Regional Transportation Options Plan 2012

Existing Conditions





Prepared for

Central Lane MPO

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Part I Introduction

This section provides an overview of the Existing Conditions document and information about the Study Area boundary.

Mobility is crucial for the Central Lane Oregon area's quality of life and economic vitality. Various issues impact the creation of a more universally mobile transportation system including; regional economic shifts, population growth, social equity, and environmental issues such as climate change. With limited resources, determining the best means for improving the transportation system and meeting future demand is challenging and the framework has become increasingly complex. A steadily growing component of transportation or mobility planning is Transportation Demand Management (TDM) or Transportation Options (TO) - as it is commonly referred to in Oregon. TO is a set of strategies that increase transportation system efficiency. TO emphasizes the movement of people and goods, rather than motor vehicles, and thus focuses policy implementation on more efficient modes such as; ridesharing, walking, cycling, public transit, congestion pricing, or telework. TO prioritizes travel based on the value and costs of each trip, giving higher value trips and lower cost modes priority over lower value, higher cost travel.

Over the last 30 years, the Eugene-Springfield metro area has made several key decisions to support TO projects and programs. Historically, these projects and programs have been based in marketing and education and have focused on voluntary travel behavior adjustments. Regional efforts have been relatively successful; yet growth, congestion, and reliance on the single-occupancy vehicle continue to challenge policy makers, planners, engineers, and program managers in providing a balanced and efficient transportation system.

The following memo provides an overview of the region's existing conditions that impact the planning context for TO-related program development and delivery in the Eugene-Springfield metro area. This report evaluates the region's demographics, land use, and travel behavior, existing bicycle, pedestrian and transit infrastructure and existing policy context. This information provides the current baseline or existing regional conditions that impact TO and the ability of the region to better integrate transportation infrastructure and programs for improved mobility.

The information used in this report to describe the existing system and identify deficiencies comes from many sources including; Lane Council of Governments, the cities of Eugene, Springfield, and Coburg, Lane County, the Oregon Department of Transportation (ODOT), Lane Transit District (LTD), and local health and recreation agencies. Further, literature and case studies from federal agencies and transportation-related research organizations contributed to this effort.

A. Study Area

The study area for the Regional Transportation Options Plan is the Central Lane Metropolitan Planning Organization (MPO) boundary. This is the same geographic area within which the federally required Central Lane MPO is responsible for coordinating transportation planning. It is also the service area of point2point Solutions; the regional public TO program. The study area is illustrated in Figure 1. In

addition, the existing conditions analysis considers areas outside the direct study area (e.g., unincorporated Lane County surrounding the MPO and satellite small cities within the commute shed for the MPO) to the extent that they affect travel patterns and transportation-related needs for the MPO area.



Figure 1 Central Lane Metropolitan Planning Organization (MPO) Boundary

Part II Existing Services and Funding

This section describes the existing Transportation Options services and programs offered in the region through partnerships, including point2point Solutions, the Central Lane MPO, the Cities of Eugene and Springfield, several local school districts, and private and public-sector employers. This section also identifies existing TO funding.

TO programs have long played a significant role in the region's transportation system planning and implementation. In 1996, the MPO helped establish a regional TDM program called Commuter Solutions. Ever since, the MPO has provided the majority of the program's funding. Commuter Solutions developed as the region's primary source for information about non-single occupancy travel options over the last 15 years. In 2003, the regional TDM Refinement Plan bolstered policy-level support for TDM planning. In 2004, the Refinement Plan evolved into a chapter of the RTP. In 2009, Commuter Solutions became point2point Solutions.

A. Programs Provided through point2point Solutions

Point2point Solutions offers a number of existing programs in the region, including:

- Employer/Employee Transportation Benefits Program Activities
- School Solutions Program Activities
- Congestion Mitigation Program Activities
- Park & Ride Activities

Employer/Employee Transportation Benefits Program Activities

- Provide discounted transit benefits through the Group Pass Programs. It is estimated that approximately 86 employers throughout the region are enrolled in the group pass program.
- Utilize Commuter Club Transit Vouchers to subsidize individual transit passes for employees.
- Provide Parking Management services for employers/developers of projects in the MPO;
- Coordinate Emergency Ride Home (ERH) incentive program services through area employers.
- Promote Bike/Walk Services travel options to employees/employers in the region;
- Provide technical assistance to employers in the region with Employee Transportation Coordinators (ETC) which provides a designated coordinator of employer transportation benefits.
- Offer ride-matching services for commuters in the region through Ridesharing Program Activities such as Carpool Matching.
- Conduct marketing activities to increase the number of commuters and Emergency Ride Home worksites in the rideshare database. As of 2010, there were 115 different businesses enrolled in the emergency ride home program.
- Work with statewide TO partners to continue support for a statewide web-based ride matching system.

- Promote and provide management support of vanpools in the service areas of the Valley VanPool consortium, a partnership with Cherriots (Salem area) and Oregon Cascades West Council of Governments (Benton, Linn and Lincoln Counties).
- Promote transportation options through the Business Commute Challenge. In 2011, there were 2,329 participants in the Business Commute Challenge, with a reduction of 92,958 miles over the one week event.
- Provide information and incentives to participating employers to help encourage participation of their employees.
- Provide SmartTrips program to targeted areas (Gateway EmX corridor).

School Solutions Program Activities

- Promote alternative ways to school for students through the Smart Ways to School Program. This program partners with K-12 schools throughout the region to improve school safety while reducing energy consumption and traffic congestion. In 2010, 14 schools received stipends.
- Provide the Student Transit Pass Program as part of the agency's Transit Activities for families of grade 6-12 students. In 2010, approximately 32,720 students in 168 schools throughout the region had access to this program.
- Promote and provide free carpool match services through the Carpool Activities programs for families of K-12 students.
- Promote and provide assistance to parents interested in forming groups of students to walk and bike to/from school Walk and Bike Activities: (Families of K-12 students)
- Assist schools seeking and using Safe Routes to School funding to increase the number of students who walk or bike to/from school and reduce school-related vehicle trips for families of K-8 students.
- Help foster collaborative community efforts that increase walking and biking while reducing school-related traffic.
- Develop regional Safe Routes to School Program to leverage existing Eugene 4J and Bethel School District programs.

Congestion Mitigation Program Activities

- Provide targeted outreach of point-2point programs and services in areas along key congested corridors in partnership with other jurisdictions. Areas may include corridors that exceed or are expected to exceed an established level of service (LOS) or areas experiencing or projected to have high levels of congestion due to new development, major road construction, events, or defined EmX corridors or other transit corridors that may experience reduction in service.
- Collaborate with MPO regarding KeepUsMoving.Info (KUMI) website providing commuter information of transportation options.
- Participate in Regional Construction Coordination annual meeting and present point2point Solutions service opportunities.

Park & Ride Activities

In 2010, there were an estimated 25 Park & Ride locations throughout the region providing 789 parking stalls.

B. Programs Provided through the City of Eugene

Eugene Pedestrian and Bicycle Master Plan Update

The City of Eugene has created a Pedestrian and Bicycle Master Plan aimed at making Eugene an excellent place to walk and bicycle, reducing overall carbon emissions, and increasing the number of residents who walk and bike.

This plan will serve as the pedestrian and bicycle chapter of the city's Transportation System Plan (TSP), which is currently being updated. The plan includes identification of mobility gaps in the bicycle and pedestrian transportation system; recommendations for improvements to increase safety (real and perceived), comfort, speed, and convenience for users of all ages and skill levels; implementation strategies for the necessary system improvements; and identification of funding sources for implementation.

20-Minute Neighborhood Plan

In an effort to better understand the connections between walkability, livability, and the geography of Eugene, the City of Eugene has completed a 20 minute neighborhoods assessment. "Twenty-minute neighborhoods" are those in which a significant number of regular trips can be made in 20 minutes without using a personal automobile. A resident might walk to the grocery store or school and meet many of their recreational and social needs without using a car. Creating these neighborhoods is an important step toward reducing greenhouse gas emissions and fossil fuel usage. Through this assessment, the City of Eugene has developed a composite map that shows several places that are very walkable; where a large number of residents live near a variety of services and have the transportation infrastructure to make walking easy. In addition, the assessment shows areas of town where making a trip on foot is challenging and the services that would serve daily needs are not nearby. The City is using the results from this assessment to determine needs and to coordinate with their ongoing opportunity siting and infill compatibility standards planning efforts.

SmartTrips Eugene

SmartTrips is a comprehensive approach to reduce drive-alone trips and increase biking, walking, and public transit in targeted geographic areas of the city. It incorporates an innovative and highly effective individualized marketing methodology, that hand-delivers packets of information to residents who wish to learn more about all of their transportation options including transit, walking, bicycling, carpooling, and combining trips. Key components feature biking and walking maps and organized activities that get people out in their neighborhoods or places of employment to shop, work, and discover how many trips they can easily, conveniently, and safely make without using a car. Success is tracked by evaluating qualitative and quantitative results from surveys and other performance measures. In 2010 Eugene piloted the SmartTrips program in the Harlow/Coburg neighborhood. SmartTrips: Eugene for the

summer of 2011 was called SmartTrips: Central and targeted the TrainSong, Whiteaker, and Jefferson-Westside neighborhoods. The City is planning a SmartTrips program in the summer of 2013.

Eugene Sunday Streets

Eugene Sunday Streets is a FREE community event that premiered in Eugene in summer 2011, Eugene Sunday Streets features a 2-3 mile, car-free route that opens the streets for people to walk, bike and roll. Activity centers at our local parks host FREE healthy and active activities such as fitness classes, dancing, yoga, slacklining, live music and more. These events are working to get more people to use active modes of transportation thus improving our community's livability and health.

C. Transportation Options Funding

Transportation options-related planning, programs, and projects within the Central Lane MPO area are funded through a variety of different sources, including federal, state and local funds. As a designated urban area with a population over 200,000, the Central Lane MPO receives formula funds from USDOT. There are a number of programs under the SAFETEA-LU transportation bill that distribute federal funds directly to the MPO.

Surface Transportation Program (Urban) funds (STP-U) are provided to the MPO based on a populationbased formula set by the Federal Government in the Transportation Bill. The MPO receives approximately \$3-4 million per year in these Federal Highway Administration funds, subject to Congressional budgeting, and has established a process by which these funds are programmed by MPC for eligible projects within the MPO's region.

Within the Central Lane MPO, programming of STP-U funds since 2003 has been accomplished under a model that targets portions of the funds to broad purposes, within which priorities are then determined. The current framework was initially approved by the MPO Policy Board in 2006 and reaffirmed by the Board in 2010. Of the STP-U funds available to the MPO in a single federal fiscal year, the structure sets the following targets:

- 10% Transportation Options/Transportation Demand Management (TO/TDM) activities
- 25% Planning activities
- 65% Project Development, Preservation, and Modernization (PPM) activities across all transportation modes within the MPO

Table 1 below provides a breakdown of transportation options funding by type of STP-U funds programmed in fiscal years 2004 through 2013:

Туре	Amount	Percentage
Planning	\$1,136,500	10.8%
Modernization	\$1,940,072 ¹	18.5%

Table 1: Central Lane MPO STP-U Funding for Transportation Options

Preservation	\$1,597,621 ¹	15.3%
Program Development	\$3,133,000	30.0%
Transit	\$2,662,000	25.4%
Total	\$10,469,193	100.0%

1. This includes funding for specific bicycle trail/pathway or sidewalk projects. Additional funding for bicycle and pedestrian improvements also occurs in many funded street projects and is not broken out separately in the table above.

Funding for transportation options-related planning, programs and projects equaled approximately 37.5 percent of all STP-U funding in fiscal years 2004 through 2013.

- FTA Section 5307 Urbanized Area (5307) are analogous to STP-U funds but are provided by the Federal Transit Administration to support capital, certain operating, and planning expenditures for publicly owned transit systems. The amount received by the MPO is about the same as the STP-U allocation. In March 2003, MPC designated LTD as the direct recipient of these funds thus permitting LTD to manage their allocation and expenditure, subject to the program rules. In Fiscal Years 2010-2013, LTD has \$27.8 million in projects funded with Section 5307 funds.
- FTA Section 5310 funds are federal funds for transit improvements directed to serving the elderly and disabled. LTD manages these funds.
- FTA Section 5311 funds are used to fund capital, operating, and planning needs of public transit in rural and small urban areas. The Section 5311 program also provides for planning, marketing, capital assistance, purchase of service agreements, user-side subsidy projects and demonstrations, and rural connections coordinating between inter-city bus and rural public transportation operators. LTD manages these funds.
- FTA Section 5316 funds are for the Job Access and Reverse Commute Program. These formula grants are intended to provide funding for local programs that offer job access and reverse commute services which provide transportation for low income individuals who may live in the city core and work in suburban locations. The MPO policy board approved LTD as a direct recipient for these funds. In Fiscal Years 2010-2013, LTD has \$348,721 in projects funded with Section 5316 funds.
- FTA Section 5317 funds are for the New Freedoms Program. These formula grants encourage services and facility improvements to address the transportation needs of persons with disabilities that go beyond the Americans with Disabilities Act. The MPO policy board approved LTD as a direct recipient for these funds. In Fiscal Years 2010-2013, LTD has \$292,427 in projects funded with Section 5317 funds.
- FTA Section 5309 funds are federal earmarked funds available for transit capital improvements. Funds are administered by the FTA regional office and are granted on a project-by-project basis, typically to finance one-time capital improvements. The funding ratio for these funds is 80 percent federal and 20 percent local match. LTD is the recipient of these funds within the MPO.
- FTA Section 5339 funds are discretionary funds from the SAFETEA-LU Transportation Bill.

The State also uses its federal funds as well as state funds for transportation projects within the MPO area. The State provides funding for several transportation-options related planning, program development, and projects, including the following:

- Safe Routes to School: The Oregon Safe Routes to School (SRTS) Program administers federal funds received under the current transportation bill. Approximately \$2.2 million infrastructure funds are available for construction for 2012-2013. Two groups of funding are available through the SRTS program, including infrastructure projects within two miles of the school, and noninfrastructure activities; education, encouragement, and traffic enforcement activities within two miles of the school.
- Public Transit Division Funds: The Public Transit Division (PTD) assists communities with the development of alternative transportation methods, including rideshare programs, park and ride lots, telecommuting programs, and information and incentive programs to encourage the use of alternatives to driving alone. Each region of ODOT determines funding levels for TO programs within the region.
- STP-Enhancement or L220 Funds: Funds allocated by ODOT for environmental programs such as pedestrian and bicycle activities and mitigation of water pollution due to highway runoff. Enhancement projects must have a direct relationship to the intermodal transportation system and go beyond what is customarily provided as environmental mitigation. ODOT has used these funds for several projects in the Central Lane MPO, including bicycle improvements completed as part of the Willamette River Bridge, as well as the West Bank Path Extension.
- S080 Funds: Region 2 has been granted State Bicycle/Pedestrian funds for projects, including the OR 126B (Main Street) Pedestrian Improvements.
- Transportation, Community, and System Preservation (TCSP) Program: States, metropolitan
 planning organizations, local governments, and tribal governments are eligible for TCSP Program
 discretionary grants to plan and implement strategies which improve the efficiency of the
 transportation system, reduce environmental impacts of transportation, reduce the need for
 costly future public infrastructure investments, ensure efficient access to jobs, services and
 centers of trade, and examine development patterns and identify strategies to encourage
 private sector development patterns which achieve these goals.
- Flexible Funding Program, Oregon Department of Transportation: This program directs a significant of undedicated federal STP funds received by ODOT to non-highway projects, including bike, transit, pedestrian, and other TO-related projects.
- Business Energy Tax Credit Program, Oregon Department of Transportation.
- ConnectOregon: ConnectOregon funds are being distributed to air, marine, rail, transit and other multimodal projects statewide.

The State also funds projects outside the MPO area within Lane County. These are listed in the STIP, but since they are outside the MPO area, are not included in the MTIP.

Local governments also have Capital Improvement Programs and Operations budgets which fund transportation improvements and operations. These funds are obtained from bonds, system

development charges, and other sources of local revenue, including local option gas tax revenues in both Eugene and Springfield. Lane Transit District similarly has sources of local funds, primarily the payroll tax and farebox revenues.

Part III Context/Trends/Data

A. Demographics

Demographics are the statistical data of populations. Planning for any component of a balanced and efficient transportation system requires understanding the region's population over time. Population characteristics such as age, income, education, land use, and where people live are key factors that affect how and how much travel occurs in the region. Where and how people live greatly determines which transportation facilities and modes are most used and which warrant the greatest investment of transportation funding. Demographics are also used as inputs to transportation models, which are used to forecast future trends and/or needs of the community.

The Central Lane MPO area is diversifying and aging. According to information gathered by Portland State University in preparing Lane County's Coordinated Population Forecast, the three cities within the Central Lane MPO forecast an increase in the senior (65+) and Latino population, as well as a reduction in the number of persons residing in each household.

		Eu	gene		Springfield				Coburg			
		%	%	Persons		%	%	Persons		%	%	Persons
		Population	Population	Per		Population	Population	Per		Population	Population	Per
Year	Population	65+	Hispanic	Household	Population	65+	Hispanic	Household	Population	65+	Hispanic	Household
1990	112,669	12.70%	2.7%	2.3	44,683	10.8%	2.9%	2.54	763	18.7%	2.4%	2.41
2000	137,893	12.10%	5.0%	2.27	52,864	10.3%	6.9%	2.55	969	10.3%	3.0%	2.64
2010	156,844	12.10%	6.5%	2.26	58,891	10.2%		2.54	1,092	-		2.67
2015	166,609	14.50%		2.22	62,276	12.0%		2.51	1,293	,		2.63
2020	176,124	17.30%		2.2	66,577	14.3%		2.5	1,567			2.59
2025	185,422	19.00%		2.17	70,691	16.7%		2.48	1,914	,		2.6
2030	194,314	20.20%		2.15	74,814	18.5%		2.45	2,322	-		2.6
2035	202,565	20.80%		2.15	78,413	19.6%		2.42	2,659	j		2.58

Table 2: Population Forecasts for the Cities of Eugene, Springfield, and Coburg

Source: US Census, Portland State University

This is consistent with national demographic trends, which show a shift from households dominated by married couples with children, to more diverse household characteristics, as the traditional family structure continues to change (US Census, 2009). Today's fastest growing households are:

- Young professionals
- Couples without children
- Empty nesters
- Senior Citizens
- Single parents

Age

The provision of affordable and accessible transportation options is an important factor in fostering selfsustainability and promoting independence among elderly residents that may no longer operate a vehicle. As noted above, the region – much like the nation – has a growing senior population as the Baby Boomers reach 65.

According to the American Community Survey (ACS), the share of the population that is 65 years or older within the Eugene-Springfield urbanized area is approximately 12.5 percent. Older adults make up a smaller share of the population than in Oregon as a whole, which is at 13.5 percent. Map 1 depicts the spatial relationship of the senior population within the Central Lane MPO.

Map 1 Central Lane MPO Elderly Concentration



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Children

Children are not the fastest growing age group in the Central Lane MPO area. However children, like older adults, require unique mobility consideration. Younger children are often mobility dependent upon their caregivers. Children's mobility needs have a significant effect on Vehicle Miles Traveled (VMT).

Obesity rates in children are increasing to epidemic levels due to lack of exercise and poor nutrition; however, those who are engaged in healthy outdoors activities such as team sports are at higher risk of developing asthma. In addition, a leading cause of childhood death is from car crashes while bicycling and walking.

Mobility efficiency, health, and safety are important considerations when planning for the transportation needs of children.

Race and Ethnicity

The Central Lane MPO area is predominately white, but has a growing non-white minority population. The growing racial and ethnic diversity is an important issue to consider, both in terms of ensuring equal access to transportation options, as well as ensuring that the region's communication and outreach strategies are properly tooled to address different cultural attitudes. Table 3 provides information on the current racial and ethnic diversity, indicating that the population in the Eugene-Springfield metro area is 82.7 percent White and 7.5 percent Latino.

Table 3 Eugene Urbanized Area Population by Race and Ethnicity

	2009	
White	198,205	82.7%
Black or African American	3,079	1.3%
American Indian and Alaskan Native	1,937	0.8%
Asian	8,527	3.6%
Native American or Other Pacific Islander	600	0.3%
Some Other Race	206	0.1%
Two or More Races	9,165	3.8%
Hispanic or Latino	17,881	7.5%

Source: 2009 American Community Survey 1-Year Estimates

Map 2 depicts the spatial relationship of non-white minorities within the Central Lane MPO.

There is evidence of economic disparity in the region; for example, for 2007-2009 the median income for Latino and Hispanic households in the region was \$29,044 compared to \$41,720 for White, non-Hispanic/Latino households.

	Median Household Income in Past 12 months
White	\$41,720
Black or African American	N
American Indian and Alaskan Native	\$36,988
Asian	\$35,852
Native American or Other Pacific Islander	\$41,477
Some Other Race	\$26,944
Two or More Races	\$37,014
Hispanic or Latino	\$29,044

Table 4 Eugene Urbanized Area Poverty Status by Race and Ethnicity

N indicates that data cannot be displayed because the number of sample cases is too small.

Source: 2007-2009 American Community Survey 3-Year Estimates

There also appears to be some difference in the mode choice across different ethnicities, as depicted in Table 5.

Means of Transportation to Work	Total:	Car, truck, or van - drove alone	Car, truck, or van - carpooled	Public transportation (excluding taxicab)	Walked	Taxicab, motorcycle, bicycle, walked, or other means	Worked at home
		66,406	7,328	4,665	4,888	6,778	4,687
White	94,752	70.1%	7.7%	4.9%	5.2%	7.2%	4.9%
Black or African		1,119	167	56	0	111	45
American	1,498	74.7%	11.1%	3.7%	0.0%	7.4%	3.0%
American Indian		563	373	20	0	54	54
and Alaskan	1,064	52.9%	35.1%	1.9%	0.0%	5.1%	5.1%
		1,988	498	437	188	215	154
Asian	3,471	57.3%	14.3%	12.6%	5.4%	6.2%	4.4%
Native American or Other Pacific	N	N	N	N	N	N	N
	7 1	1 286	207	115	86	81	10
Some Other Race	1.884	68.3%	15.8%	6.1%	4.6%	4.3%	1.0%
Two or More	,	1.985	323	236	173	225	13
Races	2,955	67.2%	10.9%	8.0%	5.9%	7.6%	0.4%
		4,199	1,070	418	469	213	143
Hispanic or Latino	6,512	64.5%	16.4%	6.4%	7.2%	3.3%	2.2%

Table 5 Eugene Urbanized Area Means of Transportation to Work by Race and Ethnicity

N indicates that data cannot be displayed because the number of sample cases is too small.

Source: 2007-2009 American Community Survey 3-Year Estimates

Map 2 Central Lane MPO Minority Concentration



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Income and Employment

Income and employment are important factors affecting the potential need and use of different transportation options within the region. Access to affordable transportation by low-income individuals and families can help make trips to work, school, and medical appointments possible.

The Central Lane MPO income has lagged behind the average income within Oregon State. The median household income in the region in 2009 is \$39,826. This is 82 percent of the median Oregon income (\$48,457). Map 3 depicts the spatial relationship of low income households within the Central Lane MPO.

As noted previously, there is economic disparity within the region, which can impact reliance on alternative, affordable transportation in the region. Table 6 provides detail on the poverty status of different races and ethnicities in the region. With the exception of the American Indian and Alaskan Native, non-white populations had a higher rate of poverty than White population in 2007-2009.

Table 6 Eugene Urbanized Area Poverty Status by Race and Ethnicity

		Income in the Past 12 Months below poverty level		
	Total			
White	191,510	33,824	17.7%	
Black or African American	3,035	699	23.0%	
American Indian and Alaskan Native	2,655	379	14.3%	
Asian	N	N	N	
Native American or Other Pacific Islander	N	N	N	
Some Other Race	N	N	N	
Two or More Races	9,093	1,730	19.0%	
Hispanic or Latino	16,775	4,071	24.3%	

Source: 2007-2009 American Community Survey 3-Year Estimates

Table 7 shows that households with incomes below the poverty level generally had a higher mode split for non-single-occupant-vehicle travel modes than those above the poverty level, with a larger percent of households living below poverty taking public transportation, walking, or bicycling to work than households with a higher income.

Table 7 E	ugene Urbanized	Area Means	of Transp	portation to	Work by	Poverty	Status
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Means of Transportation to Work	Below 100 pe	100 to percent povery	o 149 c of the r level	At or al percer pover	pove 150 It of the ty level	
Total:	13, 1	198	8,4	17	88,	000
Car, truck, or van - drove alone	6,404	48.5%	4,713	56.0%	69,940	79.5%
Car, truck, or van - carpooled	1,089	8.3%	801	9.5%	7,794	8.9%
Public transportation (excluding taxicab)	1,577	11.9%	881	10.5%	3,336	3.8%
Walked	1,775	13.4%	793	9.4%	2,958	3.4%
Taxicab, motorcycle, bicycle, or other means	1,763	13.4%	961	11.4%	4,755	5.4%
Worked at home	590	4.5%	262	3.1%	4,217	4.8%

Source: 2007-2009 American Community Survey 3-Year Estimates

Map 3 Central Lane MPO Household Poverty Concentration



T:WPO/RTP/FY11 2035 Update\Maps\Updated\Water_WOplus.mxd

Vehicle Ownership

Vehicle ownership is currently a primary indicator of mobility. In the Eugene-Springfield urban area, approximately 5 percent of residents do not have access to a vehicle, which is higher than the statewide average. Without a private vehicle, workers make their commute by taking transit, walking, biking, carpooling, or utilizing taxi services. Map 4 depicts the spatial relationship of households with no vehicle available within the Central Lane MPO.

Table 8 Means of Transportation to Work by Vehicle Available

Means of Transportation to Work	No Vehicle	e available	1 veł avail	nicle able	2 vehicle	s available	3 or veh avai	more icles ilable
Total:	5,2	51	27,6	637	47,	,884	28,	744
Car, truck, or van - drove alone	684	13.0%	16,699	60.4%	36,267	75.7%	22,407	78.0%
Car, truck, or van - carpooled	757	14.4%	2,116	7.7%	3,844	8.0%	2,957	10.3%
Public transportation (excluding taxicab)	1,428	27.2%	2,265	8.2%	1,404	2.9%	634	2.2%
Walked		0.0%		0.0%		0.0%		0.0%
Taxicab, motorcycle, bicycle, or other means	2,172	41.4%	5,087	18.4%	4,045	8.4%	1,697	5.9%
Worked at home	210	4.0%	1,470	5.3%	2,324	4.9%	1,049	3.6%

Source: 2007-2009 American Community Survey 3-Year Estimates

A greater percentage of residents with no vehicle chose to bicycle (41.4 percent) or take public transit (27.2 percent) to work.

Map 4 Central Lane MPO Zero Car Household Concentration



T:WPO\RTP\FY11 2035 Update\Maps\Updated\Water_WOplus.mxd

Transportation Disadvantaged

Providing effective TO programs includes providing for the needs of all citizens. Transportation disadvantaged citizens are those who because of physical or mental disability, income status, or age are unable to go where they need or want to and are, therefore, dependent upon others to obtain access to health care, employment, education, shopping, social activities, or other life-sustaining activities; this includes children. Disadvantaged status is multi-dimensional. Disadvantaged status evaluation should take into account the degree and number of these factors that apply. The greater their degree and the more factors that apply, the more disadvantaged an individual or group can be considered.

Map 5 depicts the spatial relationship of areas with varying levels of disadvantage within the Central Lane MPO, including the following attributes: low-income, minority, Limited English Proficiency, disability, elderly and zero car households.

Map 5 Central Lane MPO Communities of Concern



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B. Transportation/Land Use

Commute and Mode Choice

Both where people decide to live and work and how people decide to travel between these two places impacts the mobility needs of the community. Commute choice is impacted by a number of varying factors, including (but not limited to) proximity to and availability of transportation options, travel time, route directness and convenience. Understanding mode choice also helps planners to understand commuters' attitudes and preferences about travel. Our choices about the way in which we commute conversely have impacts on a number of factors, including greenhouse gas emissions, air pollution, health, personal income and expenditures, congestion, and infrastructure maintenance and preservation. The following provides an overview of the existing conditions with respect to commute patterns, mode choice, vehicle miles traveled, and proximity to modes (other than a single-occupancy vehicle), greenhouse gas emissions, land use characteristics, transportation costs, congestion, community health, and safety.

Commute Patterns

According to the Census OnTheMap website, in 2009 there was a jobs-to-housing imbalance in the area, with approximately 20,000 more jobs provided in the Central Lane MPO than there were working aged residents living in the MPO (OnTheMap, n.d.). As a result, the region has an inflow of workers commuting to the region from outside the MPO boundaries. In addition, approximately 20,000 working-aged residents (or 22 percent of residents) living within the MPO commute outside of the MPO for work. As a result, there is currently a cumulative inflow of approximately 40,822 workers (or 36.5 percent of all workers in the MPO) commuting from outside the MPO boundaries to jobs located within the MPO boundaries.





Figure 2 Commute Patterns in Central Lane MPO

Residents who commute outside of the MPO for work are most likely to go to unincorporated areas in Lane or surrounding counties (19,804 residents or 21.6 percent of working aged residents), or Portland (3,098 residents or 3.4 percent of working aged residents), followed by Salem (1,561 residents or 0.7 percent of working aged residents) (OnTheMap, n.d.).



Figure 3 Distance/Direction Report - Home Census Block to Work Census Block

Source: UC Census Bureau. OnTheMap Application and LEHD Origin-Destination Employment Statistics.

In contrast, non-residents who commute in for jobs within the MPO are predominately traveling from unincorporated areas in Lane County or surrounding counties (41,351 workers or 36.9 percent of MPO workers), followed by Portland (2,105 workers or 1.9 percent of MPO workers) and Cottage Grove (1,528 workers or 1.4 percent of MPO workers) (OnTheMap, n.d.). Figure 3, above, shows the relative number and travel direction of MPO residents commuting from home to work. Figure 4, below, shows the relative number and travel direction of MPO residents commuting from work to home



Figure 4 Distance/Direction Report - Work Census Block to Home Census Block

Source: UC Census Bureau. OnTheMap Application and LEHD Origin-Destination Employment Statistics.

These commuting characteristics impact the vehicles miles traveled in the region. The majority of workers in the MPO (66.3 percent) are commuting less than 10 miles to work, followed by workers commuting greater than 50 miles (15.4 percent), 10 to 24 miles (12.8%) and 25 to 50 miles (5.5 percent). The majority of those commuting more than 50 miles are commuting to work from the north of the MPO, followed by workers from the south of the MPO (OnTheMap, n.d.).

An evaluation of the commute pattern of MPO residents over time shows that this trend has been relatively consistent between 2002 and 2009, with recent variations attributable to the current economic recession.



Figure 5 Central Lane MPO residents distance to work

Source: US Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics

Commuting to work is only one of the motivators that influence travel behavior. According to the 2009 Nationwide Household Travel Survey (NHTS), 42 percent of daily trips are taken for shopping and errands, 27 percent of daily trips are social and recreational, such as visiting a friend, and 15 percent of daily trips are taken for commuting (Santos et al, n.d.). Trips made for work, other than the commute to and from work, accounted for an additional 3 percent of trips. Trips to school and church accounted for about 10 percent of all trips (Santos et al, n.d.).

The average trip length to and from work as reported in the NHTS is 12.2 miles, 6.4 miles for shopping, 7.1 miles for other personal errands, and 11.2 miles for social and recreational activities. (Santos et al, n.d.).

The travel survey results over time have identified some changes in travel behavior. In 2009, a typical household generated slightly fewer vehicle trips and vehicle miles than a previous household survey conducted in 2001. The lower estimates for the number of vehicle trips and vehicle miles were evaluated to be statistically significant for all trip purposes except social and recreational travel and shopping (Santos et al, n.d.). In addition, the number of person trips per day per person as well as the miles traveled per person decreased (Santos et al, n.d.). Reasons for this trend require further study, but could reflect the aging of the population, less people in the workforce, increased use of communications technology, and other social or economic factors (Santos et al, n.d.).

While the number of vehicle miles traveled for social and recreational purposes were lower in 2009 than in 2001, the number of trips remained the same, suggesting that people drove to a similar number of social and recreational activities but chose places closer to home (Santos et al, n.d.). The number of vehicle trips and vehicle miles traveled for shopping remained consistent in 2001 (Santos et al, n.d.).

According to the results from the NHTS, a higher rate of travel is associated with increasing incomes. The NHTS data evaluation indicates that the highest income households make about two and one-half times as many person trips as the lowest income households (Santos et al, n.d.). Between the 2001 and 2009, significant declines in personal travel were noted for all income groups except the lowest, with the largest declines in the middle-income households earning \$40,000 to \$60,000 a year (Santos et al, n.d.).

The NHTS results also suggest that there is variability in travel behaviors according to age, with the greatest decrease in trip-making for people ages 16-20, followed by people ages 21-35 (Santos et al, n.d.). In contrast, the growth in annual miles of driving was sizable for the oldest age group--people age 65 and older (Santos et al, n.d.).

The NHTS also identified some gender difference in travel, with women making about 80 percent of the number of trips men make for commuting to and from work, while men make about 80 percent of the number of trips women make for shopping and family and personal errands (Santos et al, n.d.).

The NHTS did show an increase in SOV trips between 2001 and 2009, due largely to a rise in trips for social and recreational travel (Santos et al, n.d.).

The NHTS also continued to show a correlation between high population density and the percent of households with fewer or no vehicles. Almost thirty percent of the households in areas with a population density greater than 10,000 persons per square mile did not own a vehicle in 2009, a proportion that has remained steady since 1995 (Santos et al, n.d.). On the other hand, almost 70 percent of the households in the least densely-populated areas owned two or more vehicles, a proportion that has also remained consistent since 1995 (Santos et al, n.d.).

It should be noted that the 2009 NHTS did not include surveys within the State of Oregon. Within Oregon, the information on trip purpose is currently being updated as part of the Oregon Travel and Activity Survey (OTAS) project. The project aims to collect data that will be used for travel model development and for analysis at both statewide and regional levels. With data collection spanning the State of Oregon and SW Washington, travel models will be able to analyze long distance travel behavior in addition to local travel patterns.

Mode Choice

In the Central Lane MPO Area, the overwhelming majority of residents drive alone to work every day. The 2009 American Community Survey shows that over 68 percent of workers commute by driving alone, while over eight percent carpooled, over seven percent bike to work, and over four percent walk or take transit to work. Non-auto modes make up over 23 percent of work commute trips in the Eugene-Springfield area, which is higher than the rates observed in Oregon, where 72 percent drove alone and 10.4 percent carpooled to work.

Compared to the national average, however, the percentage of workers who commute to work by bicycling is among the highest in the Country.



Figure 6 Eugene Urbanized Area Means of Transportation to Work

Source: 2009 American Community Survey 1-Year Estimates





A review of the Journey to Work information over time shows that there has been a slight reduction in travel by single-occupancy vehicles over time, with a corresponding increase in travel by public transportation, bicycling, and teleworking.

Tourism and Special Events

Lane County has an established and expanding tourism industry. The region contains numerous cultural and entertainment resources, meeting and event facilities, sports events, natural resources, and recreational amenities that draw visitors to the area. At this time, little is known regarding the existing impacts of tourism or special events on transportation demand management.

At the same time, it is commonly understood that visitors have particular mobility needs such as between an airport and accommodations, to restaurants and shops, to special events, etc. Tourist and special event travel has predictable patterns and needs, and often occurs in areas that have unique environmental or social features that are sensitive to degradation by auto traffic. It is also generally understood that visitors are willing to use TO if the infrastructure and programs are convenient, enjoyable, and affordable.

The region has experimented with a number of programs to minimize the congestion impacts of certain special events by offering and marketing services such as special shuttles or bus routes for the Olympic Trials, Oregon Country Fair, and other similar events. Yet, more research is needed to better understand what transportation services are needed and how those can be marketed so that tourists can more easily travel by a variety of modes.

The region also has the potential to economically benefit from the transportation options infrastructure in place by drawing tourists to its bicycle trails. There are currently several different resources offered by ODOT to promote bicycle touring and bicycle tourism development has been a topic of discussion at the region and state. The potential benefits are significant. According to Rails-to-Trails Conservancy, existing walking and biking trails add \$1.4 billion in economic activity nationwide each year in retail and tourism alone, on top of increased real estate values, business profits from bicycle and pedestrian facility improvements, time savings, and healthcare cost savings (Kooshian and Winkelman, 2011).

Vehicle Miles Traveled

Vehicle Miles Traveled (VMT) is a measure of how much roadways in a community are being used. One unit of VMT is equal to one vehicle traveling 1 mile on a roadway. The region currently monitors VMT, with the goal of reducing VMT per capita over time. Factors that impact VMT include, but are not limited to, the location of housing to employment, road conditions, congestion, gas prices, and access to alternative transportation options such as transit, car-pooling, biking or walking.

Daily VMT per person is estimated to be 17.3 miles within the Eugene Springfield MPO area. This estimate includes all travel within the MPO, including non-personal trips. The per person VMT within the Eugene-Springfield metro area has not grown appreciably since 1990, which is in contrast to national trends, where VMT per person has risen steadily.

The Eugene-Springfield daily VMT per person is significantly below the national average, as shown in Figure 8.



Figure 8 Daily VMT per Person, 1990 to 2009, Eugene-Springfield compared with other Oregon MPOs and the US National Average

According to results from the Central Lane MPO's travel model, the amount of daily vehicle miles traveled per person within the Central Lane MPO boundaries was 12.11 miles in 2004 and the average trip length was 3.60 miles. Approximately 14.8 percent of the trips per person were less than one mile (Central Lane MPO, 2007).

Land Use Characteristics

A number of different land use characteristics can contribute to mode choice and vehicle miles traveled. The following provides a brief overview of some of these issues:

Map 6 Employment Density in Central Lane MPO



Source: OnTheMap

Development density or intensiveness. Development density is measured with various parameters such as population and employment density, square footage of development or intensiveness of economic activity. Independent of other factors, higher density and/or intensity can create higher total travel demand, but also enables and encourages shorter auto trips and higher walk, bike, and transit use due to a concentration of activities.

Map 6 above illustrates the employment densities that are found in the Central Lane MPO as of 2009. In general, the density of jobs per square mile is highest in Eugene's Central Business District and extending south to encompass the area around the University of Oregon. Areas with greater density are also found near Valley River Center, the RiverBend Medical campus, and Lane Community College.

Mix of uses. Within a given area of land, the mix of uses influences the extent to which needs such as work, school, shopping can be served by development in the area. Mixing of compatible land uses enables shorter trips where bike and walk may be viable options and enables shorter auto trips and supports efficient transit operations.

The City of Eugene recently initiated a number of programs aimed at creating and enhancing 20 minute living, where residents can meet their daily needs – work, shop, and play – within an enjoyable 20 minute walk (Sustainable Eugene, n.d.). A 20-minute neighborhood is defined as a place with convenient, safe, and pedestrian-oriented access to the places people need to go to and the services people use nearly every day: shopping, quality food, school, parks, social activities, and transit that is

near and adjacent to housing. In other words, a 20-minute neighborhood is another name for a walkable environment (Sustainable Eugene, n.d.).

The City of Eugene's Climate and Energy Action Plan (CEAP) adopted by the City Council in September 2010, includes a target of having 90 percent of Eugene households within a 20-minute neighborhood over the next 20 years (Sustainable Eugene, n.d.).

As part of the Envision Eugene process, the City has conducted a preliminary walkability analysis. In the analysis, walkability is defined by quantitative information, and includes the following factors:

People	Density	Destinations
Residents	Bicycle Facilities	Full Service Grocery
Employees	Sidewalks	Convenience Stores
	Intersections	Elementary Schools
	Retail Goods and Services	Parks
		Bus Stops

Based on these factors, the following composite was prepared. The resulting map (Map 7) is intended to portray an index of walkability, where higher scores (illustrated in red and orange) are those places where many of the factors occur and are considered more walkable, and lower scores (shown in blue and green) have fewer of the factors and are considered generally less walkable.



Map 7 City of Eugene 20-Minute Neighborhood Analysis Map

The following infrastructure opportunity areas depicted in Map 8 were identified through this process. Complete copies of the preliminary maps for this project are found in Appendix **.



Map 8 City of Eugene, 20-Minute Neighborhood Analysis, Infrastructure Opportunities

Urban form. The broad overall physical and geographic arrangement of land use and transportation facilities determines the urban form. Urban form can favor one transportation mode over another and may influence overall VMT by encouraging one mode over another. For example, pedestrian-friendly employment and activity centers connected by moderate to higher density corridors can encourage walking, bicycling, and transit use relative to auto oriented centers isolated from low density residential areas.

As part of the Envision Eugene process, the City of Eugene is evaluating the development of mixed use transit corridors with stretches of medium- and high-density housing and businesses along the following key corridors: West 11th Avenue, South Willamette, Highway 99 W, River Road, Coburg Road and Franklin Boulevard. Mixed use is already allowed in commercial zones and along transit corridors, but very little mixed use development is currently happening (Envision Eugene, n.d.).

The City of Springfield has determined that additional moderate- and high-density multifamily units are needed to help accommodate expected housing demand over the next 20 years. The Springfield 2030 Refinement Plan accommodates the majority of higher density residential growth in Springfield's designated Mixed Use Nodal Development centers. These centers – primarily Downtown Springfield and the Glenwood Riverfront District – are centrally located and well served by public bus rapid transit (EmX). As future growth and development bring change to Springfield, the City is committed to managing this change through its initiation and support for comprehensive district, corridor, and neighborhood planning efforts.

The City of Coburg completed an Urbanization Study update in 2010. The update confirms the City's commitment to preserving a small scale, walkable community by designing for shared use 'skinny' streets and developing a comprehensive shared use path system in and around the City that connects the downtown to the residential and other commercials areas.

Urban Design. The orientation of the building on a site relative to transportation infrastructure (parking, sidewalks, bus stops, etc.) can impact the choice of modes, as well as the extent of contiguousness of development. Other design features such as covered walkways, seating and other amenities can be part of site design. Collectively, these design features can increase the safety, attractiveness, and convenience of various modes.

Activity scale. Larger scale facilities that draw their market from a larger area tend to result in longer access trips and reduced probability of using walk and bike modes, thus producing greater VMT.

C. Connectivity and Proximity to Alternative Modes

Pedestrian Facilities

Sidewalk coverage is one way to track how well the region's roadway system serves pedestrians. It can be a useful metric to track over time to demonstrate if or how sidewalk coverage is improving through new projects.

As part of the local Transportation System Plans for the Cities of Eugene, Springfield, and Coburg each city has evaluated its existing sidewalk coverage, generally for major streets such as arterials and collectors.

In Eugene, the percentage of streets classified as arterials or collectors that have sidewalks is 69 percent (252 of 366 miles); this figure does not include limited access freeways such as Randy Papé Beltline and I-105 (Resources, Eugene TSP, n.d.).

In Springfield, approximately 60 percent (that is, 53.7 of 89.1 miles) of the arterials and collectors within the City have sidewalks on both sides. An additional 9.6 miles of these streets have sidewalks on at least one side. Some of the principal arterials (such as OR 126) are limited-access facilities; these facilities are not appropriate for sidewalk access.

Major roads in Coburg that include sidewalks are Pearl Street, West Van Duyn Street, and Willamette Street. A portion of North Coburg Road also has sidewalk on the side adjacent to the elementary school.

The only residential roads that include sidewalks are the relatively new Rustic Court, Shane Court, and Sarah Lane. Most pedestrian usage occurs within the street. Since traffic volumes are relatively low on local and collector city streets, the roadway is shared among bicycles, automobiles, and pedestrians.

As part of the Communities and Schools Together (CAST) project, a partnership among the Bethel School district, Oregon Research Institute, and several community organizations, parents of elementary school children assessed the safety and accessibility of the built environments surrounding their schools. The goals of the street audits were to: 1) develop community and family awareness of street barriers for child walking and biking; 2) highlight opportunities for active child transport to and from schools; 3) develop and mobilize knowledgeable community members in the nomenclature of built environments; 4) create a community-based dataset and public assessment process for eventual use by city planners; and 5) develop community readiness for Safe Routes to School encouragement and enforcement grant applications.

In addition, in 2008, the CAST project conducted a Safe Routes to School (SRTS) survey. The SRTS survey consists of an in-class student tally and a parent transportation survey. Both surveys originate from the National Center for SRTS and were given to parents and teachers of students grades K-5. Parents were asked to complete the anonymous survey on their own and teachers were asked to administer the survey to their students.

All seven Bethel Elementary schools participated in the SRTS survey. The results of this survey provide insights into the mode choice used by students and issues affecting the parent's decisions to allow or not allow their child to walk or bike to and from school. These results can be found at the CAST website at https://cast.ori.org/node/510.

Bicycle Facilities

Access to bikeways is another measure to track the extent of accessibility. In the Central Lane MPO area, the ratio of bikeway miles (both on and off-street to arterial and collector miles (excluding freeways) was 59 percent in 2004 (Central Lane MPO, 2007).

The total number of miles of bikeway in Eugene is 220 miles (116 miles of bike lanes, 52 miles of signed bikeways, and 52 miles of shared-use paths) (Resources, Eugene TSP, n.d.). Approximately 45 percent of Eugene's arterials and collectors are served by bike lanes. As part of Eugene's TSP planning process, identified gaps in the arterial and collector bikeway network will be used in developing projects for the future proposed bicycle system in Eugene.

There are approximately 58 miles of street bikeways in Springfield (39.2 miles of bike lanes, 16.4 miles of signed bikeways, and 2.2 miles of shoulder bikeways). At present, 62.5 percent of the arterials and collectors have some form of bikeway. There are also 12.9 miles of shared-use paths, which also serve bicycles.

The Central Lane MPO is currently developing a new bike model that will assist the region in understanding bicycle mode choice and better plan for new bike facilities. The region's modeling of bicycle mode choice and routes is currently limited by several factors. While bike trips are included in

the regional travel model, cyclists are assumed to travel by the most direct route between origin and destination on a network that does not include local roads.

Further, trips are not assignable to the network, and thus volumes on various segments of the network are not available. The new model will attempt to address these current gaps, and it is estimated that the model will be completed in 2014.

Transit Facilities

The average annual transit trips per person in the Eugene-Springfield metro area in 2009 was 52 trips (National Transit Database, 2009). Many factors affect public transit use, including distance to stops, reliability of transit, and accessibility of destinations, among others. In 2004, 83 percent of all households in the Central Lane MPO were located within ¼ mile of a transit stop (Central Lane MPO, 2007).

Lane Transit District predominately operates under a hub-and-spoke distribution paradigm, in which trips are connected to the Eugene Transit Station in downtown Eugene. The Center for Neighborhood Technology has completed a Transit Connectivity Index (TCI) in several regions throughout the nation (Housing + Transportation Affordability Index, n.d.), including the Central Lane MPO area, which is shown in Map 9 below. The TCI is based on the number of bus routes and train stations within walking distance for households in a given Block Group scaled by the Frequency of Service.



Map 9 Transit Connectivity Index in Eugene-Springfield Urban Area

Transit Connectivity Index (TCI)							
Criteria	Househo	ldsPercent of Households					
No Data Available		0%					
Less than 10 Rides/Week	1,049	2%					
10 to 100 Rides/Week	14,515	27.1%					
100 to 1000 Rides/Week	35,517	66.2%					
1000 to 10000 Rides/Week	2,552	4.8%					
10000 Rides/Week and Great	ter	0%					
Eugene Total	53,633	100%					

Source: Center for Neighborhood Technology

The data used to prepare the map appears to be somewhat outdated (e.g. the Gateway EmX Extension does not appear to be depicted) but generally shows greater connectivity near the Eugene Transit Station, with declining connectivity further from this location. Some gaps in coverage appear in areas throughout the region.

D. Congestion

The most tangible consequence of an increase in VMT without road capacity expansion to meet new demand is traffic congestion. Traffic congestion is the increase in travel time delay due to an increase in traffic, slower vehicle speeds, and queuing when cars line up to enter a roadway. Congestion in the

Central Lane MPO Area results in losses to commuters and other drivers from vehicle operating costs, environmental costs, lost economic productivity, and freight unreliability.

As of 2004, the Central Lane MPO estimated that there were 14,140 daily hours of delay due to congestion (Central Lane MPO, 2007). RAND estimates that each hour of delay for passenger vehicles costs the economy \$14.60, and \$77 for freight trucks. Under current growth trends, daily hours of delay are estimated to increase to 40,460 hours by 2031, nearly tripling costs to the economy.

The Central Lane MPO has adopted a Congestion Management Process (CMP) that documents the activities and strategies used to manage traffic congestion. One of the activities referenced in the report is a 2004 Congestion Management System (CMS) Baseline Report that identified nine roadways as congestion management roadways. The 2004 CMS report discussed a set of strategies for addressing congestion within each corridor, including land use strategies; transportation demand management (TDM); intelligent transportation system (ITS) techniques and operational tools; roadway projects to add capacity; transit strategies; and bicycle/pedestrian strategies. Table 9 provides an overview of the identified congested corridors and associated TDM measures for each corridor:

CORRIDOR	SEGMENT	TDM Strategies
Interstate 5	OR 58 interchange at Goshen to north boundary of the MPO at Coburg	Employment-based strategies at major employment centers in the corridor can have a measurable impact. However, the overall TDM impact on this corridor is likely to be limited in view of high proportion of trucks and through auto trips on I-5.
OR 126/I-105	 Garfield Street in Eugene to Main Street/McKenzie Highway in Springfield 6 -7th couplet from Garfield to Jefferson Washington-Jefferson Bridge (I-105) from 7th to Delta Highway I-105 from Delta Highway to Interstate 5 I-5 to Main Street/McKenzie Highway 	Given the high proportion of medium-distance commuters using this corridor to access regional job destinations, TDM measures can have a positive impact. Parking strategies combined with express LTD routes could be considered for their potential impact on peak-
		hour congestion in this corridor.
Beltline Highway	Highway 99 to Interstate 5	Given the high proportion of medium-distance commuters to regional job destinations, TDM measures could have an impact on congestion in this corridor.

Table 9 Congestion Management Corridors

Main Street/McKenzie Highway	Mill Street in downtown Springfield to 70 th Street	Parking strategies combined with express LTD routes could be considered for their potential impact on peak-hour congestion in this corridor. Given the high proportion of medium-distance commuters to regional job destinations using this corridor, there is potential for TDM to have a positive impact on congestion.
Broadway/Franklin Boulevard	 Mill Street in Eugene to Springfield Bridge Broadway from Mill Street to Alder Street Franklin Boulevard from Alder Street to I-5 	Since this corridor provides the primary connections for downtown Eugene, the University of Oregon, and downtown Springfield, TDM will continue to
	Franklin Boulevard from I-5 to Springfield Bridge	be an important component in addressing congestion in the corridor. In particular, parking strategies will continue to be important as a means of attracting more people to the use of transit and alternative modes.
West 11 Avenue	Terry Street to Chambers Street	West 11th will continue to be an important commute route to jobs in west Eugene, therefore TDM strategies can have a positive impact on congestion in this corridor. This is most relevant for the western end of the corridor, where a number of large employers are located within ½ mile of West 11 th Avenue.
Ferry Street Bridge/Coburg Road	Broadway to Crescent Avenue	Because of the large concentration of jobs in central Eugene and the growing concentration of employment in the Chad Drive area, TDM strategies can have a very large and positive impact on congestion in this corridor.

Southeast Eugene corridor	Hilyard, Patterson, Amazon Parkway, and Willamette from 13 to 33rd Avenue	Since this corridor provides primary access for residents of south Eugene to major employment centers in downtown Eugene, the U of O area and the Sacred Heart hospital area, TDM measures will continue to be a very important
		component for dealing with congestion.
18th Avenue	Bertelsen Road to Agate Street	Traditionally, 18th Avenue has been a major commute route for west Eugene residents to get to downtown and the UO area, and this travel is forecast to increase somewhat. Downtown and university commuters represent a strong market for TDM measures such as car pooling and use of alternative modes. In addition, West 18th has become an important commute route to jobs in west Eugene, therefore TDM strategies can have a positive impact on congestion in this part of the corridor as well.

E. Safety

Perception of Safety

Transit rider surveys find that personal safety on vehicles and in the vicinity of stops and stations is an important customer concern (Strathman et al, 2010). Although it is generally accepted that the incidence of crime negatively affects the demand for transit (Strathman et al, 2010), empirical studies documenting this relationship are lacking.

Parents' perceptions of the transportation route between home and school were among the key factors determining whether children walk or bike to school. Perceived safety from traffic and crime has been associated with higher rates of children walking and bicycling to school (Research Syntheses, Summaries, & Briefs, n.d.).

Studies have also shown that the cost of traffic injuries and deaths may be reduced significantly in walkable communities (Kooshian and Winkelman, 2011). Street networks that are designed with the

safety and convenience of all users have been shown to be safer for everyone who uses them (Kooshian and Winkelman, 2011). A 2009 report from Transportation for America used a Pedestrian Danger Index (PDI) in order to establish a level playing field for comparing metropolitan areas based on the danger to pedestrians. The PDI corrects for the fact that the cities where more people walk on a daily basis are likely to have a greater number of pedestrian fatalities, by computing the rate of pedestrian deaths relative to the amount of walking residents do on average (Kooshian and Winkelman, 2011).

Transportation for America has evaluated different metropolitan areas within Oregon according to their PDI, which is calculated by dividing the average pedestrian fatality rate (2007-2008), by the percentage of residents walking to work (2000). The Eugene-Springfield area was ranked fourth safest out of six metropolitan areas according to the PDI index (Transportation for America), falling behind Medford, Salem, and the Portland-Vancouver-Beaverton metro areas. The PDI for the Eugene-Springfield area was calculated at 31.3, with nine pedestrian fatalities in 2007-2008, accounting for 11.8 percent of all traffic deaths that were pedestrians (Transportation for America). Eugene-Springfield had a slightly higher rate of total traffic deaths that were pedestrians than in Oregon (11.6 percent).

Transportation for America also compared the average annual federal money spent on bicycle and pedestrian improvements per person and the Eugene-Springfield area was ranked third, behind Salem and the Portland-Vancouver-Beaverton metro areas (2000).

As noted by Transportation for America in their 2001 report Dangerous by Design, the money saved by preventing pedestrian injuries and fatalities can in many cases offset the costs of improving our streets and roads. As an example, Transportation for America cites a National Safety Council Study that estimated the comprehensive cost — including both economic costs and diminished quality of life — for each traffic death at \$4.3 million. Multiplying that figure by the nine pedestrian fatalities in 2007-2008 equates to a cost of \$38.7 million over that period.

Crash Data

As part of the update process for each city's Transportation System Plan, crash records were obtained to identify regional crash trends that may be addressed through engineering, education, and enforcement strategies. Reportable crashes are those that result in an injury or fatality or result in over \$1,500 in vehicle or property damage.

In the City of Eugene, Pedestrian-involved crashes (grouped with bicyclist crashes) have declined from 37 crashes in 2005 to 20 crashes in 2009 following an annually declining pattern in overall crashes.

In the City of Springfield, pedestrian-involved crashes (grouped with bicyclist crashes) declined from 15 crashes in 2005 to seven crashes in 2009, following an annually declining pattern in overall crashes.

F. Human Services Transportation

Lane County and the Eugene-Springfield Metro area contains a vast network of human service and public transit agencies that work together to meet the transportation needs of eligible patrons, as outlined in the Lane Coordinated Public Transit Human Services Transportation Plan.

Through a variety of efforts at the state and local level, LTD has become the primary coordinator of paratransit services for seniors, people with disabilities, and the clients of many human services agencies in Lane County. This includes serving as the designated administering agency for State of Oregon Special Transportation Fund for the Elderly and Disabled (STF). As the administering agency for state STF monies, LTD assesses the transportation needs of seniors and people with disabilities in Lane County with the input of an Advisory Committee. STF funds are then allocated to programs to meet this need.

In addition to STF funds, LTD also receives and administers the County's allocation of FTA Section 5310 and 5311 funds from the State. By combining FTA Section 5310 and 5311 funds with State STF funding, LTD is able to provide both capital and operating funding, as appropriate, for local projects.

In 2011, a total of \$2,421,015 is expected to be available for qualified projects within Lane County. LTD works with local and state agencies to develop a broad range of services that not only meet ADA paratransit requirements but also serve seniors and other agency clients and are provided countywide. In 2010, it was estimated that the RideSource Call Center arranged nearly 27,000 one-way trips in a single month. Following is a description of the major paratransit, demand-responsive, and volunteer driver services operated or coordinated by LTD.

RideSource. RideSource provides transportation services within the Eugene/Springfield area for individuals who are not able to ride the Lane Transit District (LTD) fixed-route bus system due to a disabling condition either all of the time or for specific trips or under certain conditions. The RideSource program serves both ADA paratransit eligible riders as well as seniors. A fleet of approximately 71 vehicles is used to provide RideSource paratransit service. RideSource also offers a shopper service in addition to its regular paratransit service, providing transportation from rider's homes to selected large grocery stores at set times.

Senior and Disabled Services (S&DS). LTD assists S&DS to provide funding for non-medical transportation services to persons who receive Medicaid medical transportation services and who are able to live in their own homes rather than in a care facility.

Pearl Buck Pre-School Transportation for children of disabled parents.

Lane County Developmental Disabilities Work Transportation for individuals with developmental disabilities case managed through Lane County.

Volunteer escorts for seniors without transportation options and who require the assistance of an attendant.

Part IV Plan and Policy Context

A. Policy Context

This section provides an overview of federal, state, regional, and local documents that comprise the policy framework for transportation options planning in the Central Lane MPO area. A variety of documents were reviewed to identify policies most relevant to transportation options planning in the region. Although each document reviewed contains many policies, only the policies and information most pertinent to the trends in regional transportation options planning are summarized to help focus this work. Additional detailed information on the relevant policies is contained in Appendix A.

Federal

Recent federal transportation laws have started to pivot away from a traditional focus on highway construction and automobile travel towards multimodal and more comprehensive transportation planning. Congress charted a new policy direction with the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). This Federal transportation bill focused on priorities other than the completion of the Interstate Highway System. For example, it contained new planning requirements and funding for mobility options. The initial statement of ISTEA represented a new direction:

It is a goal of the United States to develop a national intermodal transportation system that moves people and goods in an energy-efficient manner. The nation's future economic direction is dependent on its ability to confront directly the enormous challenges of the global economy, declining productivity growth, energy vulnerability, air pollution, and the need to rebuild the Nation's infrastructure. The two transportation bills enacted since ISTEA varied little from this approach.

The most recent transportation bill, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which became federal law in August 2005, preserves key features of the two previous authorization acts (ISTEA and TEA-21) emphasizing multimodal solutions to major transportation challenges. SAFETEA-LU also provided funding for non-motorized alternative transportation, including a Safe Routes to School program.

Roughly \$6.5 billion per year was allocated to the Surface Transportation Program (STP). States were allowed to use this money to fund transit and "bicycle transportation and pedestrian walkways." The Congestion Mitigation and Air Quality Improvement Program (CMAQ) -- about \$1.7 billion a year -- went to projects likely to reduce pollution, and specifically forbade funding "a project which will result in the construction of new capacity available to single occupant vehicles." The Eugene-Springfield metro area, however, is not currently eligible to receive CMAQ funds. In addition, SAFETEA-LU established a new Small Starts Program as part of the New Starts Program for smaller transit capital projects such as Bus Rapid Transit. SAFETEA-LU also included the Transportation, Community, and System Preservation (TCSP) Program, which funded a number of innovative planning efforts linking transportation, housing, land use, and environment; and enhancement projects that are required components of applicable FHWA and FTA funding programs.

SAFETEA-LU also requires the metropolitan planning process is to promote consistency between transportation improvements and State and local planned growth and economic development patterns, emphasizing land use and transportation coordination. SAFETEA-LU did not specify how this coordination would occur, providing State Departments of Transportations, metropolitan planning organizations (MPOs), local agencies, and others involved in the transportation planning process flexibility in meeting this requirement.

SAFETEA-LU also required improved public involvement processes, specifically requiring representatives of users of pedestrian walkways, bicycle transportation facilities, and the disabled be added as parties to be provided with the opportunity to participate in the statewide and metropolitan planning processes.

SAFETEA-LU has been criticized for its lack of funding and policy commitment to transportation options. Some specific criticisms include:

- Highway spending. Transportation funding under SAFETEA-LU continues to be heavily weighted toward highway spending. SAFETEA-LU provided \$244.1 billion over five years, its revenues raised by the federal gas tax and directed to the Highway Trust Fund, which has both highway and mass transit accounts. \$40 billion a year went to highways, most of which was used to expand and upgrade the Interstate highway system; some \$10 billion went annually to mass transit.
- Transit funding structure. While funds for new roads were distributed to states based on a formula, new transit lines had to undergo the rigorous New Starts process -- competing with other projects from all over the country -- before winning a share of federal dollars. There was no such required audit for road projects. In addition, while SAFETEA-LU technically allowed New Start projects to be funded with an 80 percent federal share, just like highway projects, the FTA gave project plans extra credit if the local share was higher; in the competitive environment of the New Starts program, getting at least a 40 percent local match has become a de facto requirement for federal aid. As a result, communities almost always have to commit a higher percentage of their resources, in relative terms, if they want to invest in transit rather than highways.
- Reliance on federal gas tax. Funds for surface transportation come primarily from the national gas tax; therefore, if automobile driving declines, and/or fuel efficiency increases (as the federal government has mandated), there are subsequently fewer revenues funding the program.

A new transportation bill has yet to be authorized, and it is still difficult to predict how the new bill will address funding for transportation options. It is speculated that fiscal constraint will be the center of the forthcoming transportation reauthorization debate, with resulting reductions or elimination in funding for specific programs targeting bicycle, pedestrian, and other TO improvements and programs.

The US Department of Transportation has signaled its commitment to providing more transportation options as part of its involvement in the HUD/DOT/EPA Interagency Partnership for Sustainable Communities. On June 16, 2009, EPA joined with the U.S. Department of Housing and Urban Development (HUD) and the U.S. Department of Transportation (DOT) to help improve access to

affordable housing, more transportation options, and lower transportation costs while protecting the environment in communities nationwide.

The Partnership established six livability principles to act as a foundation for interagency coordination:

- Provide more transportation choices
- Promote equitable, affordable housing
- Enhance economic competitiveness
- Support existing communities
- Coordinate policies and leverage investment
- Value communities and neighborhoods

The Partnership will encourage livability principles to be incorporated into Federal programs, while better protecting the environment, promoting equitable development, and helping to address the challenges of climate change.

Statewide

Oregon State laws have a long history of addressing TDM and mobility options. In 1971, the Oregon Legislature passed the landmark "Bike Bill" (ORS 366.514). The law requires ODOT, cities and counties to:

- Spend "reasonable" amounts a minimum of one percent of their share of the State Highway Fund on walkways and bikeways.
- Include walkways and bikeways as part of road construction projects, with three exceptions: where there is no need, where the cost is too high in proportion to need, or where it would be unsafe.

In 2009, ODOT estimates that it funded \$6.3 million in improvements through this program.

In 1996, Oregon adopted the Employee Commute Options (ECO) Rule which requires employers with more than 50 employees to develop a good faith plan aimed at reducing drive-alone trips by 10% over three years. The program applies within the Portland metro area only; the ECO Program is part of the Portland-Vancouver Air Plan to ensure the region will meet the federal health-based ozone standard in spite of continued population growth. The rule was updated in 2006 to cover only those employers with greater than 100 employees (reporting on progress is mandatory, achieving reduction targets is not).

ODOT provides funding to seven cities/regions in Oregon which have developed Transportation Options Programs. In the Eugene-Springfield area, this program was initiated in 1996. point2point Solutions has grown steadily and received several awards over the last 15 years in operation. Each region of ODOT determines funding levels for TO programs within the region. The process varies but typically involves a funding request by the responsible entity for inclusion in the State Transportation Improvement Program (STIP). In recent years, the state funding for TDM reached a plateau and more recently has been reduced.

More recently, the State established the Connect Oregon Program. ConnectOregon is a lottery-bondbased initiative first approved by the 2005 Oregon Legislature to invest in air, rail, marine and transit infrastructure. ConnectOregon is focused on improving the connections between the highway system and the other modes of transportation to better integrate the components of the system, improve flow of commerce and remove delays. The 2009 Jobs and Transportation Act contained a third ConnectOregon program, providing \$100 million in lottery-backed bonds for multimodal investments.

Beyond these programs, the state has also provided key planning rules that require the integration of transportation options into transportation and land use planning. The state land use program is the state's framework for growth management, a key measure to achieving livable communities. The program promotes orderly growth through comprehensive planning, urban growth boundaries, and other provisions to encourage compact growth. As a result of the 30-year old program, Oregon is generally more compact than other states.

Oregon's land use program Goal 12 (Transportation) and the Transportation Planning Rule require that local, regional, and state transportation system plans are developed to "avoid principal reliance upon any one mode of transportation." Each Transportation System Plan (TSP) is required to determine transportation needs and plans for roadway, transit, bicycle, pedestrian, air, rail, water, and pipeline facilities. TSPs in larger jurisdictions also are required to address transportation system management, demand management, parking, and finance. Goal 12 of the Transportation Planning Rule requires transportation system plans to be designed to achieve specified vehicle mile reductions per capita within MPO areas. In Oregon's four metropolitan planning areas the TSP's are required to achieve a 5% reduction in vehicle miles of travel (VMT) per capita during the 20-year horizon of the Transportation System Plan.

In urban areas greater than 25,000 in population, the TPR directs local governments to adopt regulations to require new retail, office, and institutional buildings to provide preferential access to transit. This is to be accomplished by several means, including requiring buildings to be located as close as possible to transit stops.

The Oregon Transportation Plan (OTP) is the long-range transportation plan for the state of Oregon. The purpose of the plan is to identify and plan for changes in the future with substantial impact on mobility in the state, and to anticipate ways in which those changes could best be handled. Included in the plan is the overall vision for the state's transportation system, along with supporting policies and strategies.

Largely in response to Transportation Planning Rule guidelines, along with the expected population increase, the OTP outlines several transportation demand management strategies that support the overarching policies embodied in the plan, particularly "Creating Communities." These strategies include promoting mixed-use compact development, improving bicycle and pedestrian facilities, and encouraging use of alternative modes of travel like carpooling, transit, or telework.

Regional and Local Plans

The Central Lane MPO works to provide coordinated regional TDM policies and strategies. 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 Regional Transportation Plan (RTP) strategies include nodal development and transit-supportive land use patterns, new and expanded TDM programs, and Bus Rapid Transit, in addition to roadway projects that benefit pedestrians, bicyclists, and motorists.

TDM addresses federal SAFETEA-LU and state TPR requirements to reduce reliance on the automobile, thus helping to reduce or 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 and increasing highway construction and maintenance costs, as well as from growing concerns about sustainability, including minimizing greenhouse gas emissions.

Each of the partner cities within the MPO have their own local TDM adopted policies and strategies adapted to their unique conditions and community objectives.

The Central Lane MPO region's transportation planning partners have embarked on an unprecedented long-range transportation coordination effort. It includes creating or updating the following (through 2013):

- Coburg Transportation System Plan
- Eugene Transportation System Plan
- Springfield Transportation System Plan
- Lane Transit District Long Range Transit Plan
- Regional Transportation System Plan
- Regional Transportation Plan

These efforts provide an opportunity to further consider and integrate TDM strategies into these plans.

B. Greenhouse Gas Emissions

As total vehicle miles traveled (VMT) increases, so do greenhouse gas emissions from the transportation sector.

In 2010 the Central Lane Metropolitan Planning Organization completed a greenhouse gas (GHG) inventory for the region. The emissions inventory established a snapshot of the carbon footprint of the region in order to focus planning efforts to achieve long-term greenhouse gas emission reductions.

Residents and businesses in the Eugene-Springfield metropolitan region are responsible for an estimated 3.2 million metric tons of GHG emissions annually (Central Lane MPO, 2010).

The study found that the three greatest sources of carbon emissions in the region are goods and food consumed (58 percent), transportation by car and truck (31 percent), and energy used in homes and buildings (11 percent) (Central Lane MPO, 2010).

The transportation system emissions come mainly from on-road commercial and private passenger vehicles, as well as other passenger transport such as air travel, with small shares from rail, marine, and

transit sources. The annual per capita emissions from local passenger transport are slightly less in the Eugene-Springfield metro area (2.4 MT CO2e) as compared to Portland Metro (3.1 MT CO2e) and the United States (3.4 MT CO2e). Most of the local passenger transport (approximately 66 percent) consists of trips within the MPO boundaries, with an average of 11.4 miles travelled per person in an average weekday. These trips represent trips to work, convenience trips for shopping, recreation, entertainment, and school. When all trips within the Eugene-Springfield are accounted for, an average household emits over 5.5 MT CO2e per year for local transportation, which is approximately 17 percent of total household emissions (Central Lane MPO, 2010).



Figure 9 Transportation-Related Greenhouse Gas Emissions

Transit is a small source of current emissions (0.3%), and increased transit ridership is one of the key strategies for reducing overall transportation emissions. With respect to emissions, an average passenger mile traveled by bus is more efficient than one travelled by private vehicle. It is estimated that the area's transit ridership annually saves the region 0.06 MT CO2e per person, or approximately three percent of the regional local passenger transport emissions, by taking transit rather than driving a car (Central Lane MPO, 2010).

Reducing the number of miles traveled or shifting those miles to more efficient modes of transportation such as bicycling, walking, ridesharing or transit, is one of the key opportunities to reduce emissions rates for local passenger transport over time. These individual efforts can be combined with other changes to reduce overall transportation emissions, such as: increasing use of low carbon fuels; increasing use of electric or hybrid vehicles, in conjunction with increased renewable energy generation; and increasing vehicle fuel efficiency.

Legislation

The Oregon Legislature has established greenhouse gas emissions reduction goals relating to all sectors, including energy, residential, commercial, transportation, and industrial land uses. There is an existing statewide goal to reduce emissions to at least 75 percent below 1990 levels by the year 2050.

Following the establishment of these statewide goals, the first legislation enacted to address GHG emissions focused on the transportation sector. In Oregon, the transportation sector accounts for approximately 34 percent of the overall GHG emissions in Oregon. Legislation regarding GHG reductions within the Transportation Sector was included in House Bill 2001, enacted in 2009, and Senate Bill 1059, enacted in 2010. SB 1059 directs ODOT to develop a Statewide Transportation Strategy covering all modes of transportation (light vehicles, heavy vehicles, rail, air, marine) (OSTI, n.d.).

The Central Lane Metropolitan Planning Organization serving the Eugene-Springfield area is required to begin planning efforts to reduce Transportation Sector GHG emissions. The legislation requires the MPO to develop transportation modeling and other technical capabilities needed to estimate and evaluate emissions. The legislation also requires the MPO to develop scenarios showing land use and transportation alternatives that result in a reduction of transportation sector GHG emissions. (Note: Scenario planning for reducing GHG emissions in metropolitan areas only requires consideration of light vehicles, not heavy trucks or other modes of transportation. Light vehicles are described as vehicles under 10,000 lbs of gross vehicle weight, including motorcycles, cars, minivans, light trucks, and sports utility vehicles.)

GHG Reduction Targets

In May, 2011, the Oregon Sustainable Transportation Initiative (OSTI) established targets for per capita greenhouse gas emissions from light duty vehicles by 2035 (over 2005 levels) for each of the six metropolitan areas within the State, including the Central Lane MPO (OSTI, n.d.). Reduction targets are being set for the state's six metropolitan areas to inform scenario planning and to illustrate what it will take to accomplish our statewide goals. Emission reduction targets could be accomplished through a combination of actions at the statewide and the local level, including changes in our transportation system, vehicle and fuel technologies, and community design. To develop the targets, the Department of Land Conservation and Development conducted a study to estimate potential future changes to fuel technology, vehicle technology, and the makeup of our vehicle fleet. This resulted in a finding that an additional 20 percent per capita reduction in transportation sector greenhouse gas emissions would be required within the Eugene-Springfield area by the year 2035 to meet targets (OSTI, n.d.).

C. Community Health

Increasingly, transportation is being viewed as a determinant of health status. Research has demonstrated the impacts of increased auto dependency and air pollution on environmental and health concerns such as respiratory illnesses and cardiovascular disease. Public health researchers are also examining the relationship of transit choice and access to wider public health concerns, including stress, physical inactivity, obesity, and quality of life. As this research continues and the evidence mounts, transportation and public health planners are increasingly working together to assess how transportation policies can benefit and promote public health.

Health-related data is most often collected at the county level by the public health department. As a result, it can be difficult to disaggregate data down to smaller geographies. However, the Eugene-Springfield population makes up a large portion of the Lane County population (about 70 percent); therefore, county-level data can provide insight into the health indicators for the area.

According to a national study conducted by the University of Wisconsin, within Oregon, Lane County is ranked as the 18th healthiest county. Lane County is also ranked 17th for health factors, which include health behaviors, clinical care, social and economic factors, and the physical environment. With respect to the physical environment, the study ranked Lane County 33rd in Oregon, reporting on the following physical environment health factors:

Health Factor	Lane County	National Benchmark (90 th percentile)	Oregon
Air pollution-particulate matter days	11	0	12
Air pollution-zone days	5	0	1
Access to healthy foods	51%	92%	62%
Access to recreational facilities	13	17	12

Table 10 Health Factors in Lane County

Chronic Illness and Obesity

There are a number of chronic diseases that are partially attributable to lack of physical activity and air quality impacts, specifically those listed in Table 11 below. The Oregon Behavioral Risk Factor Surveillance System (BRFSS) contains data on chronic disease prevalence in Lane County. Over the past two reporting periods, the BRFSS has reported the following:

Table 11 Chronic Disease Prevalence in Lane County

	Asthma	Heart Attack	Coronary Disease	Stroke	Diabetes	High Blood Pressure	High Blood Cholesterol
2006- 2009	10%	3%	3%	2%	6%	26%	32%
2004- 2007	10%	3.1%	3.2%	2.4%	6.5%	25.8%	31.6%

In its annual report, the Lane County Public Health Authority has reported that lack of physical activity and poor nutrition are the second leading cause of death in Lane County. Approximately 26 percent of Lane County residents are obese and another 35 percent are overweight. Lane County also reports that a study commissioned by the Northwest Health Foundation found that 34 percent of the increase in Oregon's health expenditures between 1992 and 2005 could be attributed to the rising obesity prevalence. Finally, the annual report contained data on the physical activity and obesity rates of school-aged children and adults within Lane County, as follows:

% who met CDC physical activity recommendations			% who are obese		
8 th grade	11 th grade	Adult	8 th grade	11 th grade	Adult
61%	52%	60%	9%	11%	25%

Table 12 Physical Activity and Obesity Rates within Lane County

National studies indicate that increasing the time spent walking each day significantly reduces obesity rates. Lawrence Frank and colleagues have conducted several studies that show community walkability is associated with active travel, lower body mass index (BMI), reduced VMT and reduced emissions per person (Kooshian and Winkelman, 2011). In Seattle, a five percent increase in the overall level of walkability was associated with a 32 percent increase in minutes of active transport and about one-quarter-point reduction in BMI (Kooshian and Winkelman, 2011). A similar study in Atlanta found walkability to be a significant factor in explaining the number of minutes per day of moderate physical activity. Residents of the most walkable environments in Atlanta were found to get approximately 37 minutes of moderate activity per day, whereas residents of the least walkable environments got only 18 minutes (Kooshian and Winkelman, 2011).

Public transit use is linked with higher levels of physical activity and lower rates of obesity (Research Syntheses, Summaries, & Briefs, n.d.). In an article appearing in the Journal of Preventive Medicine, researchers examined the health benefits of simply walking to a transit stop. Generally, taking public transit versus driving alone equates to an average of 8.3 more minutes a day of walking.

Researchers found that there is an average lifetime savings of \$5,500 per person in obesity medical related costs by simply walking to public transit each day. In 2010, 25 percent of Oregonian adults are obese. Given this rate, and the annual rate increase in obesity seen in Oregon since 1989 (approximately 0.7 percent annual percentage growth between 1989 and 2010), by 2035 approximately 42 percent of the population could be considered obese.

In addition, walking or biking to school can help kids be more active overall (Research Syntheses, Summaries, & Briefs, n.d.). Most studies of children and adolescents indicate that walking or bicycling to school is related to higher overall physical activity. Efforts promoted by programs such as Safe Routes to School, including building sidewalks, crosswalks and traffic-control devices around schools, have been

linked to both increases in the percentage of students who walked to school and reductions in the percentage of students being driven to school.

An estimated 20-30 percent of traffic around area schools represents parents dropping off or picking up their children in private vehicles.

In the 2009-2010 school year, the 4J program at Roosevelt Middle School experienced dramatic increases in the percentage of students walking and biking to school (18 to 24 percent and 9 to 17 percent respectively) AND decreases in the number of arrivals and departures of single occupancy vehicles (average number of vehicles per day from 223 to 190).

The benefits also extend to adults. More and better-quality sidewalks are associated with adults having both higher rates of walking and of meeting physical activity recommendations and with a lower likelihood of being overweight (Research Syntheses, Summaries, & Briefs, n.d.).

Disability

Access to transportation options provides a vital lifeline for people with disabilities to access employment, education, healthcare, and community life. The availability of an extensive system of accessible public transportation or other mobility options is one of the most prevalent indicators of independent living for people with disabilities.

In 2009, 11.0 percent of the population in the Eugene urbanized area reported having a disability. This percentage is largest in persons 65 years and older, in which 38.4 percent of the population reported having a disability. The incidence of disabilities is slightly lower than that reported in the State of Oregon, in which 13 percent of residents have a disability.

Map 10 depicts the spatial relationship of disabled residents within the Central Lane MPO.

Map 10 Disability Concentrations in Central Lane MPO



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D. Transportation Costs

Household Expenditures

Mobility and mode choice are influenced by transportation costs. Presently, transportation (17.6 percent) is second only to housing (34.1 percent) as the largest expenditure for the average household. In 2007, approximately 27.2 percent of transportation expenditures were for purchasing gasoline and motor oil (Transportation Energy Data Book, 2010).

The portion of total household expenditures devoted to transportation (automobiles and transit) tends to decline with increased per-capita transit ridership (Litman, 2011). At a minimum, shifting from driving to transit saves fuel and oil, which typically total about 10¢ per vehicle-mile reduced.

A study prepared by ICF International found that a two adult "public transportation household", defined as a household located within ¾ mile of public transportation, with two adults and one car saves an average \$6,251 every year, compared to an equivalent household with two cars and no access to public transportation service. When put in perspective of other household expenditures, including an average of \$5,781 spent on food, \$6,848 spent on mortgage interest and fees, and \$3,925 in mortgage principal in 2004, transit savings are significant. These savings are due to driving less, walking more, and owning fewer cars (Bailey et al, n.d).

Walkability has been shown to provide economic relief as well. Urban configurations that allow residents and workers to avoid trips they would otherwise take by car save money both for travelers and communities. Litman (1999) estimated that for each trip not driven, society saves between \$1 and \$3.50 in avoided costs associated with congestion, road maintenance, parking, pollution, noise, safety and other environmental costs (Kooshian and Winkelman, 2011). The Central Lane MPO's Regional Transportation Plan, last updated in 2007, estimated that if land use patterns and travel behavior continue as they exist today, the percentage of total trips less than one mile in length would increase by 8.8 percent. If these trips were made by walking or bicycling, there would be significant potential savings in avoided costs.

In 2009 the National Research Council published a report monetizing the damage of major air pollutants – sulfur dioxide, nitrogen oxides, ozone, and particulate matter – on human health, grain crops and timber yields, buildings, and recreation. They assigned a cost to society due to motor vehicles and fuels ranging from 1.2 cents to about 1.7 cents per mile traveled, equivalent to \$0.35 to \$0.50 per gallon (at 30 mpg) (Kooshian and Winkelman, 2011).

The Center for Neighborhood Technology (CNT) has created several tools to assist in the evaluation of the costs of housing and transportation. In particular, one initiative has been the development of the H+T Affordability Index, which has been designed as a more complete measure of affordability beyond the standard method of assessing only housing costs. By taking into account both the cost of housing as well as the cost of transportation associated with the location of the home, H+T provides a more complete understanding of affordability. CNT has defined an affordable range for H+T as the combined costs consuming no more than 45% of income.

According to the Housing and Transportation Affordability Index, within the Central Lane MPO area, there are significant areas where housing and transportation combine to exceed 45 percent of the household income. The incidence of this is greater than if housing costs were evaluated alone. For example, in the City of Eugene, the percent of households whose housing costs exceed 30 percent of the household income is estimated to be 46.1 percent; when transportation costs are also included, the number of cost-burdened households raises to 77.1 percent (Housing + Transportation Affordability Index, n.d.).

When estimating the annual household gasoline expenses based upon 2008 gas price data, CNT estimates that annual housing gasoline spending is lower near downtown Eugene and Springfield, with average annual gasoline expenses typically totaling less than \$900/year. As distance increases from central business districts, the annual cost of gasoline rises to between \$2,700 and \$3,600/year (Housing + Transportation Affordability Index, n.d.).

Part V Summary of Key Issues

The Central Lane MPO Area is served by a number of local governments and special districts that have all engaged in high quality planning for their respective communities. Balancing competing interests, while reaching for the highest common good, is challenging even under the best of circumstances. Central Lane MPO Area jurisdictions support and are implementing public policies that support higher density mixed use development within downtown areas and other sustainable compact strategies. All of these efforts will continue to make the region a better place to live than it would have been without advanced planning and public participation.

This is a pivotal period for our region and its commitment to its transportation infrastructure, plans, and programs. The need to manage travel demand has become increasingly urgent for a number of converging reasons including:

- Peak oil and energy efficiency
- Efforts to reduce greenhouse gas emissions (Oregon SB1059 and HB2001)
- Vehicle travel's link to poor air quality, road accidents, and reduced physical activity
- Emerging Federal and State regulations to create more balanced and efficient transportation systems

A broad transportation network has been built, but it strains to meet the community's varying mobility needs. Land use, cost, and environmental considerations all play significant roles for both the supply and demand of the transportation system. This generation must address the many challenges our region is facing; increased congestion, rising costs, limited options, and economic development considerations.

Transportation demand management (TDM) has a growing role in responding to these issues and creating a more efficient and balanced transportation system which provides broader travel options in and around the region.

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