs) formed in nodal development areas
- Car Sharing
- ITS – bus information tailored to specific nodal developments (schedule and real time availability)

Incentives

- Location Efficient Mortgages
- Bus passes to nodal residents

TDM Strategies Supporting the Implementation of BRT

A similar meeting was held with BRT planners to identify TDM strategies that can be expected to complement the implementation and operation of BRT. Based on discussion with BRT planners, the most effective TDM strategies are those that:

- address security concerns of riders,
- improve connectivity to BRT (bike paths, park and rides, parking adjacent to BRT stations)
- manage land use to facilitate concentration of activities (nodal development)
- provide information and education on the BRT service
- provide incentives for transit use (bus passes)
- provide space for bicycle on board BRT vehicles

In addition to discussing some of the key TDM strategies that are likely to complement BRT operations, the interaction between the BRT development process and TDM was discussed. An important outcome was the recognition that TDM could play a role as well as benefit from early involvement in the BRT development process. Specific TDM measures associated with BRT development are outlined in Table 3.

TPC Ranking of TDM Measures

Technical Ranking Method And Relationship To Project Objectives

Having identified a broad list of potential TDM strategies, it was important to conduct a ranking process to identify which strategies would best be suited to supporting the implementation of Nodal Development and BRT. A ranking process was developed incorporating criteria developed by the TDM Advisory Committee. To get a broad range of expertise involved in the evaluation process, the staff involved in the implementation of nodal development and BRT as well as TPC staff were recruited for the evaluation exercise. The exercise was conducted on October 9th, 2003. The results of that exercise are presented below.

Development of Criteria and Short List of Strategies

The TDM Advisory Committee developed the following set of criteria to be used in evaluating TDM strategies. The objective was to identify criteria that were consistent with the factors identified by implementing planners as important to the success of both nodal development and BRT. The criteria developed are listed below:

Increases Commuter Use of Alt Modes	Can be focused on areas of high congestion
Improves System Connectivity	Increases the Security of alt mode use
Manages Land Use & concentration of activity	Increases intermodal connectivity
increases reliability of alt modes	Improves the level of awareness of alt modes
Manages Parking Supply (level, type, location)	Increases effectiveness and speed of transit
Increases frequency of service	Politically Feasibility

Because of the complexity of the evaluation process, project staff determined that it would be important to have the technical evaluation focus on the most important TDM strategies. To reduce the number of strategies to a manageable number, project staff conducted a preliminary screening of the strategies. This screening considered the feasibility of the strategies and the overlaps among strategies.

Participants in the evaluation were given scoring sheets comprised of the TDM strategies and the criteria. The participants were instructed to evaluate the entire set of strategies considering one criterion at a time. For example, all strategies were evaluated as to their ability to increase commuter use of alternative modes before moving to the next criteria. In addition, participants were asked to evaluate each TDM strategy for nodal development and BRT separately.

Results of the technical evaluation are provided in Table 3. It should be noted that these results are not meant to preclude the use of any of the TDM options. Rather, they attempt to provide some sense of which strategies might be best suited to supporting the implementation of nodal development and BRT.

Table 1 VTPI TDM Encyclopedia Strategies by Category ¹

Strategy	Strategy Description
Improved Transport Options	
1. Address Security Concerns	Improving personal safety for walking, cycling, transit and urban infill.
2. Alternative Work Schedules	Flextime, Compressed Work Week (CWW), and staggered shifts used to reduce peak-period vehicle traffic.
3. Bicycle Improvements	Ways to improve bicycle transport.
4. Bike/Transit Integration	Ways to integrate bicycle and public transit to improve mobility.
5. Carsharing	Vehicle rental services intended to substitute for private vehicle ownership.
6. Flextime	Allowing employees flexibility in their daily work schedules to avoid peak-period traffic.
7. Guaranteed Ride Home	Programs that provide an occasional subsidized ride home to commuters who use alternative modes.
8. Individual Actions for Efficient Transport	Actions that individuals can take to travel more efficiently and support TDM in their community.
9. Nonmotorized Planning	Planning for walking, cycling, and small-wheeled transport.
10. Nonmotorized Facility Management	Managing and maintaining nonmotorized facilities such as walkways, sidewalks and paths.
11. Park & Ride	Programs to provide convenient parking at transit and rideshare stations.
12. Pedestrian Improvements	Ways to improve walking conditions.
13. Ridesharing	Ways to support and encourage carpooling and vanpooling.
14. Shuttle Services	Shuttle buses, jitneys and free transit zones.
15. Small Wheeled Transport	Accommodating roller skates, push scooters, handcarts and utility wagons for transportation.
16. Taxi Service Improvements	Ways to improve taxi services.
17. Telework (Telecommuting, Distance Learning, Tele-shopping, etc.)	Ways to encourage use of telecommunications as a substitute for physical travel.
18. Traffic Calming	Roadway design features that reduce vehicle traffic speeds and volumes.
19. Transit Improvements	Ways to improve and promote public transit.
20. Universal Design (Barrier Free Transport Planning)	Designing transportation systems to accommodate people with disabilities and other special needs.
Incentives To Use Alternative Modes and Reduce Driving	
21. Walking And Cycling Encouragement	Programs and activities that encourage nonmotorized transportation.
22. Commuter Financial Incentives	Parking cash out, travel allowance, transit and rideshare benefits.
23. Congestion Pricing	Road pricing used to reduce peak-period vehicle trips.
24. Distance-Based Pricing	Charging insurance, road use fees, emission charges and taxes based on a vehicle's mileage.
25. Fuel Taxes	Increasing fuel taxes to fund roads, encourage energy conservation, and reduce travel demand.
26. HOV (High Occupant Vehicle) Priority	Strategies that give transit and rideshare vehicles priority over other traffic.
27. Parking Pricing	Charging motorists directly for parking.
28. Pay-As-You-Drive Vehicle Insurance	Converting vehicle insurance premiums into distance-based charges.
29. Road Pricing	Congestion pricing, value pricing, road tolls and HOT lanes
30. Speed Reductions	Strategies to reduce traffic speeds.
31. Street Reclaiming	Encouraging community interaction on neighborhood streets.
32. Vehicle Use Restrictions	Regulatory strategies to limit automobile travel at a particular time and place.

Parking Management	
33. Bicycle Parking	Selection and location of bicycle racks, bicycle lockers and changing facilities.
34. Car-Free Districts and Pedestrianized Streets	Designing special areas and times for minimal automobile use.
35. Parking Management	Strategies for more efficient use of parking.
36. Parking Solutions	A comprehensive menu of solutions to parking problems.
37. Shared Parking	Sharing parking facilities among multiple users.
Policy And Institutional Reforms	
38. Car-Free Planning	Reduced driving at particular times and places.
39. Comprehensive Market Reforms	Policy changes that result in more efficient and fair transportation pricing.
40. Context Sensitive Design	Flexible design requirements to reflect community values and balance objectives.
41. Institutional Reforms	Creating organizations that support efficient transport.
42. Least Cost Planning	Creating an unbiased framework for transport planning.
43. Regulatory Reform	Policy changes to encourage competition, innovation, diversity and efficiency in transport services.
Land Use Management	
44. Clustered Land Use	Land use practices to create more resource efficient and livable communities
45. Location Efficient Development	Planning, regulatory and fiscal reforms that encourage Smart Growth.
46. New Urbanism	Multi-modal and livable communities based around transit stations.
47. Smart Growth	Locating common destinations close together.
48. Smart Growth Planning and Policy Reforms	Development that maximizes multi-modal accessibility.
49. Transit Oriented Development	Accessible, livable community design.
TDM Programs and Program Support	
50. Access Management	Coordination between roadway design and land use.
51. Aviation Transport Management	Applying TDM to air transport.
52. Campus Transport Management	Transportation management at colleges, universities and other large facilities.
53. Data Collection and Surveys	Collecting data and perform surveys for TDM program planning and evaluation.
54. Commute Trip Reduction	Programs that encourage more efficient commuting.
55. Intelligent Transportation Systems	Use of information technologies to improve transportation system performance and efficiency
56. Freight Transport Management	Methods of increasing the efficiency of freight and commercial transport.
57. School Trip Management	Programs that encourage parents, students and staff to use alternative modes for travel to and from schools.
58. Special Event Management	Transportation management for major events, construction projects and emergencies.
59. TDM Marketing	Programs to promote TDM to users.
60. TDM Programs	Developing an institutional framework for implementing TDM.
61. Tourist Transport Management	Transportation management for tourist and leisure travel.
62. Transportation Management Associations (TMA)	Private, non-profit, member-controlled organizations that provide transportation services in a particular area.
Notes:	
1) Source for VTPI Strategies - Vancouver Transport Policy Institute, May 2002	

Table 2: Technical Assessment of TDM Strategies -

Level of Importance to BRT and Nodal Development

VTPI TDM Encyclopedia Strategies	Strategy Description	BRT Ranking	Nodal Ranking	Combined Ranking
Transit Improvements	Ways to improve and promote public transit.	31.0	27.1	58.1
Transit Oriented Dev (TOD)	Accessible, livable community design.	27.1	28.4	55.6
Shuttle /Feeder Services	Shuttle/Feeder buses, jitneys and free transit zones.	28.8	26.6	55.3
Park & Ride	Programs to provide convenient parking at transit and rideshare stations.	29.2	23.7	52.9
Bike/Transit Integration	Ways to integrate bicycle and public transit to improve mobility.	26.1	24.3	50.4
Pedestrian Improvements	Ways to improve walking conditions.	24.2	25.2	49.4
Nonmotorized Facility Management	Managing and maintaining nonmotorized facilities (walkways, sidewalks, paths).	23.1	26.0	49.1
Location Efficient Dev	Planning, regulatory and fiscal reforms that encourage Smart Growth.	23.0	25.8	48.8
HOV (High Occupant Vehicle) Priority	Strategies that give transit and rideshare vehicles priority over other traffic.	26.8	20.2	47.0
Bicycle Improvements	Ways to improve bicycle Transportation.	21.3	24.8	46.1
Address Security Concerns	Improving personal safety for walking, cycling, transit and urban infill.	22.3	23.1	45.4
Bicycle Parking	Selection and location of bicycle racks, bicycle lockers and changing facilities.	21.1	23.6	44.7
TDM Programs	Developing an institutional framework for implementing TDM.	22.7	21.6	44.2
Trans Mgmt Assocs (TMA)	Private, non-profit, member-controlled orgs that provide Transport services in particular area.	21.6	21.8	43.3
Access Management	Coordination between roadway design and land use.	21.8	20.4	42.2
Intelligent Trans Systems	Use of information technologies to improve Transport system performance /efficiency	23.2	17.7	40.9
Parking Management	Strategies for more efficient use of parking.	19.8	21.0	40.8
Car-Free Districts/ Ped-oriented Streets	Designing special areas and times for minimal automobile use.	17.3	19.7	37.0
School Trip Management	Programs that encourage parents, students and staff to use alternative modes for travel to and from schools.	17.4	17.8	35.2
Traffic Calming	Roadway design features that reduce vehicle traffic speeds and volumes.	15.7	19.2	34.9
Carsharing	Vehicle rental services intended to substitute for private vehicle ownership.	15.1	17.9	33.0

Table 3 Interaction between BRT Development Process and TDM

BRT DEVELOPMENT PROCESS	TDM	NOTES
PLANNING / ENVIRONMENTAL REVIEW		
Corridor	Review & analyze data on linkages to other modes, neighborhood shuttles to stations, employment centers, non-commute trip attractors, residential densities.	
Public process - stakeholders group formed	review and prioritize strategies for trip reduction, have TDM represented in stakeholders group	also discussed: developer financial incentives
Preliminary planning	integrate selected TDM strategies into BRT	
Alignment / station designs	review of access management (pedestrian & bike), bike and pedestrian facilities, parking management around station, park & rides, TDM information management at stations (access to ITS)	<i>see</i> TPR 0060 Plan and Land Use Regulation Amendments
ENVIRONMENTAL PROCESS		
EA / EIS	apply TDM as a mitigation strategy for construction	
APPROVAL PROCESS WITH PUBLIC ENTITIES	educate decision makers early in the process of TDM integration	
FINAL DESIGN		
CONSTRUCTION	congestion mitigation strategies (shuttles, etc.)	
OPERATION	ongoing TDM outreach and education; strategies supporting multi-modal connectivity (e.g., station bikes, car sharing, etc.)	

Appendix 3. Development of Alternative TDM Scenarios

The underlying intent of the TDM Refinement Plan is to provide more specific TDM activities in the framework of the overall regional transportation plan. For purposes of analyzing the effectiveness of alternative packages of TDM strategies, staff developed six alternative TDM scenarios consisting of three budget scenarios in both a voluntary and regulatory environment. These alternatives have been numbered as follows:

Numbering for Alternative TDM Scenarios			
	1/2 Current Budget	Current Budget	3x Current Budget
Voluntary	1	2	3
Regulatory	4	5	6

The three budget scenarios include:

4. 50 percent of current funding:
The FY2002-2005 Statewide Transportation Improvement Plan provides for \$111,000 annually from ODOT which is equivalent to 50 percent of current funding.
5. Current funding level:
Existing funding level.
6. Three times existing budget
This budget scenario is meant to provide insight to what an additional investment in TDM might yield.

Table 1 describes the six scenarios of TDM alternative strategies. Under each scenario, packages of strategies are grouped according to Commuter Solutions program components.

TDM strategies can be implemented along a spectrum ranging from voluntary to regulatory. The TDM policies included in TransPlan call for an expansion of current activities within the voluntary part of the spectrum. Policy #1 also includes language calling for the establishment of TDM benchmarks. Policy #1 goes on to say that “mandatory programs may be established,” should those benchmarks not be met. However, mandatory, or regulatory TDM strategies can range in regulatory intensity from the Employee Commute Option (ECO) strategy currently in place in Portland to no-drive days, bridge tolls, and congestion pricing.

Staff discussed the factors which might prompt the region or individual jurisdictions within the region to move to a more regulatory environment. The primary factor staff considered was whether or not the region could achieve the TransPlan goals and associated local goals, or state and federal requirements. For example, the ECO strategy is in place in Portland in order for that region to come in to compliance with federal air quality standards. More regulatory strategies might be implemented to address state requirements related to mobility. Finally, regulatory TDM measures might be used by an individual jurisdiction to achieve specific local goals. For purposes of this study, it is assumed that, in the regulatory scenarios, the focus of regulation is on the more moderate regulatory strategies associated with ECO strategies.

Table 1 Description of Alternative TDM Scenarios

(Note - shaded scenarios included in Preliminary Draft Refinement Plan)

VOLUNTARY	50 % of current program (1)	Current program (2)	3 X current (3)
Research	Self selected employee transportation surveys Voluntary self reporting survey	Evaluation of region-wide employer-based transit program Coordination of 4J School transportation with local community groups (BTA/CAT) Analysis of travel patterns along congested corridors (e.g. Country Club Rd.) Development of TDM/STF joint projects: Oakridge Service	Thorough evaluation of outreach efforts Expand car/vanpool outreach Targeted nodal analysis of TDM strategies Pilot TravelSmart Program & evaluate
Technical Assistance	Limited planning TDM regional strategies Limited expansion of employer-based transit program No recruitment of new employers Limited support for ETCs Restricted assistance to congested corridors (TMA development) Limited statewide participation in TDM programs Limited outreach to employers on TDM strategies Limited community-wide incentive program Ride share coordination limited to on-line carpool matching services	Rideshare coordination(carpool/vanpool) Expansion of ETC support program Planning of regional TDM strategies Maintenance of community-wide incentive program Support of school transportation partnerships for (BTA/CAT) Assistance to congested corridors (TMA development)	Develop a region-wide TMA assistance program Funding of TMA start up costs Continual updating of Rideshare program to include CarpoolMatchNW Expansion of School transportation options program (including after-school) Expansion of leased park and ride locations Increased program leveraging Expansion of community-wide incentive program
Education and Awareness	Limited outreach to community Limited public education Breath of outreach limited to businesses rather than communities	Support of school based environmental ed. program (Newspapers in Ed). Outreach to region's communities Targeted public education: Tax Benefit Workshop Program marketing to business about TDM services	Development of extensive outreach campaigns Distribution of multi-modal transportation information centers Promotion of telework campaign Development of community workshops on TDM strategies Implementation of TravelSmart program in nodal development
STAFF	Reduction of 1 FTE	2 FTE	Increase of 1.5 FTE

REGULATORY	50 % of current program (4)	Current program (5)	3 X current (6)
Research	Increased monitoring of business TDM of employers' mandated TDM programs Limited self selected employee transportation surveys Limited assistance with voluntary annual self reporting survey	Increased monitoring of employer travel patterns surveys Increased monitoring of businesses' TDM plans and strategies Decreased research to other community segments (schools, neighborhoods, etc.) Increased documentation of TDM measures to region's jurisdictions	Region-wide evaluation of employer -based TDM program Regional monitoring
Technical Assistance	Ride share coordination limited to on-line carpool/vanpool matching services Limited assistance in developing mandatory TDM programs No planning on regional TDM strategies No expansion of employer-based transit program Limited support for ETCs Restricted assistance to congested corridors No statewide participation in TDM programs	Rideshare coordination (carpool / vanpool/ matching services) Maintenance of ETC support program Planning of regional TDM limited to employers Decreased community-wide incentive program No support for school transportation partnerships (BTA/CAT)	Assistance with mandated TMAs in nodal development Develop a region-wide TMA assistance program Funding of TMA start up costs Continual updating of Rideshare program to include CarpoolMatchNW Expansion of School transportation options program (including after-school) Expansion of leased park and ride locations Increased program leveraging Extensive incentive program
Education and Awareness	Provide limited information to employers with new hires No outreach to community No public education Breath of outreach limited to businesses	Educational outreach only to employers on mandatory program Limited outreach to schools on transportation	Educational outreach to region on mandatory program
STAFF	Reduction of 1 FTE	2 FTE	Increase of 1.5 FTE
Notes:	CS would not have adequate budget to monitor mandatory measures	CS would require shifting resources to allow for monitoring/analysis of mandatory TDM measures	If budget is increased, overall scope of CS may stay constant given budget required to monitor and assist mandatory measures.

Appendix 4. TDM Findings from July 2002 TransPlan

These findings are included in the currently adopted version of TransPlan. They will be updated as part of the three-year RTP update.

1. TDM addresses federal TEA-21 and state TPR requirements to reduce reliance on the automobile, thus helping to postpone the need for expensive capital improvements. The need for TDM stems from an increasing demand for and a constrained supply of road capacity, created by the combined effects of an accelerated rate of population growth (41% projected increase from 1995 to 2015) and increasing highway construction and maintenance costs; for example, the City of Eugene increased the Transportation systems development charges by a total of 15 percent to account for inflation from 1993-1996.
2. The *Regional Travel Forecasting Model* revealed that average daily traffic on most major streets is growing by 2-3 percent per year. Based on *1994 Commuter Pack Survey* results, half of the local residents find roads are congested at various times of the day; and the vast majority finds roads are congested during morning and evening rush hours.
3. The *COMSIS TDM Strategy Evaluation Model*, used in August, 1997 to evaluate the impact of TDM strategies, found that vehicle miles traveled (VMT) and vehicle trips are reduced up to 3 percent by voluntary strategies (e.g., employer-paid bus pass program) and up to 10 percent by mandatory strategies (e.g., mandatory employer support); that requiring employers to increase the cost of employee parking is far more effective than reducing employee transit costs; and that a strong package of voluntary strategies has a greater impact on VMT and vehicle trips than a weak package of mandatory strategies.
4. Lane Transit District (LTD) system ridership has increased 53 percent since the first group pass program was implemented in 1987 with University of Oregon students and employees.
5. The OHP recognizes that TDM strategies can be implemented to reduce trips and impacts to major transportation facilities, such as freeway interchanges, postponing the need for investments in capacity-increasing projects.
6. The study, *An Evaluation of Pricing Policies for Addressing Transportation Problems* (ECONorthwest, July 1995), found that implementation of congestion pricing in the Eugene-Springfield area would be premature because the level of public acceptance is low and the costs of implementation are substantial; and that parking pricing is the only TDM pricing strategy that would be cost-effective during the 20-year planning period.

Tables

Table 1A - Current Budget Scenario Program TDM Implementation Actions Project List (2005-2030)

Table 1B - Regulatory 3X Budget Scenario Program TDM Implementation Actions Project List (2005-2030)

Table 2 TransPlan TDM Planning and Program Actions

**Table 1A - Current Budget Scenario Program TDM Implementation Actions Project List
(2005-2030)**

Action Category: Education and Awareness

Action Description	Short-Term (2005-2009)	Medium-Term (2010-2019)	Long-Term (2020-2030)	Total (2005-2030)
<i>Status:</i>				
Support of school based environmental ed. program (Newspapers in Ed).	\$25,000	\$50,000	\$55,000	\$130,000
Outreach to region's communities	\$190,000	\$380,000	\$418,000	\$988,000
Targeted public education: Tax Benefit Workshop	\$32,500	\$65,000	\$71,500	\$169,000
Program marketing to business about TDM services	\$90,000	\$180,000	\$198,000	\$468,000
<i>Action Category Sub-Total</i>	<i>\$337,500</i>	<i>\$675,000</i>	<i>\$742,500</i>	<i>\$1,755,000</i>

Action Category: Technical Assistance

Action Description	Short-Term (2005-2009)	Medium-Term (2010-2019)	Long-Term (2020-2030)	Total (2005-2030)
Rideshare coordination(carpool/vanpool)	\$180,000	\$360,000	\$396,000	\$936,000
Expansion of ETC support program	\$200,000	\$400,000	\$440,000	\$1,040,000
Planning of regional TDM strategies	\$50,000	\$100,000	\$110,000	\$260,000
Maintenance of community-wide incentive program	\$50,000	\$100,000	\$110,000	\$260,000
Support of school transportation partnerships for (BTA/CAT)	\$22,500	\$45,000	\$49,500	\$117,000
Assistance to congested corridors (TMA development)	\$50,000	\$100,000	\$110,000	\$260,000
<i>Action Category Sub-Total</i>	<i>\$552,500</i>	<i>\$1,105,000</i>	<i>\$1,215,500</i>	<i>\$2,873,000</i>

**Table 1A - Current Budget Scenario Program TDM Implementation Actions
Project List (2005-2030)**

Action Category: Research

Action Description	Short-Term (2005-2009)	Medium-Term (2010-2019)	Long-Term (2020-2030)	Total (2005-2030)
Evaluation of region-wide employer-based transit program	\$40,000	\$80,000	\$88,000	\$208,000
Coordination of 4J School transportation with local community groups (BTA/CAT)	\$17,500	\$35,000	\$38,500	\$91,000
Analysis of travel patterns along congested corridors (e.g. Country Club Rd.)	\$100,000	\$200,000	\$220,000	\$520,000
Development of TDM/STF joint projects: Oakridge Service	\$25,000	\$50,000	\$55,000	\$130,000
Action Category Sub-Total	\$182,500	\$365,000	\$401,500	\$949,000
Total Current TDM Implementation Actions	\$1,072,500	\$2,145,000	\$2,359,500	\$5,577,000

Table 1B - Regulatory 3X Budget Scenario Program TDM Implementation Actions Project List (2005-2030)

Action Category: Education and Awareness

Action Description	Short-Term (2005-2009)	Medium-Term (2010-2019)	Long-Term (2020-2030)	Total (2005-2030)
<i>Status:</i>				
Develop extensive outreach campaigns	\$75,000	\$150,000	\$165,000	\$390,000
Distribute mobile transportation information centers (MTICs) to multi-modal hubs	\$25,000	\$50,000	\$55,000	\$130,000
Develop community workshops on TDM strategies	\$75,000	\$150,000	\$165,000	\$390,000
Implement TravelSmart program in nodal development	\$300,000	\$600,000	\$660,000	\$1,560,000
Participate in state-wide on-line rideshare project	\$75,000	\$150,000	\$165,000	\$390,000
Participate in state-wide regional Trip Planner Project	\$75,000	\$150,000	\$165,000	\$390,000
Pilot TravelSmart project in nodal development	\$75,000	\$150,000	\$165,000	\$390,000
Coordinate with local jurisdictions on expanding bicycle safety education awareness	\$27,500	\$55,000	\$60,500	\$143,000
Expand safety education outreach to private transportation providers and school bus providers	\$25,000	\$50,000	\$55,000	\$130,000
Coordinate with local jurisdictions to expand and implement educational campaigns	\$25,000	\$50,000	\$55,000	\$130,000
Place electronic kiosks at key multi-modal hub with connections to on-line trip planning, ODOT's Trip Check, CarPool Match NW	\$125,000	\$250,000	\$275,000	\$650,000
Work with law enforcement agencies on enforcement of yield law	\$25,000	\$50,000	\$55,000	\$130,000
Work with school districts and school sites on mandated trip management programs	\$35,000	\$70,000	\$77,000	\$182,000
Coordinate with local jurisdictions on car sharing program support (e.g., parking, development issues)	\$50,000	\$100,000	\$110,000	\$260,000
<i>Action Category Sub-Total</i>	<i>\$1,012,500</i>	<i>\$2,025,000</i>	<i>\$2,227,500</i>	<i>\$5,265,000</i>

**Table 1B - Regulatory 3X Budget Scenario Program TDM Implementation Actions
Project List (2005-2030)**

Action Category: Technical Assistance

Action Description	Short-Term (2005-2009)	Medium-Term (2010-2019)	Long-Term (2020-2030)	Total (2005-2030)
Develop region-wide ETC training course	\$125,000	\$250,000	\$275,000	\$650,000
Increase support services to employers	\$375,000	\$750,000	\$825,000	\$1,950,000
Collaborate with region's planning departments to include TDM programs as part of development application process	\$25,000	\$50,000	\$55,000	\$130,000
Establish estimated attendance thresholds for events requiring shuttle services	\$1,250	\$2,500	\$2,750	\$6,500
Expand employer programs to support TDM regulation	\$100,000	\$200,000	\$220,000	\$520,000
Explore a TDM System Development Charge in areas of high congestion	\$8,750	\$17,500	\$19,250	\$45,500
Explore reduction in SDCs for employers who go beyond mandated TDM measures	\$2,500	\$5,000	\$5,500	\$13,000
Analyze congestion pricing mechanisms, regional parking management fees and services	\$15,000	\$30,000	\$33,000	\$78,000
Establish TMAs in nodal development	\$35,000	\$70,000	\$77,000	\$182,000
Develop region-wide TMA assistance program	\$100,000	\$200,000	\$220,000	\$520,000
Fund TMAs start up costs	\$50,000	\$100,000	\$110,000	\$260,000
Monitor pricing policies of region's school districts	\$5,000	\$10,000	\$11,000	\$26,000
Coordinate with local jurisdictions to provide bicycle safety and maintenance programs for employers	\$5,000	\$10,000	\$11,000	\$26,000
Establish financial incentives for employers with TDM programs	\$225,000	\$450,000	\$495,000	\$1,170,000
Update ridesharing on line program to include CarpoolMatchNW	\$5,000	\$10,000	\$11,000	\$26,000
Expand of School transportation options program (including after-school)	\$175,000	\$350,000	\$385,000	\$910,000
Expand leased park and ride locations	\$25,000	\$50,000	\$55,000	\$130,000
Increase program leveraging	\$130,000	\$260,000	\$286,000	\$676,000
Enhance incentive program	\$250,000	\$500,000	\$550,000	\$1,300,000
Action Category Sub-Total	\$1,657,500	\$3,315,000	\$3,646,500	\$8,619,000

**Table 1B - Regulatory 3X Budget Scenario Program TDM Implementation Actions
Project List (2005-2030)**

Action Category: Research

Action Description	Short-Term (2005-2009)	Medium-Term (2010-2019)	Long-Term (2020-2030)	Total (2005-2030)
Monitor region-wide school transportation performance measures	\$127,500	\$255,000	\$280,500	\$663,000
Evaluate region-wide effect of employer-based programs	\$175,000	\$350,000	\$385,000	\$910,000
Conduct comprehensive evaluation of marketing efforts	\$20,000	\$40,000	\$44,000	\$104,000
Expand car/vanpool feasibility studies along congested corridors	\$40,000	\$80,000	\$88,000	\$208,000
Target analysis of TDM strategies in developing nodes and along BRT corridors	\$60,000	\$120,000	\$132,000	\$312,000
Pilot TravelSmart Program in nodes & evaluate	\$125,000	\$250,000	\$275,000	\$650,000
Action Category Sub-Total	\$547,500	\$1,095,000	\$1,204,500	\$2,847,000
Total Regulatory TDM Implementation Actions	\$3,217,500	\$6,435,000	\$7,078,500	\$16,731,000

Table 2 TransPlan TDM Planning and Program Actions

Planning and Program Actions	Current Budget Scenario	Regulatory 3x Existing Budget Scenario
EDUCATION/AWARENESS		
1.6 Evaluate potential impact of telecommunication technology	Promotion of teleworking Promotion of on-line car pool matching service	Involvement in state-wide on-line rideshare project Participation in state-wide regional Trip Planner Project Explore Pilot TravelSmart project
2.1 Develop multi-modal <i>Share the Road</i> public awareness campaign	Produced and distributed bicycle safety videos for bicyclists and transit operators	Coordinate with local jurisdictions on expanding bicycle safety education awareness Expand safety education outreach to private transportation providers and school bus providers
2.2 Reinforce public understanding of law concerning pedestrian rights of way	Participating in current regional effort to increase educational focus at congested corridors of pedestrian traffic laws.	Coordinate with local jurisdictions to expand and implement educational campaigns
2.3 Provide bicycle rental information at bus and train stations 2.4 Provide bicycle routes and bus schedule information at Amtrak, Greyhound, airport, and other intermodal facilities	Develop and distribute mobile transportation information centers (MTICs) at key multi-modal hubs	Placement of electronic kiosks at key multi-modal hub with connections to on-line trip planning, ODOT's Trip Check, CarPool Match NW 2.5 Implement a public awareness campaign on yield to bus law LTD currently involved in public awareness campaign Work with law enforcement agencies on enforcement of yield law
2.7 Promote school trip management	School-Related Transportation Task Force <i>Smart Ways to School</i> Program Sponsorship of <i>Newspapers in Education</i>	Work with school districts and school sites on mandated trip management programs Expand school transportation options to include after-school programs

Planning and Program Actions	Current Budget Scenario	Regulatory 3x Existing Budget Scenario
2.8 Promote car sharing	Studying with existing carsharing programs and reviewing options for local application	Coordinate with local jurisdictions on car sharing program support (e.g., parking, development issues)
2.9 Expand marketing		Develop extensive outreach campaigns
2.10 Increase awareness of connectivity		Distribute MTICs to
TECHNICAL ASSISTANCE		
1.1 Require employers designate an Employee Transportation Coordinator (ETC) 1.2 Require state and local government agencies to implement TDM programs 1.3 Require employers of a certain size to develop TDM programs for their employees	Commuter Solutions ETC Program	Develop region-wide ETC training course Increase support services to employers Collaborate with region's planning department to include TDM programs as part of development application process
1.4 Require large special events in the community provide transit shuttle services	LTD provides shuttle services for U of O sports events, Lane County Fair, Oregon Country Fair, Scandinavian Festival, Filbert Festivals.	Establish estimated attendance threshold for events requiring shuttle services
1.5 Expand employer bus pass programs	Existing Group Pass Program (GPP) applies to employers with at a minimum 10 employees	Expand employer programs to support TDM regulation

Planning and Program Actions	Current Budget Scenario	Regulatory 3x Existing Budget Scenario
1.7 Evaluate various transportation system pricing	Review of parking management strategies Educational outreach on costs of driving	Explore a TDM System Development Charge in areas of high congestion Analyze congestion pricing mechanisms, regional parking management fees and services
1.8 Establish Transportation Management Areas	Technical assistance to Gateway-area and Coburg industrial area projects	Establish TMAs in nodal development Develop region-wide TMA assistance program Fund TMA startup costs
1.9 Develop program to price high school parking lot	Coordination of School Related Transportation Task Force with local jurisdictions	Monitor pricing policies of region's school districts
1.10 Implement traffic calming measures	Coordinate with jurisdictions' traffic engineers	Coordinate with jurisdictions' traffic engineers
3.1 Collaborate with bicycle shops to sponsor bicycle maintenance clinics	Provide bike -maintenance assistance to area employers to encourage and support bike commuting	Coordinate with local jurisdictions to provide bicycle safety and maintenance programs for employers

Planning and Program Actions	Current Budget Scenario	Regulatory 3x Existing Budget Scenario
3.2 Provide incentives to employers who implement TDM programs for their employees	Promotion of Business Energy Tax Credit Program Marketing Supplies and materials support	Explore the reduction in SDCs for employers who go beyond mandated TDM measures Establish financial incentives for employers with Support the establishment of TMAs in nodes
3.3 Provide credits to developers who construct bicycle support facilities	Promotion of Business Energy Tax Credit Program	Explore the reduction in SDCs for employers who go beyond mandated TDM measures
1.12 Continual update of ride sharing capabilities		Update ridesharing software to link with CarpoolMatchNW
1.13 Enhance commute options		Expand park and ride locations
1.14 Expand program funding	Greater jurisdictional support	Increase program leveraging
1.15 Expand incentive program	Incentives targeted at employers	Expand incentive program for community groups (e.g. Boy Scouts, civic groups)
RESEARCH		
4.1 Evaluate school commute VMT	<i>Smart Ways to School</i> Program monitoring on pilot schools	Monitor region-wide school transportation performance measures
4.2 Evaluate ETC program		Evaluate region-wide effect of employer-based programs
4.3 Evaluate marketing efforts		Conduct region-wide evaluation of marketing effort
4.4 Target ridesharing		Expand car/vanpool analysis of TDM strategies in developing nodes and along BRT corridors for intermodal connectivity
4.5 Target research		Target analysis of TDM strategies in developing nodes and along BRT corridors
4.5 Pilot innovate programs		Pilot TravelSmart in developed nodes

