



Sustaining Quality of Life in the Southern Willamette Valley

October 18, 2005

TO: Region 2050 Policy Advisory Board

FROM: Tom Schwetz

SUBJECT: Alternative Growth Scenarios Transportation Evaluation: Expanded Analysis

I. Introduction

A preliminary transportation analysis was provided to the Policy Advisory Board at its meeting on June 22, 2005. This memo provides a recap of the key points in that analysis. The bulk of the memo provides a summary of the detailed needs analysis and strategies development completed since the June meeting. A summary of the transportation evaluation is also provided.

This memo draws from three separate products completed since the June Policy Advisory Board meeting:

1. *Region 2050 Transportation Evaluation Technical Memorandum #2: Evaluation of Fixed Transportation Network* - This memo provides a summary of a technical analysis of the impacts of the three Region 2050 Alternative Growth Scenarios on a base network of transportation facilities and services. It reviews the results of an assessment of those growth scenarios on a base or reference network of transportation facilities and services. This network draws on the existing Transportation System Plans and the MPO area's Regional Transportation Plan, incorporating the system improvements identified in those plans into the reference network.
2. *Region 2050 Transportation Evaluation Technical Memorandum #3: Preliminary Transportation Strategies for Region 2050 Scenarios* - This memo discusses a set of preliminary proposals for addressing transportation system deficiencies identified in a general way in Technical Memorandum #2. It summarizes the analysis done to date on the transportation impacts of projected growth in the 2050 region, and the mix of strategies identified to address those impacts and ensure reasonable mobility levels throughout the region.
3. *Region 2050 Transportation Evaluation Engineer's Report on Project Selection and Cost Estimates* - This memo provides a preliminary report on estimated costs for the major transportation improvements discussed earlier in Technical

Memorandum #3. Planning-level cost estimates are discussed for the following types of transportation projects:

- Major capacity increases on most state highways and other major arterial roadways
- Major capacity increases on selected rural roadways (major collectors and state secondary highways)
- Major increases in service on the region's transit system, operated by Lane Transit District (LTD).

While these products are summarized in this memo, copies of the full reports are available online at <http://www.region2050.org/policybd.html> under the Board Meeting Packet material for the October 26 meeting. If a hard copy is desired, one can be provided by calling Tom Schwetz at 682-4044.

II. Recap of Preliminary Analysis

As noted in June, in beginning to assess the transportation impacts of the three alternative growth scenarios, it is useful to get a sense of the general scale and impact of that growth on the region's core transportation network. Figure 1 illustrates the broad implications and impacts of an additional 45 years of growth in the region:

- The metro area will continue to be the 'center of gravity' for the region (between 55,000 and 142,000 new people; between 17,000 and 49,000 new jobs);
- The primary area of growth comes from south and southeast of the metro area (between 41,000 and 86,000 new people; between 24,000 and 45,000 new jobs);
- Significant growth comes from west of the metro area (between 17,000 and 42,000 new people; between 6,000 and 14,000 new jobs);
- Substantial growth comes from north of the metro area (between 14,000 and 42,000 new people; between 12,000 and 18,000 new jobs).

This growth represents over 225,000 additional daily trips, many of which will be using the core transportation system of the region. The core part of the region's transportation system is made up of the state system and specific County roads that connect new growth areas to the metro area.

Based on the preliminary analysis conducted in June, a series of conclusions were drawn which continue to have merit. These include:

1. Regardless of the scenario, substantial population and employment growth in the Eugene-Springfield will result in large congestion increases on the major roadway system. In other words, travel conditions in 2050 are going to be impacted more by the sheer size of anticipated growth in the region, more than by where the growth occurs.
2. Perhaps more important than the congestion issues, how we pay for future improvements and continued maintenance and operation of the region's transportation system may need significant restructuring to sustain the increase in population and employment by 2050.

3. Nevertheless, choices about the location and type of growth will have positive and negative influences on mobility and accessibility in the region. It is important to make informed choices around the priorities the region makes for investment of scarce resources in order to minimize adverse impacts and maximize future opportunities for addressing those impacts.
4. What is true for the current planning horizon year of 2025 will also apply to the less predictable future out to 2050 and beyond:
 - Travel will be more congested regardless of what else we do
 - Capacity improvements will be needed on the highest-priority segments of our regional roadway network, to achieve any reasonable standard of mobility and accessibility
 - At the same time, increased use of non-capital construction strategies will also be needed, to preserve existing and new capacity into the future
 - These strategies include improved facilities and more service on the transit system, additional bicycle and pedestrian facilities, and education and incentives to increase use of these non-auto modes
 - Equally important strategies will be needed in the areas of operations and access management for major roadways, and communication with the traveling public on a constant basis to help people make the best possible travel choices
5. An important policy question to be discussed has to do with what represents an acceptable level of mobility or accessibility, for the system as a whole and for unique or specific elements of the system (for example, the degree of congestion on Interstate 5 at peak periods, or a definition of adequate response times for emergency vehicles);

III. Summary of Detailed Needs Analysis and Strategy Development

Based on the preliminary modeling conducted for Region 2050, a more detailed needs analysis was conducted and is summarized in *Technical Memorandum #2*. The needs analysis led to the development of a set of transportation strategies for each Region 2050 scenario, summarized in *Technical Memorandum #3*. Cost estimates were developed and included in the *Engineer's Report on Project selection and Cost Estimates*. This section provides a summary of those efforts.

Needs Analysis

The needs analysis identified expected deficiencies in the roadway, transit, and bicycle/pedestrian networks under each of the Region 2050 alternative growth scenarios. These deficiencies are summarized in three attached tables :

- Table 1: Preliminary Assessment of Roadway Capacity Deficiencies
- Table 2: Preliminary Assessment of Transit Service Deficiencies
- Table 3: Preliminary Assessment of Bike/Ped Service Deficiencies

Each of these assessments is summarized in the discussion below.

Roadway Deficiencies

Table 1 provides a qualitative summary of anticipated congestion problems on the region's major roadways in 2050. The roadway system that was modeled includes most of the state highways in the region 2050 area, along with selected other major roadways such as river crossings and important connectors on the local roadway system. Several sections of state highway are not included in Table 1 because initial modeling indicates they are expected to perform at an adequate level of service, compared to most other highway segments. Notably, the highway sections that appear not likely to experience extreme congestion include nearly all portions of the (proposed) West Eugene Parkway; Beltline from West 11th to Prairie Road; and most of Highway 99 from Garfield to Beltline.

Segments of major roadways that are expected to be congested in 2050 are listed in Table 1, along with the initial assessment of impacts for all growth scenarios, and a rating of High, Medium or Low to indicate the specific impact of each scenario. For some roads, especially most major highways within the Eugene-Springfield metro area, the impacts of each scenario are not expected to be noticeably different from one another, compared to the overall impact of growth in the region.

Transit Deficiencies

Table 2 summarizes the anticipated unmet transit needs in a general way for various geographic subareas within the Region 2050 study area. These subareas are as follows:

- Land within the current Urban Growth Boundary (UGB) of the Eugene-Springfield metro area
- Potential development areas adjacent to the metro UGB: Alvadore, Goshen and Pleasant Hill
- The Cottage Grove and Creswell areas, including both cities and the developable area nearby
- Veneta and Elmira, including developable areas nearby
- Junction City, including the area within the city's UGB
- Coburg, including the area within that city's UGB
- Oakridge and the area within its UGB, along with developable areas in the Lowell-Dexter-Fall Creek vicinity

These subareas are useful for evaluating transit issues because both the current and future level of transit service is different for small cities and rural areas, compared to the metro area.

Table 2 indicates the general transit needs for all three scenarios, along with the anticipated impact of each particular scenario. It should be noted that the Rural scenario would be unlikely to experience the same level of transit service as the Compact or Satellite scenarios, because of the cost of serving lower-density

residential areas. Nevertheless, it is likely that there would be some increased demand for service in outlying areas that develop at rural densities.

Pedestrian and Bicycle System Deficiencies

Bicycle and pedestrian impacts are summarized in Table 3. The preliminary evaluation of bike and walking deficiencies makes use of the same subarea analysis that was used for the transit system. Similar to transit, the required and expected level of service for bicycling and walking is different for the metro area, for small cities, and for rural areas in between these two categories. Eugene, Springfield and each of the small cities currently provide an existing urban level of service, and each city has developed a plan to improve and add to the inventory of sidewalks, bike paths and shared facilities along roadways. Rural areas rely chiefly on roadway shoulders for walking and cycling.

As with transit service, development at rural densities does not normally warrant sidewalks or extensive bicycle systems, although increasing development could lead to more demand for better bike and walking facilities in these kinds of areas. Table 3 summarizes the expected impacts on biking and walking for all three scenarios, along with the anticipated impact of each individual scenario.

Strategies to Address Transportation Deficiencies

The following discussion summarizes the preliminary Region 2050 transportation strategies for roadways, transit, bicycle-pedestrian facilities, and overall system management, organized by geographic area:

- The Eugene-Springfield metropolitan area, usually referred to as “metro area”
- Three areas adjacent to the metro area and expected to become major growth centers:
 - Alvadore
 - Goshen
 - Pleasant Hill
- Small towns and cities in the area outside of the metro area:
 - Creswell
 - Cottage Grove
 - Veneta (and the Elmira area)
 - Junction City
 - Coburg
 - Oakridge (and the Lowell-Dexter-Fall Creek area)

Each of these areas is discussed below, and the recommended strategies are also summarized in a set of tables for each geographic area, to be found at the end of this report.

Eugene-Springfield Metro Area Roadways

The metro area will continue to be the “center of gravity” for the region for all of the growth scenarios. The major roadway network in the metro area will continue to be of primary importance as the core system that handles most of the essential regional trips made by auto, truck, and public transit.

The Regional Transportation Plan (RTP) for the metro area, along with the Lane County Transportation Plan (LC TSP) incorporate numerous capacity improvement projects on the State Highway system and the major county and city road systems. Modeling for Region 2050 assumes completion of all projects through 2025, including the projects in the metro RTP that are not yet on the financially constrained project list. These future projects are referred to later in this memo as projects on the RTP illustrative list.

The proposed strategies for the metro roadway system for 2050 make use of the RTP and LC TSP project lists as a starting point, and in some cases go beyond those project lists to recommend additional future capacity projects on the system.

Interstate 5

Interstate 5 has a preeminent role in the region’s highway system, since it connects our region with most of the population centers of Oregon and the west coast and carries nearly all the north-south freight movement through those same areas. Within the metro area, I-5 is one of several limited-access roadways that serve a vital role for regional mobility, but its larger role adds to the importance of maintaining a high level of service along the corridor.

To address projected congestion in 2050, the following projects are proposed on I-5 in the metro area:

- Widen to 6 lanes south of I-105 and north of Beltline (the section from I-105 to Beltline is already 6 lanes, and will receive auxiliary lanes as part of the I-5/ Beltline interchange project)
- Reconstruct or improve existing interchanges at Glenwood Blvd. and 30th Avenue, and rebuild the I-5/Franklin partial interchange to provide a full interchange

These projects are included in the RTP Illustrative list.

Interstate 105 and OR 126, the Eugene-Springfield Highway

I-105/OR 126 is another essential route for travel within the metro area, and also plays a key role in mobility for east-west trips throughout the region, the county and the state, as it connects state highway 126 to the west and east with the metro area and with I-5. Region 2050 projected growth will contribute to congestion on this route, and will heighten the importance of maintaining a good level of service on the corridor. The following projects, all of which are included on the RTP Illustrative list, are proposed:

- Add lanes for capacity and merging on the Washington-Jefferson bridge, both northbound and southbound
- Widen I-105 from Delta to I-5, to six through lanes (note: the current I-105 project adds auxiliary lanes but not through lanes)
- Widen OR 126 from I-5 to Mohawk to six through lanes
- Major interchange improvements at Q Street/Pioneer Parkway interchange area
- New interchanges to replace at-grade intersections at 52nd Street and Main Street

Beltline Highway

Beltline Highway is the third limited-access state highway in the metro area, and it too plays an essential role in regional and statewide travel. Region 2050 growth will impact Beltline and it will be increasingly important to maintain good mobility on this roadway for the health of the regional economy. Several projects are proposed:

- Widen Beltline to 4 lanes from West 11th to Roosevelt
- Widen Beltline to 6 lanes from River Road to Delta Highway
- Add auxiliary lanes, extend or widen ramps/merge distances, etc. at selected locations in the areas between Prairie Road-River Road, and Delta Highway-Coburg Rd.
- To supplement Beltline as a Willamette River crossing, construct the proposed new Division Avenue Bridge and related Beaver Street Arterial, both of which are included on the RTP Illustrative project list.

Other major roadways in metro area

West 11th from Terry Street to Green Hill Road continues to play an important role in regional travel, although this report assumes construction of the West Eugene Parkway. To address projected congestion on West 11th in 2025 and out to 2050, the following project on the RTP illustrative list is proposed: widen W. 11th to 4-5 lanes, upgrade to urban standards from Green Hill to Terry Street.

State highways 99 and 126-business are routed along 6th-7th Avenues, East Broadway, Franklin Boulevard, and Main Street. Unlike the major limited-access highways, these city streets are serving trips that may be considered more “congestion-tolerant,” and the Compact growth scenario may have a somewhat higher impact. Congestion on portions of these routes is proposed to be addressed by a combination of intersection improvements, turn lanes/minor widening at selected locations, and access management as needed. No major through lanes are proposed to be added to these roadways.

Likewise, congestion on the lower McKenzie Highway, 126 east of Springfield, is proposed to be addressed by selective, lower-capital measures rather than major widening.

Intelligent Transportation Systems (ITS) Deployment

Intelligent Transportation Systems (ITS) focuses on using advanced technology and management techniques to increase the efficiency of the transportation system without having to add major new capacity. An ITS plan was developed for the metro Eugene-Springfield area in 2003, consisting of the following major components:

- Travel and traffic management
- Communications
- Public transportation management
- Emergency management
- Information management
- Maintenance and construction management

The plan includes detailed recommendations for implementing ITS strategies in each of these six areas, and for the three time periods of five, ten and twenty years (total) to enhance mobility in the metro area.

Only a few of the recommended ITS measures have been implemented to date. This report recommends full implementation of the ITS plan for the metro area by 2025, and updates to the plan as necessary to extend it and maximize its utility out to 2050.

All of the roadway strategies discussed above for the metro area are listed in Table 4.

Eugene-Springfield Metro Area Transit, Bicycle and Pedestrian Systems

Along with the major roadway system, good facilities for transit, bicycling and walking will be of increasing importance as growth occurs out to the Region 2050 forecasted levels.

Within the metro area the major transit strategy is Bus Rapid Transit, or BRT, which is included in the financially constrained project list in the RTP for full implementation by 2025. Anticipating that full deployment of the BRT system will extend beyond 2025, this report recommends continued implementation and selective expansion out to 2050. This strategy is expected to be very important for all growth scenarios, although it would be most important in the Compact scenario since that alternative results in the highest densities and greatest dependence on non-traditional means of travel within the metro area.

In addition to implementation of BRT routes throughout the metro area, the other main transit proposals in the RTP are essential to carry out and extend for a 2050 horizon, including:

- All needed bus purchases and expansion of LTD's central operations/maintenance facility

- Adding all proposed park and ride lots, all stations and passenger amenities in selected areas

Again, these projects are included in the constrained project list for completion by 2025, but it is probably that full implementation will extend beyond that date.

An important component of the ITS system for the metro area is application of the best available technology and management approach to the transit system. Transit ITS includes both advanced traveler information and operational methods for tracking and managing transit vehicles for better efficiency. This report recommends full use of proposed ITS techniques to enhance transit operations and cost-effectiveness out to 2050.

Bicycle and pedestrian travel will also be of greater importance within the metro area, particularly in the Compact growth scenario. The metro RTP includes a financially constrained project list as well as future illustrative projects. Both lists of projects should be pursued aggressively as implementation will almost certainly extend out beyond 2025. Sidewalk infill to close gaps on priority roadway segments, and provision of sidewalks in all new developments represent another needed component for urban mobility, regardless of which growth scenario is pursued for the 2050 horizon.

Transit, bicycle and pedestrian strategies for the metro area are summarized in Table 5.

Roadway strategies for Alvadore, Goshen and Pleasant Hill areas

The three partially-developed areas near the current Eugene and Springfield UGBs, Alvadore, Goshen and Pleasant Hill, represent key areas for the 2050 analysis because depending on the scenario, they will either be:

- Major new additions to the metro UGB, in the Compact scenario
- New cities with large population and employment growth, in the Satellite scenario, or
- Locations for substantial amounts of low-density rural development, in the Rural scenario.

Some of the most important roadway projects for these three areas are represented by the previous list of metro area major roadway strategies, because good mobility in the larger region is so heavily dependent on the core metro roadway network. In addition, however, these three growth areas present challenges for several other roadways in the region, as discussed below.

Alvadore area roadway issues

In order to provide access to up to 12,000 people and 2300 jobs in the Alvadore area, major capacity additions will need to be made to several rural roadways. Depending on additional modeling and analysis, it is anticipated that portions of Clear Lake Road, Green Hill Road, Fir Butte Road, and possibly others in the

vicinity will need to be widened from 2 lanes to 4 lanes, along with intersection improvements, traffic controls, and significantly more aggressive access management to address capacity and safety issues. Most of the roads in this area are already in fair to good condition in terms of geometrics and width, and the Lane County TSP includes projects to modernize some additional sections (such as Alvadore Road and Fir Butte Road). Nevertheless, the traffic volumes forecasted by the initial 2050 modeling show increases that would overwhelm even the best 2-lane roadway.

Goshen area roadway issues

Similar concerns arise based on preliminary modeling for the Goshen growth area. To provide mobility for up to 10,000 residents and 7000 jobs will require new capacity. It appears widening will be required (from 2 lanes to 4 lanes) on portions of Dillard Road and Highway 99, although much more analysis needs to be done to evaluate impacts and alternatives in more detail.

Pleasant Hill area roadway issues

With up to 12,000 people and about 2300 jobs, Pleasant Hill is the third area that could experience major growth by 2050. The main artery to (and through) Pleasant Hill, State Highway 58, was recently improved by adding wider shoulders and (in some locations) sidewalks, wider and better-marked median areas for left turns and pedestrian crossing, and improvements in striping, signing, surface and overall condition and appearance. However, it should be noted that ODOT's previously proposed major widening project to 4 lanes was ultimately rejected by the community and the Lane County commissioners, following an extensive public involvement process.

Preliminary modeling for 2050 shows a need for up to 4 lanes on Highway 58, which will present a major challenge in light of community sentiment and recent history. In addition, the growth in Pleasant Hill apparently would translate into very large traffic volumes on north-south connecting county roads such as Jasper Road, Edenvale Road and Parkway Road. These two-lane roads are not equipped to handle such large volumes, so major capacity increases would also need to be considered on portions of these roadways. Traffic growth appears to be heaviest for the Compact scenario, although both other scenarios also contribute significant traffic increases on area roadways.

For all three of these areas, Alvadore, Goshen and Pleasant Hill, it will be essential to develop a local Transportation System Plan, or TSP. The process of putting together a TSP for each city or area entails a detailed evaluation of existing conditions, forecasting future impacts, and evaluating alternative strategies before adopting a final plan. This kind of process would be needed to fully assess travel needs and solutions within each area, along with improved connections to other cities and the rest of the region.

Roadway strategies for these three areas are summarized in Table 6.

Transit, bicycle and pedestrian strategies for Alvadore, Goshen and Pleasant Hill

Given their location at the edge or several miles beyond the edge of the metro area UGB, travel in these three areas is somewhat less amenable to using non-auto alternatives such as transit, bicycling and walking. Nevertheless, these modes of travel will be of increasing importance especially as urban densities and small-city population levels are reached in these communities. It will be important to implement strategies such as the following:

- Expand transit service—currently there is minimal LTD bus service between these three communities and Eugene-Springfield, in terms of coverage, frequency and limited hours/days. The future projections of population and employment will require greatly expanded service, both within the expanding communities as well as to and from the metro area.
- Selected ITS deployment—some of the ITS techniques described earlier under the metro area strategies will be needed for both roadway operations efficiency and transit operations/customer information, as growth occurs in these outlying areas.
- Bikeways and sidewalks—again, conversion of these small, rural communities into cities of 10,000 residents or more will need to be accompanied by significant new facilities for walking and bicycling. Most of the improvements would need to address local circulation, but some projects should be aimed at improved non-auto connectivity to other small communities and to the metro area, particularly a few critical bicycle paths or routes.

All of the strategies discussed above for roadways, transit, bikeways and pedestrians would need to be pursued most aggressively for either the Compact or Satellite scenarios. Most of the proposals would also be needed to some extent for the Rural scenario, although lower densities and more dispersed travel would probably correlate with a lower level of transit service and fewer bicycle and pedestrian facilities within the area.

The transit, bicycle and pedestrian proposals for Alvadore, Goshen and Pleasant Hill are listed in Table 7.

Roadway strategies for outlying towns and small cities

The remaining geographic area to be discussed consists of the roadways that radiate out from the Eugene-Springfield metro area, and the communities that are located along those roadways about 10 to 20 miles away from the core area. Generally speaking, there has been less planning to date for the roadways connecting these areas than for the metro area and for the small cities themselves. Therefore the

Region 2050 growth scenarios require some new proposals in cases where roadway projects have not yet been incorporated into adopted plans.

Creswell and Cottage Grove

The growth projected for Region 2050 in any of the scenarios will require widening Interstate 5 to six lanes, from the Highway 58 interchange to the Row River interchange in Cottage Grove. In addition, that interchange along with the one serving Creswell and the interchange at Saginaw should be improved or reconstructed to modern standards, to accommodate the traffic volumes safely and effectively. The ITS plan discussed above for the metro area should be extended as applicable to encompass I-5 at least as far south as Cottage Grove. Finally, the projects already included in the two cities' TSPs and the Lane County TSP should be aggressively pursued, and those plans should be updated and expanded in geographic scope to address the needs of substantial growth in the two cities.

Urban levels of service and mobility will be most urgent with the Compact and Satellite scenarios, due to the substantial growth in urban densities for both Creswell and Cottage Grove. The Rural scenario also greatly increases the population of each community, however.

Veneta and Elmira

The most critical transportation issue for growth in Veneta and the Elmira area is the capacity of Highway 126 west, linking Veneta with Eugene, I-5 and most of the rest of the region. Some initial planning and citizen involvement was carried out in the late 1990s as part of a 126 west corridor study, but no definitive plan has yet been developed for this portion of state highway 126. The preliminary modeling results for 2050 indicate that growth in Veneta under any of the three scenarios—along with overall growth in the region, county and state—will require the addition of two more lanes to the existing two-lane section of 126. Obviously this will be a challenging and controversial proposal given the environmental constraints along most of the route. Nevertheless, widening of this roadway appears necessary if these levels of growth are expected to occur.

Along with this major capacity project, it will be important to pursue ITS measures to maximize the capacity of 126 west—and to prolong the period in which it can effectively operate with only two lanes. Finally, improvements to city streets and county roadways, as spelled out in the Veneta TSP and Lane County TSP, should be carried out and added to for the period beyond 2025.

Junction City

For Junction City, Highway 99 is the primary means of connection to the rest of the region. Fortunately this portion of roadway was widened from 2 to 5 lanes in the 1980s, and for the most part, access along the highway is somewhat limited and does not interfere greatly with the capacity and safe operation of the highway. Region 2050 growth in Junction City is not as great in a proportional sense as that for most of the other small cities, but there is still a substantial increase in

population forecasted for every scenario. The additional travel and congestion on Highway 99 can probably be addressed by the following kinds of measures:

- Access management and minor improvements at selected locations along Highway 99 between Beltline and Junction City;
- Continued improvement of other routes, including River Road and Prairie Road, to afford alternative connections to and from Junction City;
- Implementing appropriate techniques from the ITS toolkit to enhance capacity, safety and overall operation of the highway.

In addition, projects in the city's TSP and the Lane County TSP should continue to be implemented, and those TSPs should be extended and updated for the period beyond 2025.

Coburg

Recent development within Coburg, and recent planning including the adoption of the city's TSP, has underscored the importance of Interstate 5 as Coburg's primary connection with the outside world. Accordingly, the review of this area north of the Eugene-Springfield metro UGB needs to acknowledge the following projects that will be needed before the 2050 horizon:

- Widen Interstate 5 to six lanes, from the metro UGB north to the Lane County line.
- Make major improvements to the interchange that serves Coburg, as listed in the RTP illustrative project list.
- Extend metro area ITS coverage to this portion of I-5.

In addition, projects in the city of Coburg's TSP and the Lane County TSP should continue to be implemented, and those TSPs should be extended and updated for the period beyond 2025.

Oakridge and Lowell-Dexter-Fall Creek areas

Highway 58 is the critical route connecting Oakridge with the rest of the region. The Region 2050 growth scenarios indicate that Oakridge could grow by over 10,000 new residents and 6,000 added jobs over the next 45 years. In addition, the Lowell area is projected to grow by about 2,000 residents.

Under the prior discussion of the Pleasant Hill area, it was noted that 2050 modeling shows traffic volume increases between the metro area and Pleasant Hill that would require additional lanes on Highway 58 as far as Pleasant Hill. Traffic will also grow substantially between Pleasant Hill and Oakridge, although the volumes on this part of 58—and the prohibitive constraints due to terrain—would not warrant two added lanes beyond the Pleasant Hill area. Instead, increased traffic on Highway 58 should be addressed by a mixture of the following strategies:

- Access management, turn lanes, passing lanes, and minor improvements at selected locations along Highway 58 between Pleasant Hill and Oakridge;

- Implementing appropriate techniques from the ITS plan to enhance capacity, safety and overall operation of the highway. This should be coordinated with ITS measures, including any weather-related communications and emergency plans for the section of Highway 58 from Oakridge to Willamette Pass.

In addition, projects in the Oakridge TSP and the Lane County TSP should continue to be implemented to improve and construct roadways within the Oakridge and Lowell UGBs, and those TSPs should be extended and updated for the period beyond 2025. Table 8 provides a listing of the roadway projects identified for outlying towns and small cities.

Transit, bicycle and pedestrian strategies for outlying towns and small cities

The small towns and cities being discussed in this section have typically been dependent on auto transportation for nearly all their trips, both with the town and to neighboring communities and the metro area. Nevertheless, other modes of travel will be of increasing importance as these small cities add substantially to their population levels and their local economies. Strategies such as these should be implemented for any of the Region 2050 scenarios:

- Expand transit service—currently there is minimal LTD bus service between most of these communities and Eugene-Springfield, in terms of coverage, frequency and limited hours/days. (Oakridge is the only community listed with no regular LTD transit service at present.) The future projections of population and employment will require greatly expanded service, both within the expanding communities as well as to and from the metro area.
- Selected ITS deployment—some of the ITS techniques described earlier under the metro area strategies will be needed for both roadway operations efficiency and transit operations/customer information, as growth occurs in these small cities and adjacent outlying areas.
- Bikeways and sidewalks—the growth of several small towns with as few as 500 residents today, into cities of 10,000 residents or more will need to be accompanied by significant new facilities for walking and bicycling. Even those cities that already have a larger population and a history of providing bike and walking facilities, will need to take those efforts to a new level. Most of the improvements will need to address local circulation, but some projects should be aimed at improved non-auto connectivity to other small communities and to the metro area, particularly a few critical bicycle paths or routes.

All of the strategies discussed above for roadways, transit, bikeways and pedestrians will need to be pursued most aggressively for either the Compact or Satellite scenarios. Most of the proposals would also be needed to some extent for the Rural

scenario, although lower densities and more dispersed travel would probably correlate with a lower level of transit service and fewer bicycle and pedestrian facilities within most of the small communities and outlying areas.

The transit, bicycle and pedestrian proposals for small cities are summarized in Table 9.

Cost Analysis

The *Engineer's Report on Project Selection and Cost Estimates* provides preliminary project proposals and planning-level cost estimates for three types of transportation improvements, for the Region 2050 growth scenarios. These can be summarized as follows:

- Major state highways and arterial roadways: the total cost of major capacity improvements would be about \$750 million, for all three growth scenarios. This includes \$54 million for full deployment of ITS strategies, but does not include operating costs for ITS (or ongoing cost of any other roadway-related transportation operations). A listing of proposed projects and cost estimates for major state highways is provided in Table 10.
- Secondary state highways and county roads in selected areas: the cost of improvements to roadways serving Alvadore, Goshen and Pleasant Hill would be about \$50.3 million for the Compact scenario, \$42.2 million for the Satellite scenario, and \$11.3 million for the Rural growth scenario. A listing of proposed projects and cost estimates for secondary state highways and county roads is provided in Tables 11 and 12.
- Transit service costs: total annual operating cost of Region 2050 transit service is estimated at about \$45 million for the Compact scenario, \$47 million for Satellite, and \$50 million for Rural. This compares to about \$27 million in current operating cost for LTD service in the region. A listing of proposed projects and cost estimates for transit service strategies is provided in Table 13.

Most of the strategies listed above and in the tables following this text are either in adopted plans, or logical extensions of those plans (in terms of widening a portion of highway or extending transit service to a new geographic area, for example). A small number of the major projects under consideration are likely to be very expensive and controversial (even though many are included in an existing plan), and it must be emphasized that this effort presents only the first iteration of recommendations.

To summarize, some of the more noteworthy major projects include:

- Widening I-5 to 6 lanes throughout the region study area.

- Widening I-105/OR 126 to 6 lanes, from Delta Highway to Mohawk Blvd.
- Widening OR 126 west from Eugene to Veneta to 4 lanes.
- Widening OR 58 from I-5 to Pleasant Hill to 4 lanes.
- Widening several two-lane county roads to provide access to nearby growth centers such as Alvadore, Goshen and Pleasant Hill.
- Adding another river crossing at Division Ave. to supplement the Beltline bridge.
- Adding very extensive transit service to outlying communities, and building out the planned BRT system within the metro area.
- Deploying very extensive and comprehensive ITS strategies throughout the metro area and extending ITS to outlying highway sections. (While ITS is regarded as a lower-cost, environmentally friendly alternative to major widening, full deployment of ITS measures would impact daily driving habits in ways most people have not thought about!)

Both the project lists and the associated cost estimates should be regarded as very preliminary in nature. Further refinement of the project lists and costs will occur as the Region 2050 process continues. Next steps taken as part of the preferred scenario development will include additional refinements to the computer modeling; continued consultation with staff at ODOT, LTD and local public works and planning departments; and better definition of project types and project limits.

IV. Evaluation Summary

Table 14: Preliminary Assessment of Transportation Impacts of Region 2050 Growth Scenarios, provides a summary comparison of the three scenarios and the outlook for all scenarios with regard to eight key evaluation criteria: Accessibility/mobility; economic vitality; effectiveness/efficiency; equity; public support/financial feasibility; reliability/responsiveness; safety; and sustainability.

The details of Table 14 will be further elaborated on at the RPAB meeting. At this point it is useful to consider the following principles in finalizing the transportation evaluation:

1. Transportation demand derives from our need to access a wide range of goods, services, work, friends, etc.
2. The most efficient transportation system is one that reduces the overall time needed for the region's residents to access the goods, services, etc they need.
3. The most effective transportation system is one that provides a range of viable choices to residents in the access of goods, services, etc.
4. Both the Compact Urban Growth Scenario and the Satellite Communities Growth scenario provide the elements to best achieve the principles in 2 and 3 above.
5. However the preferred scenario is ultimately configured, there are key elements that need to be in place with respect to infrastructure and land use to ensure a successful transportation system.

Figures and Tables

Fig. 1 Scale and Impact of Region 2050 Growth

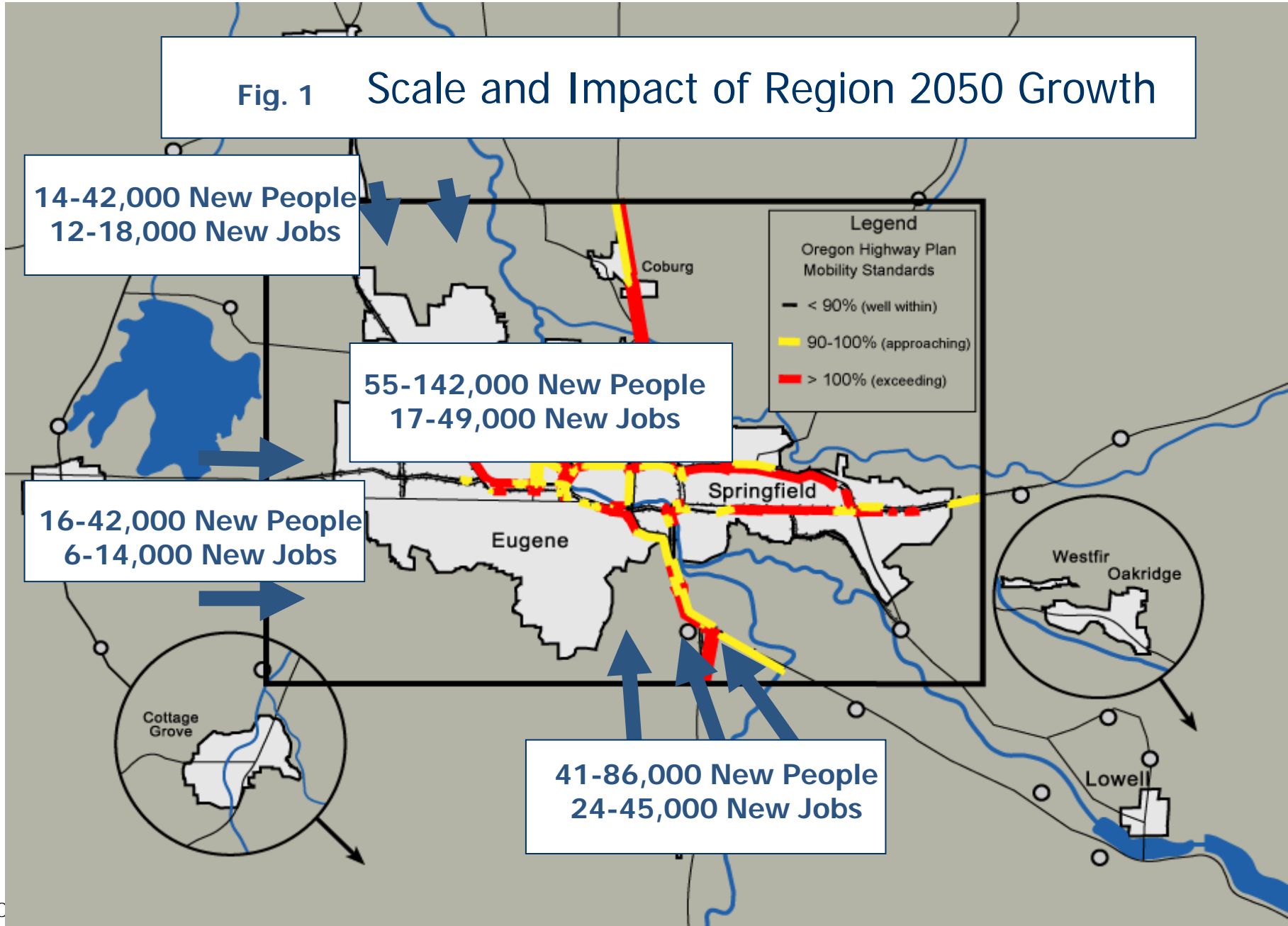


Table 1 - Preliminary Assessment of Roadway Deficiencies

Road Name	From-To	General Impact, All Scenarios	Compact Scenario Impacts	Satellite Scenario Impacts	Rural Scenario Impacts	Comments
Interstate 5	Cottage Grove to Goshen	Likely to exceed ODOT mobility standard	Low	High	Medium	Satellite and Rural have more growth south of metro area
Interstate 5	Goshen to north county line	Exceeds ODOT mobility standard	High	High	High	This section of I-5 not greatly impacted by differences in growth scenarios
Interstate 105/OR 126 (Eug.-Spr. Highway)	Delta Hwy. to E. Main Street at 57th	Portions exceed ODOT standard	High	High	High	Key metro roadway not greatly impacted by differences in growth scenarios
Beltline Highway	Prairie Road to River Road	Likely to exceed ODOT mobility standard	High	High	High	Key metro roadway not greatly impacted by differences in growth scenarios
Beltline Highway	River Road to Coburg Road	Exceeds ODOT mobility standard	High	High	High	Key metro roadway not greatly impacted by differences in growth scenarios
6th-7th couplet in Eugene	Jefferson to Garfield	Portions exceed ODOT standard	High	High	High	Key metro roadway not greatly impacted by differences in growth scenarios
Washington-Jefferson Bridge	7th Avenue to Delta Highway	Likely to exceed ODOT mobility standard	High	High	High	Key metro roadway not greatly impacted by differences in growth scenarios
Ferry Street Bridge	Broadway to Oakway	Exceeds ODOT mobility standard	High	Medium	Medium	Higher metro density of Compact results in greatest FSB congestion
Franklin Blvd.	Agate to Walnut	Exceeds ODOT mobility standard	High	Medium	Medium	Higher metro density of Compact results in greatest congestion on Franklin
Springfield Bridge	At west end (Franklin)	Exceeds ODOT mobility standard	High	Medium	Medium	Higher metro density of Compact results in greatest congestion on Spr. Bridge.
Main Street	20th to 58th, Eastbound	Exceeds ODOT mobility standard	High	Medium	Medium	Higher metro density of Compact results in greatest congestion on Main Street.
McKenzie Hwy, 126 East	East of UGB	Likely to exceed ODOT mobility standard	Low	Low	Medium	Rural has largest population growth in lower McKenzie Valley
Highway 126 West	Greenhill Road to Veneta	Exceeds ODOT mobility standard	Medium	High	Medium	Satellite has largest growth in Veneta. Rural has growth in Elmira area also.
Highway 99	Beltline to Junction City	Likely to exceed ODOT mobility standard	Medium	High	Medium	Satellite scenario has largest growth in Junction City area
Highway 58	I-5 to Oakridge	Likely to exceed ODOT mobility standard	Medium	High	Medium	Satellite has largest growth in Oakridge and Pleasant Hill.

Table 2 - Preliminary Assessment of Transit Deficiencies

Transit Service Area	General route(s) used	General Impact, All Scenarios	Compact Scenario Impacts	Satellite Scenario Impacts	Rural Scenario Impacts	Comments
Within current Eugene-Springfield UGB	Various roadways for conventional, express, BRT, etc.	More frequent service, better coverage needed, esp. for outer areas	High	Medium	Medium	Compact would have best level of service within metro area
Developing areas adjacent to metro UGB: Alvadore, Goshen, Pleasant Hill	Various roadways for conventional, express, BRT, etc.	Major increase in service needed for newly developing areas	High	High	Medium	Rural requires less service to Alvadore, Goshen, Pleasant Hill but still needs increase over existing level
Cottage Grove and Creswell	I-5, and city streets within Creswell and Cottage Grove	More frequent service needed, and better coverage within the two cities	Medium	High	High	Rural has large population growth in Cottage Grove and Creswell areas, lower density, harder to serve
Veneta/Elmira area	Hwy 126 West, Territorial, Clear Lake, other county roads and city streets	More frequent service needed, and better coverage within the Veneta-Elmira areas	Medium	High	High	Rural has large population growth in Veneta-Elmira area, lower density, harder to serve. Current service overlaps with service to Alvadore area.
Junction City	Highway 99, River Road, other county roads and city streets within Junction City	More frequent service needed, and better coverage within Junction City	Medium	High	Medium	Consider expansion of express service, esp. in Satellite scenario.
Coburg	Coburg Road, I-5 and I-105, city streets in Coburg	More frequent service needed, and extended coverage in Coburg.	Medium	Medium	Medium	Major growth in Coburg in all scenarios.
Lowell-Dexter-Fall Creek area, and Oakridge	Highway 58, Franklin, I-5, 30th Ave.	More frequent service needed, and new coverage within Pleasant Hill, Lowell. New service needed to Oakridge.	Medium	High	Medium	Adding service to Oakridge essential, esp. for Satellite. Rural has large population growth in Lowell-Dexter-Fall Creek area, lower density, harder to serve

Table 3 - Preliminary Assessment of Bicycle/Pedestrian Deficiencies

Area of concern	Acceptable level of service	General Impact, All Scenarios	Compact Scenario Needs/Service	Satellite Scenario Needs/Service	Rural Scenario Needs/Service
Within current Eugene-Springfield UGB	Sidewalks on nearly all streets; mix of off-street paths, on-street lanes, shared streets	Ongoing programs to retrofit where needed; new development provides new facilities	Medium level of needs--continues existing trends. High level of service, good facilities due to high densities.	Similar to Compact, but lower density in metro area could mean less extensive bike/ped facilities.	Similar to Satellite, but even lower density in metro area could mean less extensive bike/ped facilities.
Developing areas adjacent to metro UGB: Alvadore, Goshen, Pleasant Hill	Sidewalks on nearly all city streets; mix of off-street paths, on-street lanes, shared streets	Major increase in demand for ped/bike facilities in all scenarios, though less in Rural	Major needs in Alvadore, Goshen and Pleasant Hill areas--new parts of metro UGB	Major needs in Alvadore, Goshen and Pleasant Hill areas--new Satellite Cities	Rural growth in Alvadore, Goshen, Pleasant Hill would add to ped/bike demand, but urban service level not required.
Cottage Grove and Creswell	Sidewalks on nearly all city streets; mix of off-street paths, on-street lanes, shared streets	Major increase in demand for ped/bike facilities in all scenarios	Large growth in Cottage Grove and Creswell; some retrofits needed, new development to supply facilities per codes.	Very large growth in Cottage Grove and Creswell; some retrofits needed, and significant new facilities provided by new development.	Rural growth in Cottage Grove and Creswell areas would add to ped/bike demand, but urban service level not required outside cities.
Veneta/Elmira area	Sidewalks on nearly all city streets; mix of off-street paths, on-street lanes, shared streets	Major increase in demand for ped/bike facilities in all scenarios	Large growth in Veneta area; some retrofits needed, new development to supply facilities per codes.	Very large growth in Veneta; some retrofits needed, and significant new facilities provided by new development.	Rural growth in Veneta/ Elmira areas would add to ped/bike demand, but urban service level not required outside cities.
Junction City	Sidewalks on nearly all city streets; mix of off-street paths, on-street lanes, shared streets	Medium to large increase in demand for ped/bike facilities in all scenarios	Moderate growth in Junction City; some retrofits needed, new development to supply facilities per codes.	Major growth in Junction City; some retrofits needed, and significant new facilities provided by new development.	Similar to Compact; most growth in JC within the UGB so urban facilities required.
Coburg	Sidewalks on nearly all city streets; mix of off-street paths, on-street lanes, shared streets	Major increase in demand for ped/bike facilities in all scenarios	Major growth in Coburg; some retrofits needed, and significant new facilities provided by new development.	Same as Compact.	Same as Compact.
Lowell-Dexter-Fall Creek area, and Oakridge	Sidewalks on nearly all city streets; mix of off-street paths, on-street lanes, shared streets	Major increase in demand for ped/bike facilities in all scenarios	Large growth in Lowell, Oakridge; some retrofits needed, new development to supply facilities per codes.	Very large growth in Oakridge; some retrofits needed, and significant new facilities provided by new development.	Similar to Compact, but also much growth outside UGBs, urban level of service not required.

Table 4: Region 2050 Strategies for Metro Area Transportation System: Roadways

Roadway Section	Proposed Project or Strategy	Scenario	In RTP?	In RTP-Illustrative Project List	In Lane Co. TSP?	Comments
Interstate 5 from I-105 to north UGB	Widen to 6 lanes north of Beltline interchange	All				Section from I-105 to Beltline will have 8 total lanes (6 thru plus 2 auxiliary lanes) after completion of interchange project in RTP
Interstate 5 from Highway 58 to I-105	Widen to 6 lanes. Build additional auxiliary lanes as needed	All		Yes		
Interstate 5 from Highway 58 to I-105	Reconstruct interchanges at Glenwood, 30th	All		Yes		See next line—interchange at Franklin and I-5 could replace current Glenwood Interchange.
Interstate 5 at Franklin Blvd.	Construct interchange	All		Yes		Project under prelim. study in connection with I-5 bridge EIS
I-105 Wash-Jeff Bridge	Construct auxiliary NB and SB lanes per RTP proposal	All		Yes		NB added lane from 6 th to Delta off ramp SB added lane on off ramp to 6 th Ave.
I-105 Delta to I-5	Widen to 6 lanes per RTP proposal	All		Yes		Current project adds auxiliary lanes in both directions; may delay the need for additional through lanes.
OR 126 I-5 to Mohawk	Widen to 6 lanes per RTP proposal	All		Yes		

Table 4: Region 2050 Strategies for Metro Area Transportation System: Roadways

Roadway Section	Proposed Project or Strategy	Scenario	In RTP?	In RTP-Illustrative Project List	In Lane Co. TSP?	Comments
OR 126 Interchange at Q Street/Parkway	Major interchange improvements	All		Yes		
OR 126 At 52 nd Street	Construct interchange	All		Yes		Replaces existing at-grade intersection
OR 126 At Main Street	Construct interchange	All		Yes		Replaces existing at-grade intersection
Beltline Highway W. 11 th Ave. to Roosevelt	Widen Beltline to 4 lanes, related improvements	All		Yes		
Beltline Highway, Prairie Road to River Road	Add auxiliary lanes, improvements to ramps in selected locations	All				Level of congestion not expected to warrant adding through lanes to this section
Beltline Highway, River Road to Delta Highway	Widen to 6 lanes	All		Yes		
Beltline Highway Delta to I-5	Add auxiliary lanes, improvements to ramps in selected locations	All				Level of congestion not expected to warrant adding through lanes to this section; Coburg Road to I-5 will have aux. lanes after Beltline/I-5 project done.
OR 126 West W. 11 th Ave from Green Hill to Terry St.	Widen to 4 lanes, upgrade to urban standards	All		Yes		

Table 4: Region 2050 Strategies for Metro Area Transportation System: Roadways

Roadway Section	Proposed Project or Strategy	Scenario	In RTP?	In RTP-Illustrative Project List	In Lane Co. TSP?	Comments
OR 99 Portions of 6 th -7 th , Franklin Blvd.	Minor widening, intersection improvements, access mgmt as needed	Compact	Yes			Adding lanes not feasible. Strategies such as minor widening, intersection improvements and access management are included in RTP.
OR 126 Business Portions of Franklin near Spr. Bridge, E. Main Street,	Minor widening, intersection improvements, access mgmt as needed	Compact	Yes			Adding lanes not feasible. Strategies such as minor widening, intersection improvements and access management are included in RTP.
McKenzie Highway	Minor widening, intersection improvements, access mgmt as needed	Rural	Yes			Adding lanes not feasible. Strategies such as minor widening, intersection improvements and access management are included in RTP.
New river crossing at Division Ave.	New river crossing and connections to Division and Greenacres Roads	All		Yes		Needed to supplement Beltline widening to 6 lanes from River Road to Delta Hwy.
Beaver Street Arterial	New major roadway connecting Division Ave. with Wilkes Drive	All		Yes		Complements new river crossing and 6-lane Beltline projects, provides alternative to all traffic going thru River Road interchange.
All major arterials in metro area	Fully implement recommended ITS Plan (anticipated to extend beyond 2025)	All				20-year ITS plan includes the following components: <ul style="list-style-type: none"> • Travel and traffic management • Communications • Emergency management • Information management • Maint. and construction mgmt. • Public transit mgmt. (see item below under transit strategies)

Table 5: Region 2050 Strategies for Metro Area Transportation System: Transit and Bicycle-Pedestrian Measures

Proposed Project or Strategy	Scenario	In RTP?	In RTP- Illustrative Project List?	In Lane Co. TSP?	Comments
Fully implement Bus Rapid Transit system in metro area	All	Yes			Full BRT implementation is included on the RTP constrained list, however, all routes and improvements are not likely to be completed by 2025
Fully implement all bus purchases and expansion of operations facility	All	Yes			Included on constrained list, but implementation expected to extend beyond 2025
Implement all nine park and ride lots and various passenger boarding improvements in metro area	All	Yes			Included on constrained list, but implementation expected to extend beyond 2025
Implement all stations and passenger boarding improvements in nodal development areas	All	Yes			Included on constrained list, but implementation expected to extend beyond 2025
Fully implement ITS plan for transit system	All				20-year plan includes traveler information systems and traffic/vehicle management and operations improvements. Implementation is expected to extend beyond 2025.
Implement all bikeway projects: <ul style="list-style-type: none"> • Off-street paths • On-street bike lanes • Shared streets/routes 	All	Yes	Yes		Many projects on the RTP constrained list, along with those on the Illustrative list, will extend beyond 2025.
Build sidewalks in new developments and retrofit on all arterials	All	Yes			Ongoing programs and policies in RTP

Table 6: Region 2050 Strategies for Alvadore, Goshen, & Pleasant Hill Transportation Systems: Roadways

Roadway Section	Proposed Project or Strategy	Scenario	In RTP?	In RTP-Illustrative Project List?	In Lane Co. TSP?	Comments
Clear Lake Road, Alvadore to Hwy 99	Widen to 4 or 5-lane section	Compact, Satellite				Model refinement needed for more precise forecast. Existing 2-lane roadway experiences massive growth in traffic.
Fir Butte Road, Green Hill Road	Widen portions to 3 or 4 lanes	Compact, Satellite			Yes (portions)	Model refinement needed to help determine which roads need capacity increases.
Alvadore Road, from Snyder Rd to Hwy. 36	Rural modernization of 2-lane roadway	Compact, Satellite			Yes	Project already in LC TSP
Hwy 99, 30 th Avenue, Dillard Rd.	Widen portions to add capacity	Compact, Satellite			Portion	Model refinement needed. Dillard Rd. already in LC TSP as rural modernization, 2-lane roadway.
Highway 58, from I-5 to Parkway Rd.	Widen roadway to 4-5 lanes	All				Model refinement needed. Initial projection shows highest volumes for Compact scenario but exceeding 2-lane capacity for all scenarios.
Parkway Road or Edenvale Road	Widen roadway to 3-4 lanes, from Hwy 58 to Jasper	Compact				Growth in traffic for all scenarios, but heaviest for Compact. Model refinement needed.
Jasper Road, Springfield to Jasper	Widen to 4-5 lanes.	Compact				Growth in traffic for all scenarios, but heaviest for Compact. Model refinement needed
Alvadore, Goshen and Pleasant Hill areas	Develop local TSPs for each area, to determine local and major roads	All				Growth in these areas will require a more intentional look at travel needs within each area and connecting to other areas.

Table 7: Region 2050 Strategies for Alvadore-Goshen-Pleasant Hill: Transit and Bicycle-Pedestrian Measures

Proposed Project or Strategy	Scenario	In RTP?	In RTP Illustrative Projects List?	In Lane Co. TSP?	Comments
Expand LTD bus service to Alvadore, Goshen and Pleasant Hill areas	Compact, Satellite				A mixture of local service and express service to/from Eugene and Springfield will be needed.
Extend metro area ITS plan to major roadways, transit system in these 3 areas	Compact, Satellite				20-year plan for metro area should be extended to newly developing areas. Implementation is expected to extend beyond 2025.
Implement bikeway projects: <ul style="list-style-type: none"> • Off-street paths • On-street bike lanes • Shared streets/routes 	Compact, Satellite			Yes (on-road shoulders)	Development of TSP for each area, recommended above, will be needed to determine bike and pedestrian needs.
Build sidewalks in new developments and retrofit existing major roads.	Compact, Satellite			Yes	Required by codes and TPR in urban areas.

Table 8: Region 2050 Strategies for Outlying Towns and Small Cities: Roadways

City or Area	Roadway Section	Proposed Project or Strategy	Scenario	In RTP?	In RTP Illustrative Projects List?	In Lane Co. TSP?	Comments
Creswell, Cottage Grove	Interstate 5, From Highway 58 to Row River Interchange	Widen to 6 lanes	All				Important for interstate freight and through trips as well as regional mobility
Creswell, Cottage Grove	Interchanges on I-5	Reconstruct interchanges to new standards	All				Three interchanges: <ul style="list-style-type: none"> • Creswell • Saginaw • Cottage Grove
Creswell, Cottage Grove	Major roadways within UGBs and connecting to county/state roads	Implement improvement projects in city and county TSPs	All			Yes	TSPs will need updates to extend beyond 2020 or 2025
Creswell, Cottage Grove	I-5 and interchanges	Implement ITS components	All				Update and expand metro ITS plan and extend south along I-5 corridor to Cottage Grove
Veneta and Elmira area	Highway 126 West from WEP to Territorial Highway	Widen roadway to 4-5 lanes with shoulders, bike-ped facilities	All				Model refinement needed. Initial projection shows highest volumes for Compact scenario but exceeding 2-lane capacity for all scenarios.
Veneta and Elmira area	Major roadways within UGBs and connecting to county/state roads	Implement improvement projects in Veneta TSP and county TSP	All			Yes	TSPs will need updates to extend beyond 2020 or 2025
Veneta and Elmira area	Highway 126 West from WEP to Territorial Highway	Implement ITS components	All				Update and expand metro ITS plan and extend west along 126 corridor to Veneta
Junction City	Highway 99 from Beltline to junction of 99E and 99W	Selected intersection improvements, turn lanes, and access management	All				Additional through lanes on 99 not warranted, but congestion issues will need to be addressed in other ways

Table 8: Region 2050 Strategies for Outlying Towns and Small Cities: Roadways

City or Area	Roadway Section	Proposed Project or Strategy	Scenario	In RTP?	In RTP Illustrative Projects List?	In Lane Co. TSP?	Comments
Junction City	Prairie Road and River Road	Improve existing roadways to enhance capacity, safety, operations	All			Yes	Projects in current Lane County TSP will improve sections of River Road and Prairie Road, east and south of Junction City
Junction City	Major roadways within UGB and connecting to county/state roads	Implement improvement projects in Junction City TSP and county TSP	All			Yes	TSP will need updates to extend beyond 2020 or 2025
Junction City	Highway 99 from Beltline to junction of 99E and 99W	Implement ITS components	All				Update and expand metro ITS plan and extend north along Highway 99 through Junction City area
Coburg	Interstate 5 from McKenzie River to north county line	Widen to 6 lanes	All				Important for interstate freight and through trips as well as regional mobility
Coburg	Interstate 5 interchange	Improve existing interchange for capacity, safety, operations	All		Yes	Yes	Federal funding has been sought as part of "United Front" effort
Coburg	Major roadways within UGB and connecting to county/state roads	Implement improvement projects in Coburg TSP and county TSP	All			Yes	TSP will need updates to extend beyond 2020 or 2025
Coburg	Interstate 5 from metro UGB to north county line	Implement ITS components	All				Update and expand metro ITS plan and extend north along I-5 through Coburg area

Table 8: Region 2050 Strategies for Outlying Towns and Small Cities: Roadways

City or Area	Roadway Section	Proposed Project or Strategy	Scenario	In RTP?	In RTP Illustrative Projects List?	In Lane Co. TSP?	Comments
Oakridge and Lowell-Dexter area	Highway 58 from Pleasant Hill to Oakridge	Selected intersection improvements, turn lanes, and access management	All				Additional through lanes on 58 not warranted, but congestion issues will need to be addressed in other ways
Oakridge and Lowell-Dexter area	Major roadways within UGBs and connecting to county/state roads	Implement improvement projects in Oakridge TSP and county TSP	All			Yes	TSP will need updates to extend beyond 2020 or 2025
Oakridge and Lowell-Dexter area	Highway 58 from I-5 to Oakridge	Implement ITS components	All				Update and expand metro ITS plan and extend southeast along Highway 58 through Oakridge

Table 9: Region 2050 Strategies for Outlying Towns and Small Cities: Transit and Bicycle-Pedestrian Measures

Proposed Project or Strategy	Scenario	In RTP?	In RTP Illustrative Projects List?	In Lane Co. TSP?	Comments
Expand LTD bus service to: <ul style="list-style-type: none"> • Creswell • Cottage Grove • Veneta • Junction City • Coburg • Lowell 	All (biggest need in Compact and Satellite)				Each of these cities has some LTD service at present; some cities have both local and express routes but all are limited in frequency and time of day. Additional service to/from Eugene and Springfield will be needed in all cases. Significant new express service will be needed in the Compact and Satellite scenarios.
Add LTD bus service to: <ul style="list-style-type: none"> • Oakridge 	All (biggest need in Compact and Satellite)				Oakridge will grow by over 100 per cent in Compact and Rural scenarios, over 300 per cent in Satellite. Local and express service will be needed.
Extend metro area ITS plan to transit system operations along routes serving each city	Compact, Satellite				20-year ITS plan for metro transit system should be extended to routes serving small cities. Implementation is expected to extend beyond 2025.
Implement bikeway projects in each city: <ul style="list-style-type: none"> • Off-street paths • On-street bike lanes • Shared streets/routes 	All—biggest need in Compact, Satellite			Yes	Projects are included in each city’s TSP and the Lane County TSP. TSPs will need to be updated and expanded to address significant new growth in residents and employment.
Build sidewalks in new developments and retrofit existing major roads.	All—biggest need in Compact, Satellite			Yes	Required by codes and TPR in urban areas.

Table 10: Region 2050 Preliminary Project List and Cost Estimates for Major Roadways

Roadway Section	Proposed Project	Scenario	Length in miles	Cost per mile (mil.)	Prelim. cost (mil.)	Comments
Interstate 5 from I-105 to north Lane Co. line	Widen to 6 lanes north of Beltline interchange	All	8.0	\$10.0	\$18.0	Section from I-105 to Beltline will have 8 total lanes (6 thru plus 2 auxiliary lanes) after completion of interchange project in RTP
Interstate 5 from Highway 58 to I-105	Widen to 6 lanes. Build additional auxiliary lanes as needed	All	4.5	\$10.0	\$45.0	Some portions will be widened to 6 lanes with interchange projects listed separately
Interstate 5 from Highway 58 to I-105	Reconstruct interchanges at Glenwood, 30th	All	NA	NA	\$32.2	See next line—interchange at Franklin and I-5 could replace current Glenwood Interchange.
Interstate 5 at Franklin Blvd.	Construct interchange	All	NA	NA	\$32.2	Project under prelim. study in connection with I-5 bridge EIS
Interstate 5 from Cottage Grove to Highway 58	Widen to 6 lanes	All	14.0	\$10.0	\$140.0	
Interstate 5 from Cottage Grove to Highway 58	Reconstruct interchanges at Creswell, Saginaw, Cottage Grove	All	NA	NA	\$45.0	
I-105 Wash-Jeff Bridge	Construct auxiliary NB and SB lanes per RTP proposal	All	0.75	\$17.4	\$13.0	NB added lane from 6 th to Delta off ramp SB added lane on off ramp to 6 th Ave.

Table 10: Region 2050 Preliminary Project List and Cost Estimates for Major Roadways

Roadway Section	Proposed Project	Scenario	Length in miles	Cost per mile (mil.)	Prelim. cost (mil.)	Comments
I-105 Delta to I-5	Widen to 6 lanes per RTP proposal	All	2.7	\$10.0	\$27.0	Current project adds auxiliary lanes in both directions; may delay the need for additional through lanes.
OR 126 I-5 to Mohawk	Widen to 6 lanes per RTP proposal	All	2.6	\$10.0	\$26.0	
OR 126 Interchange at Q Street/Parkway	Major interchange improvements	All	NA	NA	\$19.3	
OR 126 At 52 nd Street	Construct interchange	All	NA	NA	\$11.6	Replaces existing at-grade intersection
OR 126 At Main Street	Construct interchange	All	NA	NA	\$11.6	Replaces existing at-grade intersection
Beltline Highway W. 11 th Ave. to Roosevelt	Widen Beltline to 4 lanes, related improvements	All	NA	NA	\$21.9	Includes related improvements to interchanges at WEP and Roosevelt
Beltline Highway, Prairie Road to River Road	Add auxiliary lanes, improvements to ramps in selected locations	All	NA	NA	\$3.0	Level of congestion not expected to warrant adding through lanes to this section
Beltline Highway, River Road to Delta Highway	Widen to 6 lanes	All	1.7	\$10.0	\$17.2	

Table 10: Region 2050 Preliminary Project List and Cost Estimates for Major Roadways

Roadway Section	Proposed Project	Scenario	Length in miles	Cost per mile (mil.)	Prelim. cost (mil.)	Comments
Beltline Highway Delta to I-5	Add auxiliary lanes, improvements to ramps in selected locations	All	NA	NA	\$2.0	Level of congestion not expected to warrant adding through lanes to this section; Coburg Road to I-5 will have aux. lanes after Beltline/I-5 project done.
OR 126 West W. 11 th Ave from Green Hill to Terry St.	Widen to 4 lanes, upgrade to urban standards	All	1.5	\$13.3	\$20.0	
OR 126 West Veneta to Eugene (w. end of WEP)	Widen to 4 lanes	All	6.1	\$10.0	\$61.0	
Highway 58 I-5 to Rattlesnake Rd.	Widen to 4-5 lanes	All	7.8	\$10.0	\$78.0	Design standards will vary depending on scenario—up to 50 per cent of the length will be urban standards, in Compact and Satellite scenarios.
New river crossing at Division Ave.	New river crossing and connections to Division and Greenacres Roads	All	NA	NA	\$8.3	Needed to supplement Beltline widening to 6 lanes from River Road to Delta Hwy.

Table 10: Region 2050 Preliminary Project List and Cost Estimates for Major Roadways

Roadway Section	Proposed Project	Scenario	Length in miles	Cost per mile (mil.)	Prelim. cost (mil.)	Comments
Beaver Street Arterial	New major roadway connecting Division Ave. with Wilkes Drive	All	.8	\$2.6	\$2.2	Complements new river crossing and 6-lane Beltline projects, provides alternative to all traffic going thru River Road interchange.
All major arterials in metro area	Fully implement recommended ITS Plan (anticipated to extend beyond 2025)	All	NA	NA	\$54.0	20-year ITS plan includes the following components: <ul style="list-style-type: none"> • Travel and traffic management • Communications • Emergency management • Information management • Maint. and construction mgmt. • Public transit mgmt. (see item below under transit strategies)

Table 11: Proposed improvements on selected roads within high growth areas

Road	Section	Compact	Satellite	Rural	Comments
Alvadore area					
Clear Lake Road	Alvadore to Green Hill Rd.	4-5 U	4-5 U, R		Portions in Urban and Rural for Sat.
	Green Hill to Hwy 99	5 U	4-5 R	4-5 R	
Goshen area					
Dillard Road	Hwy 99 to Eugene UGB	3 R	3 R		Portion in hilly terrain
Highway 99 S.	North of Dillard Rd.	3 U	3 U		State highway
Pleasant Hill area					
Parkway Road	Hwy 58 to Jasper Bridge	3-4 U	3-4 U, R		State highway Portions in Urban and Rural for Sat.
Jasper Road	Jasper Bridge to Jasper Road Extension (JRE)	3 U	3 R	3 R	State highway Constrained by river and RR tracks
Highway 58	I-5 to Cloverdale Rd.	4-5 R	4-5 R	4-5 R	State highway Highway 58 projects are consolidated and cost estimates presented in Table 1
	Cloverdale Rd. to Pleasant Lane	4-5 U	4-5 U	4-5 R	
	Pleasant Lane to Rattlesnake Rd.	3-R	4-R	4-R	
Note:	<ul style="list-style-type: none"> • Table shows number of lanes proposed, and Urban (U) or Rural (R) design standards • Roads are county roads unless indicated otherwise 				

**Table 12: Region 2050 Preliminary Project List and Cost Estimates for Secondary Roadways
(roadways are county roads unless stated otherwise)**

Roadway Section	Scenario	Proposed Project	Length in miles	Cost per mile (mil.)	Prelim. cost (mil.)	Comments
Alvadore area						
Clear Lake Road Alvadore to Green Hill Rd.	Compact	Widen to 4-5 lanes, urban	3.3	\$4.4	\$14.5	
	Satellite	Widen to 4-5 lanes, urban	1.2	\$4.4	\$5.3	Portion within Alv. UGB
	Satellite	Widen to 4-5 lanes, rural	2.1	\$3.3	\$6.9	
Clear Lake Road Green Hill to Hwy 99	Compact	Widen to 4-5 lanes, urban	1.9	\$4.4	\$8.4	
	Satellite and Rural	Widen to 4-5 lanes, rural	1.9	\$3.3	\$6.3	
Goshen area						
Dillard Road Highway 99 to Eugene UGB	Compact and Satellite	Widen to 3 lane, rural (partly hilly terrain)	4.0	\$2.0	\$8.0	
Highway 99 S. in Goshen	Compact and Satellite	Widen to 3 lanes, urban	2.1	\$2.2	\$4.6	State highway
Pleasant Hill area						
Parkway Road Highway 58 to Jasper Bridge	Compact	Widen to 3-4 lanes, urban	2.8	\$2.6	\$7.3	State highway
	Satellite	Widen to 3-4 lanes, urban	1.3	\$2.6	\$3.4	Portion within PH UGB
	Satellite	Widen to 3-4 lanes, rural	1.5	\$1.8	\$2.7	
Jasper Road Jasper Bridge to Jasper Road Extension (JRE)	Compact	Widen to 3 lanes, urban (constrained both sides)	2.5	\$3.0	\$7.5	State highway
	Satellite and Rural	Widen to 3 lanes, rural (constrained both sides)	2.5	\$2.0	\$5.0	

Table 13: Region 2050 Transit Service Level Estimates for Three Growth Scenarios

Area	2000 Population	CG Scenario Population	Sat Scenario Population	Rural Scenario Population	Annual Service Hours			
					Current Service	CG Scenario Service	Sat. Scenario Service	Rur. Scenario Service
Eugene/Springfield	160,514	252,689	212,248	193,393	286,000	398,561	380,533	356,685
Springfield	61,989	112,103	83,800	84,102				
Coburg	969	5,827	5,984	5,878	2,262	3,328	3,418	3,357
Cottage Grove	8,890	16,148	26,501	14,723	4,680	38,475	48,345	36,069
Creswell	3,909	14,920	22,858	5,795				
Junction City	5,858	9,128	12,254	8,465	3,619	5,214	5,949	4,835
Lowell	857	2,368	2,845	2,359	2,340	4,146	22,470	18,951
Pleasant Hill	543		11,777					
Oakridge	3,246	7,895	13,939	7,136	-	4,509	6,767	4,076
Westfir	287	546	564	544	-	312	322	311
Veneta	2,755	14,110	24,016	10,002	3,007	22,234	36,580	18,464
Alvadore	309		16,027					
Goshen	230		10,180		-	-	4,942	-
Rural	56,733	27,766	20,237	131,103	-	23,788	17,338	112,320
TOTAL	307,089	463,500	463,230	463,500	301,908	500,566	526,664	555,069

Outlying communities service
 service 15908
 Population 27,853
 service per capita 0.571

Metro area service
 service 286,000
 Population 222,503
 service per capita 1.285

Table 14 – Preliminary Assessment Transportation Impacts of Region 2050 Growth Scenarios

Evaluation Criteria	All Scenarios	Compact Growth	Satellite Communities	Rural Growth
Accessibility/ Mobility --Auto --Transit --Bike/ped	Auto: congestion increases on major roadway system, especially I-5, I-105, 126, Beltline. Major improvements needed plus operational strategies. Transit: impacted by congestion except for dedicated lanes/facilities. Bike/ped: longer average trips. Bike lanes and off-street paths very important.	Auto: large congestion increases on key metro facilities, e.g. I-5 and 105, Beltline, E-S Highway. Some improvements likely; greater reliance on operations, access management. Transit: BRT very important for exclusive lanes/facilities. Bike/ped: greater use of existing facilities, especially off-street.	Auto: similar to Compact, but more growth on I-5 south, Hwy 99 north, 126 west. Some improvements likely; greater reliance on operations, access management. Transit: large increase in service to outlying cities, BRT in metro area. Bike/ped: potential for increase in small cities.	Auto: similar to Compact but somewhat more dispersal of trips, less stress on central metro highways. Transit: BRT important in metro area; rural growth too dispersed to serve well. Bike/ped: ok in metro area, but less overall use due to dispersed population, long trips.
Economic Vitality	Truck movements greatly impacted by worsening congestion. Operational systems and capacity improvements needed in key locations. Need to focus on I-5 for truck mobility.	Congestion on metro area major highways likely to have biggest impact on trucks. Improvements and management strategies needed for key routes, e.g. I-5, 105/126, Beltline.	Similar to Compact, but also greater need for improvements and operations on I-5 north and south of metro area, Hwy 99, 126 west.	Most jobs still in metro area so impacts on trucks likely to be very similar to Compact scenario.
Effectiveness/ Efficiency	Average travel times increase, much more time wasted in congestion. Major impacts on transit, freight movement.	Concentration of jobs, population in metro area likely to result in greatest congestion, but also can help cost-effectiveness of auto and transit modes.	Could result in shorter trips and more use of alternative modes in small cities, but also greater cost for transit service to serve satellite areas.	Most auto-dependent scenario, highest VMT. Strong centralized travel pattern to jobs in core cities, but lower densities outside metro area lead to costlier transit service.
Equity	Travel costs likely to increase in general across all segments of community; disproportionate costs possibly borne by low-income segments.	Congestion could impact certain groups more, e.g. lower-income, but concentration of population and jobs would provide largest range of travel choices.	Travel patterns more spread out than in Compact scenario, could impact some groups more than others; likely increase in travel choices within small cities.	Greater auto dependence for non-metro population could cause inequities. Greater use of county roads could help spread the travel demand over more routes.
Public Support, Financial Feasibility	Public tolerance for increased congestion will be pitted against willingness to pay for improvements--could increase desire to "let the other guy pay."	This scenario may rely more than others on shifts in travel behavior, but this scenario would be best equipped to provide travel options, education, incentives, affordable transit, etc.	Population in Satellite cities likely to add support for some major roadway improvements; could also lead to greater competition between metro area and small cities.	Continues and strengthens historic pattern of centralized jobs and bedroom rural areas, thereby continuing rural-urban rivalry and competition for resources.
Reliable/ Responsive	Reliability of travel will suffer for all modes except bike/ped. Tools such as Intelligent Transportation Systems (ITS) and on-demand traveller information would need greater use.	Greater levels of congestion will severely impact overall reliability; however, range of "tools" to address congestion may be best in this scenario.	Commutes between Satellite cities and metro area, and between the small cities, likely to be least reliable. Potential for high reliability, improved travel <u>within</u> the Satellites.	More reliance on auto travel and on county roads would produce mixed results. Travel likely to be fairly reliable in rural areas, then break down at edge of metro area.
Safety	Increased densities and congestion would create challenges for travel safety, across all modes.	Maintaining and enhancing travel safety likely to require continuation of past techniques: "engineering, education, enforcement."	Similar to Compact, but also added challenges on state highways connecting to metro area, and within Satellite cities.	Similar to Compact, but added travel on rural county collector roads would present additional challenges in some areas.
Sustainable	Additional land devoted to transportation facilities will be minor in comparison with overall growth. Fuel consumption and air quality will correlate closely with extent of congested travel.	Continues emphasis on more efficient use of existing major roadways, greater use of transit, bike and pedestrian modes. Congestion "hot spots" likely on metro area highways.	Satellite growth could reduce air quality "hot spots" in congested areas. However, it could also bring higher air pollution levels to other areas such as highway interchanges in small cities.	Combination of more jobs in metro area and increase in rural "bedroom" population could add to congestion on major metro roadways, leading to air quality problems.

