

FINAL TECHNICAL MEMORANDUM #1
Lake County Transportation System Plan Update
Plans and Policy Review

Date: August 11, 2015

To: Lake County TSP Project Management Team

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Overview

This memorandum presents a review of existing plans, regulations, and policies that affect transportation planning in the Lake County (TSP) update study area. The review explains the relationship between the documents and planning in this area, identifying key issues that will guide the TSP development process. This memorandum is intended to inform Technical Memorandum #2, which defines project goals and explains the context for preparing the TSP.

Some documents included in this review establish transportation-related standards, targets, and guidelines with which the TSP shall coordinate and be consistent; others contain transportation improvements that will need to be factored into the future demand modeling and otherwise reflected in the draft TSP. Local policy and regulatory documents described in this review – such as the County’s Land Development Ordinance (LDO) and Zoning Ordinance (ZO) – may be subject to recommended amendments in order to implement the updated TSP. This memorandum helps set the stage for those potential amendments, which will be prepared as part of project Task 7.2.

Table 1 provides a list of the documents reviewed in this memorandum, a summary of their project relevance, and the page on which they can be found.



Table 1 – Summary of Document Reviewed and Project Relevance

	Project Relevance	Page
State Documents		
Oregon Transportation Plan (Updated 2006)	Projects, policies, and regulations proposed as part of the updated TSP will reflect the policies of the Oregon Transportation Plan and will comply with or move in the direction of meeting the standards and targets established in the OHP related to safety, access, and mobility. State modal plans will inform recommended improvements in the updated TSP; TSP recommendations will be consistent with state policy and requirements.	4
Oregon Highway Plan (Updated 2011)		4
Oregon Bicycle and Pedestrian Plan (Updated 2011)		8
Oregon State Rail Plan (2014)		8
Oregon Freight Plan (2011)		9
Oregon Public Transportation Plan (1997)		10
Oregon Aviation Plan (2007)		10
Oregon Transportation Safety Action Plan (2011)		11
Transportation Planning Rule (OAR 660-012) (Updated 2011)		13
Access Management Rule (OAR 734-051) (Updated 2012)		14
Statewide Transportation Improvement Program	The TSP update analysis will take into account projects that are programmed in the STIP. An expected outcome of this planning process is proposed recommendations to update the STIP to include projects from the updated TSP.	15
ODOT Highway Design Manual	The ODOT Highway Design Manual provides design standards on state roadways; analysis for the TSP update and final project recommendations will need to reflect state requirements for state facilities. Standards and guidelines adopted by Lake County should be considered for additional guidance, concepts, and strategies for design.	16



	Project Relevance	Page
County Documents		
Lake County Comprehensive Plan (1980, Last Updated 1989)	The updated TSP will be adopted as the transportation element of the City's Comprehensive Plan, replacing the 2002 TSP. Policy changes considered as part of the TSP update process must either be consistent with existing policies or propose amendments to adopted policies.	17
Lake County Parks and Recreation District Master Plan	Currently being created/updated.	19
Coordinated Human Services Transportation Plan (2012) and Northern Lake County Supplemental Information (2014)	This plan will inform the description of unmet transit needs and needed transit-related policies in the updated TSP transit element.	19
Lake County Airport Master Plan Update (2013)	The TSP update process will consider the findings and recommendations of the Airport Master Plan Update in determining future roadway and access needs and will incorporate applicable policies and recommendations from this plan as appropriate.	20
Lake County Transportation System Plan (2002)	The TSP update process will review goals, policies, standards, and recommended projects from the current plan and will determine what to retain or change in the updated TSP. Updated data, stakeholder and community involvement, and evaluation criteria will be used in making these determinations.	21
Lake County Zoning Ordinance and Land Development Ordinance (1980, Last Updated 1989)	Development requirements related to transportation improvements such as pedestrian and bicycle access and connectivity, traffic impact analyses, and agency coordination may be recommended as part of this planning process in order to implement the updated TSP, provide consistency between the ZO/ LDO, TSP, and Country roads standards, and strengthen compliance with the TPR.	22
Transportation Financing	Past revenue and existing and potential funding sources will be explored in order to identifying funding for needed transportation improvements recommended though this TSP update.	26



Oregon Transportation Plan (Updated 2006)

The Oregon Transportation Plan (OTP) is a comprehensive plan that addresses the future transportation needs of the State of Oregon through the year 2030. The primary function of the OTP is to establish goals, policies, strategies and initiatives that are translated into a series of modal plans, such as the Oregon Highway Plan and Oregon Bike and Pedestrian Plan.

The OTP emphasizes:

- Maintaining and maximizing the assets in place
- Optimizing the performance of the existing system through technology
- Integrating transportation, land use, economic development and the environment
- Integrating the transportation system across jurisdictions, ownerships and modes
- Creating sustainable funding
- Investing in strategic capacity enhancements

Project Relevance: The Lake County TSP update will be consistent with the objectives of the OTP. The update will seek to maximize performance of the existing transportation system by, for example, the use of technology and system management before considering larger and costlier additions to the system.

Oregon Highway Plan (Updated 2011)

The Oregon Highway Plan (OHP) is a modal plan of the OTP that guides Oregon Department of Transportation's (ODOT's) Highway Division in planning, operations, and financing. Policies in the OHP emphasize the efficient management of the highway system to increase safety and to extend highway capacity, partnerships with other agencies and local governments, and the use of new techniques to improve road safety and capacity. These policies also link land use and transportation, set standards for highway performance and access management, and emphasize the relationship between state highways and local road, bicycle, pedestrian, transit, rail, and air systems. The following policies, in particular, are relevant to the TSP update process.

Policy 1A: State Highway Classification System

The OHP classifies the state highway system into four levels of importance: Interstate, Statewide, Regional, and District. ODOT uses this classification system to guide management and investment decisions regarding state highway facilities. The system guides the development of facility plans, as well as ODOT's review of local plan and zoning amendments, highway project selection, design and development, and facility management decisions including road approach permits.

US 395, OR 140, OR 31, and US 20 are classified highways in the state classification system. The purpose and management objectives of these highways are provided in Policy 1A, as summarized below.

- **Statewide highways** (OR 140 west of US 395, US 395, and US 20) typically provide inter-urban and inter-regional mobility and provide connections to larger urban areas, ports, and major recreation areas that are not directly served by Interstate Highways. A secondary function is to provide connections for intra-urban and intra-regional trips. The management objective is to provide safe and efficient, high-speed, continuous-flow operation.



- **Regional highways** (OR 31) typically provide connections and links to regional centers, Statewide or Interstate highways, or economic or activity centers of regional significance. The management objective for these facilities is to provide safe and efficient, high-speed, continuous-flow operation in rural areas and moderate to high-speed operations in urban and urbanizing areas. A secondary function is to serve land uses in the vicinity of these highways.
- **District highways** (OR 140 east of US 395) are facilities of county-wide significance and function largely as county and city arterials or collectors. They provide connections and links between small urbanized areas, rural centers and urban hubs, and also serve local access and traffic. The management objective is to provide for safe and efficient, moderate to high-speed continuous-flow operation in rural areas reflecting the surrounding environment and moderate to low-speed operation in urban and urbanizing areas for traffic flow and for pedestrian and bicycle movements.

In addition to the state highway classification system, US 395, OR 140, OR 31, and US 20 have been given the following designations:

- US 395 – National Highway System (NHS), National Scenic Byway, State Freight Route (FR), federally designated Truck Route (TR)
- OR 140 (west of US 395) – National Highway System (NHS), State Freight Route (FR)
- OR 31 – National Scenic Byway, federally designated Truck Route (TR)
- US 20 – National Highway System (NHS), State Freight Route (FR), federally designated Truck Route (TR)

Policy 1B: Land Use and Transportation

Policy 1B applies to all state highways. It is designed to clarify how ODOT will work with local governments and others to coordinate land use and transportation needs in transportation plans, facility and corridor plans, plan amendments, access permitting and project development. Policy 1B recognizes that state highways serve as the main streets of many communities and strives to maintain a balance between serving local communities (accessibility) and the through traveler (mobility). This policy recognizes the role of both the state and local governments related to the state highway system and calls for a coordinated approach to land use and transportation planning. Inside designated Special Transportation Area (STAs) local access is a priority; inside designated Urban Business Areas (UBAs), mobility is balanced with local access. These special highway segment designations require an amendment to the OHP and allow for changes to the applicable ODOT design standards, mobility standards and access management spacing standards within the designated segments. There are not currently any UBAs or STAs within Lake County.

Policy 1C: State Highway Freight System

The primary purpose of the State Highway Freight System is to facilitate efficient and reliable interstate, intrastate, and regional truck movement through a designated freight system. This freight system, made up of the Interstate Highways and select Statewide, Regional, and District Highways, includes routes that carry significant tonnage of freight by truck and serve as the primary interstate and intrastate highway freight connection to ports, intermodal terminals, and urban areas. Highways included in this designation have higher highway mobility standards than other statewide highways.



With the exception of Highway 31, state highways in Lake County all are part of the State Highway Freight System.

Policy 1D: Scenic Byways

The primary purpose of Scenic Byways is to preserve and enhance the highway by considering aesthetic and design elements along with safety and performance considerations. Aesthetic and design elements are applied within the public right-of-way through developed guidelines. Plans and projects on highways with this designation should consider impacts to the scenic qualities of the roadway. OR 31 between the Fort Rock Road junction (mile post 29.26) and the Highway 49 Junction (mile post 12.57) and US 395 between the Highway 49 Junction (mile post 120.57) and the Oregon/Californian border (mile post 157.73) are both designated as National Scenic Routes.

Policy 1F: Highway Mobility Standards Access Management Policy

Policy 1F sets mobility targets for ensuring a reliable and acceptable level of mobility on the state highway system. The standards are used to assess system needs as part of long range, comprehensive planning transportation planning projects, during development review, and to demonstrate compliance with the Transportation Planning Rule (TPR).

Significant amendments to Policy 1F were adopted at the end of 2011. The recent revisions were made to address concerns that state transportation policy and requirements have led to unintended consequences and inhibited economic development. Policy 1F now provides a clearer policy framework for considering measures other than volume-to-capacity (v/c) ratios for evaluating mobility performance. Also as part of these amendments, v/c ratios established in Policy 1F were changed from being standards to “targets.” These targets are to be used to determine significant effect pursuant to TPR Section -0060.

Table 2 includes the mobility targets include for the state facilities in the TSP study area.

Table 2 – State Facility Mobility Targets

	Inside Urban Growth Boundary			Outside of Urban Growth Boundary	
	Non-MPO Outside of STAs where non-freeway posted speed limits is			Unincorporated Communities	Rural Lands
	<= 35 mph	> 35 mph	>= 45 mph		
Statewide Expressways	0.70	0.70	0.70	0.70	0.70
Freight Route on a Statewide Highway	0.80	0.75	0.70	0.70	0.70
Regional Highways	0.85	0.80	0.75	0.75	0.70
District / Local Interest Roads	0.90	0.85	0.80	0.80	0.75



Policy 1G: Major Improvements

This policy requires maintaining performance and improving safety on the highway system by improving efficiency and management on the existing roadway network before adding capacity. The state's highest priority is to preserve the functionality of the existing highway system. Tools that could be employed to improve the function of the existing interchanges include access management, transportation demand management, traffic operations modifications, and changes to local land use designations or development regulations.

After existing system preservation, the second priority is to make minor improvements to existing highway facilities, such as adding ramp signals, or making improvements to the local street network to minimize local trips on the state facility.

The third priority is to make major roadway improvements such as adding lanes to increase capacity on existing roadways. As part of this TSP process, ODOT will work with Lake County and other stakeholders to determine appropriate strategies and tools that can be implemented at the local level that are consistent with this policy.

Policy 2B: Off-System Improvements

This policy recognizes that the state may provide financial assistance to local jurisdictions to make improvements to local transportation systems if the improvements would provide a cost-effective means of improving the operations of the state highway system. As part of this TSP update process, ODOT will work with the County and project stakeholders to identify improvements to the local road system that support the planned land use designations in the study area and that will help preserve capacity and ensure the long-term efficient and effective operation of high functional class facilities.

Policy 2F: Traffic Safety

This policy emphasizes the state's efforts to improve safety of all users of the highway system. Action 2F.4 addresses the development and implementation of the Safety Management System to target resources to sites with the most significant safety issues.

Policy 3A: Classification and Spacing Standards

It is the policy of the State of Oregon to manage the location, spacing, and type of road intersections on state highways to ensure the safe and efficient operation of state highways consistent with the classification of the highways.

Action 3A.2 calls for spacing standards to be established for state highways based on highway classification, type of area, and posted speed. Tables in OHP Appendix C present access spacing standards which consider urban and rural highway classification, traffic volumes, speed, safety, and operational needs. The access management spacing standards established in the OHP are implemented by access management rules in OAR 734, Division 51, addressed later in this memorandum.

Policy 4A: Efficiency of Freight Movement

This policy emphasizes the need to maintain and improve the efficiency of freight movement on the state highway system. US 395 and OR 140 are state freight routes and US 395 and OR 31 federally designated truck routes.



Project Relevance: The TSP update is being developed in coordination with ODOT so that projects, policies, and regulations proposed as part of the updated TSP will comply with or move in the direction of meeting the standards and targets established in the OHP related to safety, access, and mobility.

Oregon Bicycle and Pedestrian Plan (Updated 2011)

The intent of the Oregon Bicycle and Pedestrian Plan (OBPP) is to provide safe and accessible bicycling and walking facilities in an effort to encourage increased levels of bicycling and walking. The plan is comprised of two parts: the Policy and Action Plan and the Oregon Bicycle and Pedestrian Design Guide.

The plan was adopted in 1995 and reaffirmed as an element of the OTP in 2006. The second part of the plan – the Design Guide – was updated in 2011. ODOT is currently updating the OBPP. According to the ODOT scope of work, because it has not been updated since 1995, the update will include a broader policy framework and be reviewed for consistency with OTP modal plan requirements, federal requirements, and the statewide planning program. The plan is scoped to be developed in collaboration with stakeholders representing a wide variety of transportation interests. The update is due to be completed before the end of 2015.

The existing Policy and Action Plan provides background information, including relevant state and federal laws, and includes goals, actions, and implementation strategies proposed by ODOT to improve bicycle and pedestrian transportation. The plan states that bikeway and walkway systems will be established on state highways as follows:

- As part of modernization projects (bike lanes and sidewalks will be included);
- As part of preservation projects, where minor upgrades can be made;
- By restriping roads with bike lanes;
- With improvement projects, such as completing short missing segments of sidewalks;
- As bikeway or walkway modernization projects;
- By developers as part of permit conditions, where warranted.

The Design Guide is the technical element of the plan that guides the design and management of bicycle and pedestrian facilities on state-owned facilities. It has been designated as a companion piece to the Highway Design Manual and includes updated and innovative pedestrian and bicycle treatments.

Project Relevance: The standards and guidelines for pedestrian and bicycle improvements in the OBPP can serve as “best practices” and inform recommended bicycle and pedestrian improvements in the updated TSP. In addition, advisory committees for the project include members that represent pedestrian and bicycle interests.

Oregon State Rail Plan (2014)

The Oregon State Rail Plan (“State Rail Plan”), a state modal plan under the OTP, addresses long-term freight and passenger rail planning in Oregon. The State Rail Plan provides a comprehensive assessment of the state’s rail planning, freight rail, and passenger rail systems. The State Rail Plan identifies specific policies and planning processes concerning rail in the state, establishes a system of



integration between freight and passenger elements into the land use and transportation planning processes, and calls for cooperation between state, regional and local jurisdictions in completing the plan.

Currently, freight rail service in Lake County is provided by Frontier Rail, operating as Lake Railroad with freight service between Lakeview, OR and Alturas, CA.¹ There is currently no passenger rail service in Lake County.

Project Relevance: The TSP update will consider the needs of the rail freight system in developing recommended policies and projects related to improving safety and mobility in the county. In addition, the project advisory committees include ODOT representatives that will advise on rail and freight interests.

Oregon Freight Plan (2011)

The Oregon Freight Plan (OFP) is another modal plan of the OTP and implements the state's goals, and policies related to the movement of goods and commodities. Its purpose statement identifies the state's intent "to improve freight connections to local, Native American, state, regional, national and global markets in order to increase trade-related jobs and income for workers and businesses." The objectives of the plan include prioritizing and facilitating investments in freight facilities (including rail, marine, air, and pipeline infrastructure) and adopting strategies to maintain and improve the freight transportation system.

The OFP summarizes the importance of freight-dependent industries to Oregon and identifies strategic freight routes based on factors that drive freight transportation demand in Oregon: the economy, critical freight-dependent industries and their supply chains. Lake County contains only a small portion of the US 20 corridor, the only OFP strategic corridor in the county.² However, the highways traversing the county are either part of the State Highway Freight System or are federally designated Truck Routes and therefore important to the movement of goods in and through southern Oregon. The Lake County Airport is also identified in the OFP as a freight facility in South Central Oregon (OFP Table 4-6).

OFP Issues and Strategies include supporting the Strategic Freight System through actions that proactively protect and preserve identified strategic corridors. With so little of this system present in

¹ -The Lake Railroad expanded in 2009 when it assumed operations of the connecting Union Pacific branchline from Alturas to Perez, where the railroad now interchanges with the UP.
<http://www.trainweb.org/highdesertrails/lcr.html>

² See Figure 4.13. "This route is important in terms of connectivity because it connects a major area (Central Oregon) with two major interstates (I-84 and I-5). It also connects the freight-dependent industries in Bend with cities to the east and the I-5 Corridor to the west. Without this facility, businesses located near U.S. 20 in the South East Oregon ACT or Central Oregon ACT might struggle to compete because of high travel times and transportation costs to get goods to market." OFP p. 118.



Lake County, more relevant to the TSP update are state strategies and actions addressing capacity constraints, congestion, unreliability, geometric deficiencies and safety in key highway rail corridors (Freight Issues #3 and #4). An important component of the state strategy is the concept of improving “last mile” connections from intermodal connector roads on the National Highway System to important freight generation sites.

Project Relevance: Performance of the County roadway system as it relates to freight movement and connections to important freight generation sites and the State Highway Freight System will be evaluated as part of the TSP update. Maintaining and enhancing efficiency of the truck and rail freight system in the study area will be integrated into the updated TSP. The project advisory committee includes representatives from ODOT and local freight interests.

Oregon Public Transportation Plan (1997)

The Oregon Public Transportation Plan (OPTP) is the modal plan of the OTP that provides guidance for ODOT and public transportation agencies regarding the development of public transportation systems. The vision guiding the Public Transportation Plan is as follows:

- A comprehensive, interconnected and dependable public transportation system, with stable funding, that provides access and mobility in and between communities of Oregon in a convenient, reliable, and safe manner that encourages people to ride
- A public transportation system that provides appropriate service in each area of the state, including service in urban areas that is an attractive alternative to the single-occupant vehicle, and high-quality, dependable service in suburban, rural, and frontier (remote) areas
- A system that enables those who do not drive to meet their daily needs
- A public transportation system that plays a critical role in improving the livability and economic prosperity for Oregonians.

The OPTP Implementation Plan directs ODOT investments towards commuter and mobility needs in larger communities and urban areas and also in smaller communities where warranted. It also prioritizes investments in intercity connections statewide. Long-term implementation and funding is geared toward both modernization and preservation projects while preservation projects are more the focus for short term implementation and funding.

Project Relevance: There is currently no transit district providing fixed-route public transit in Lake County. A review of the Coordinated Human Services Transportation Plan addressing the needs of the transportation disadvantaged is provided in this memorandum. An ongoing effort is considering how such transit services are coordinated within Lake County. The TSP should reference the results of that work, as well as the unmet transit needs identified in the Coordinated Human Services Transportation Plan.

Oregon Aviation Plan (2007)

The Oregon Aviation Plan (OAP) is a modal plan of the OTP that defines policies and long-range investment strategies for Oregon’s public use aviation system. The plan addresses the existing conditions, economic benefits, and jurisdictional responsibilities for the existing aviation infrastructure. It contains policies and recommended actions to be implemented by the Oregon



Department of Aviation in coordination with other state and local agencies and the Federal Aviation Administration. The OAP categorizes airports based on functional role and service criteria. The County has five airports:

- Lake County Airport – Category III (Regional General Aviations Airport)
- Christmas Valley Airport – Category IV (Local General Aviations Airport)
- Paisley Airport – Category V (Remote Access/Emergency Services Airport)
- Silver Lake Airport – Category V (Remote Access/Emergency Services Airport)
- Alkali Lake State Airport – Category V (Remote Access/Emergency Services Airport)

According to the OAP, regional general service airports (Category III) are located in a geographically significant location and serve multiple communities within the service area. A Category IV Airport's function is to accommodate general aviation users and local business activities. Category V Airports accommodate limited general aviation use in smaller communities and remote areas of Oregon as well as provide emergency and recreational use function

In 2014 the state undertook an update of the Economic Impact Study that was completed as part of the 2007 OAP. The Economic Impact Study Update (“update”) was conducted to determine the value of the Oregon Aviation System. The update included the Lake County and Christmas Valley airports, two of the fifty-seven Oregon airports listed in the National Plan of Integrated Airport Systems (NPAIS). The analysis measured economic impacts of these airport facilities, within the region and throughout the state. The direct effect of airport activities on the economy for these two airports was calculated in terms of jobs, wages and business sales.

Project Relevance: The TSP update will consider the importance of, and access to, the Lake County Airport, Christmas Valley Airport, Paisley Airport, Silver Lake Airport, and Alkali State Airport in developing its policies and projects.

Oregon Transportation Safety Action Plan (2011)

An element of the OTP, the Oregon Transportation Safety Action Plan (Action Plan) establishes a safety agenda to guide the long-term investments and actions of ODOT and the state. As indicated in the name of the plan, the emphasis of the OTSAP is action and implementation. Actions included in the OTSAP were chosen based on crash data and information provided by transportation safety experts.

Actions identified in the Action Plan that will guide or be addressed in the TSP process include:

- Focus on “safety areas of interest” such as intersection crashes and pedestrian/bicycle crashes with improvements such as advance signing, roundabouts, and access management, (Action 23).
- Elevate safety in local system plans by, for example, more widely implementing access management strategies and moving toward compliance with access management standards; and involving engineering, enforcement, and emergency service staff professionals, as well as local transportation safety advocacy groups, in planning (Actions 8 and 9).
- Design improvements for the increased safety of pedestrians, bicyclists, and other non-motorized vehicles, accommodating multiple users on a street and considering the needs of families, seniors, and children using transportation facilities (Action 4).

Roadway Departure Plan

The Roadway Departure Plan provides specific information and identifies areas regarding roadway departure safety improvements to implement the current Action Plan.

- The traditional approach of relying primarily on pursuing major improvements at high-crash roadway departure locations must be complemented with two additional approaches:
 - A systematic approach that involves deploying large numbers of relatively low-cost, cost-effective countermeasures at many targeted segments of roadway with a history of roadway departure crashes, and
 - A comprehensive approach that coordinates an engineering, education, and enforcement (3E)³ initiative on corridors and in urban areas with high numbers of severe roadway departure crashes.
- The systematic improvement categories to be deployed include the following: sign and marking enhancements on curves, centerline rumble strips on rural two-lane highways, edge line rumble stripes and shoulder rumble strips, alignment delineation, and selective rural tree removal.
- The systematic and comprehensive approaches will generate a higher number of roadway departure improvements statewide, and Region personnel will require training as they are asked to take a more active role in identifying the appropriateness of systematic improvements within their Regions.
- Low-cost, cost-effective countermeasures should be considered on other types of projects as appropriate. (e.g., resurfacing, surface transportation projects) when a crash history exists within the area of the work and the countermeasure can reduce future crash potential. In these cases, safety-specific funding can be used to supplement the project funds when necessary.

The Roadway Departure Plan identifies segments of US 20 for safety improvements, including sign and marking enhancements on curves, and edge line and shoulder rumble strips.⁴

Intersection Safety Plan

The Intersection Safety Plan provides specific information and identifies areas regarding intersection safety improvements to implement the current Action Plan. The traditional approach of relying primarily on pursuing major improvements at high-crash intersections must be complemented with an expansion of the systematic approach that involves deploying large numbers of relatively low-cost, cost-effective countermeasures at many targeted high-crash intersections and a comprehensive

³ “3E” – Engineering, Education, & Enforcement

⁴ http://www.oregon.gov/ODOT/HWY/TRAFFIC-ROADWAY/docs/excel/rd_state.xls



approach that coordinates an engineering, education, and enforcement (3E) initiative on corridors with high numbers of severe intersection crashes.

Bicycle and Pedestrian Safety Implementation Plan

The Bicycle and Pedestrian Safety Implementation Plan provides a systemic safety planning process to prioritize corridors across all public roads in Oregon. The Plan also identifies corridors with the most potential for reducing frequency and severity of pedestrian and bicycle crashes.

Project Relevance: Consistent with the state’s Action Plan, the TSP update process will identify sites with high occurrences of safety problems and will consider safety in the selection and prioritization of transportation projects to meet the county’s future system needs for all modes of transportation.

Transportation Planning Rule (OAR 660-012) (Updated 2011)

The Transportation Planning Rule (TPR), OAR 660-012, implements Goal 12 (Transportation) of the statewide planning goals. The TPR contains numerous requirements governing transportation planning and project development, including the required elements of a TSP. In addition to plan development, the TPR requires each local government to amend its land use regulations to implement its TSP (-0045). It also requires local government to adopt land use or subdivision ordinance regulations consistent with applicable federal and state requirements: “to protect transportation facilities, corridors and sites for their identified functions.”

Local compliance with -0045 provisions is achieved through a variety of measures, including access control requirements, standards to protect future operations of roads, and notice and coordinated review procedures for land use applications. Local development codes should also include a process to apply conditions of approval to development proposals, and regulations ensuring that amendments to land use designations, densities, and design standards are consistent with the functions, capacities, and performance standards of facilities identified in the TSP.

The TPR does not regulate access management. ODOT adopted OAR 734-051 to address access management and it is expected that ODOT, as part of this project, will coordinate with the county in planning for access management on state roadways consistent with its Access Management Rule. See the review of OAR 734-051 in the next section for a review of these access management rules.

The most recent amendments to TPR, effective January 1, 2012, include new language in Section -0060 that allows a local government to exempt a zone change from the “significant effect” determination if the proposed zoning is consistent with the comprehensive plan map designation and the TSP.

The amendments also allow a local government to amend a functional plan, comprehensive plan, or land use regulation without applying mobility standards (V/C, for example) if the subject area is within a designated multi-modal mixed-use area (MMA).

Project Relevance: The TPR directs local TSP development and requires specific transportation elements be implemented in the local development ordinance. Local requirements such as access management, coordinated land use review procedures, and transportation facility standards and requirements are meant to protect road



operations and safety and provide for multi-modal access and mobility. Implementation measures that will be developed with the TSP update may entail proposed amendments to the Land Development Ordinance or Zoning Ordinance to ensure consistency with TPR requirements as well as to reflect TSP recommendations.

Access Management Rule (OAR 734-051) (Updated 2012)⁵

Oregon Administrative Rule (OAR) 734-051 defines the State’s role in managing access to highway facilities in order to maintain functional use and safety and to preserve public investment. OHP Policy 3A and OAR 734-051 set access spacing standards for driveways and approaches to the state highway system.⁶ The standards are based on state highway classification and differ depending on posted speed and average daily traffic volume. These standards for highways in Lake County are presented in Table 3 below.

Table 3 – Spacing Standards for Highways, ADT ≤ 5,000

Posted Speed (mph)	Spacing (feet)			
	Regional and District Highways, Rural and Urban (feet)	Statewide Highways, Rural Areas (feet)	Statewide Highways, Urban Areas (feet)	Highways, Unincorporated Communities, Rural Areas (feet)
55 and higher	650	1,320	1,320	1,320
50	425	1,100	1,100	1,100
40-45	360	990	360	750
30-35	250	770	250	425
25 and lower	150	550	150	350

Project Relevance: OAR 734-051 regulates access management on state roadways; analysis for the TSP update and final project recommendations will need to reflect state requirements for state facilities. Implementation measures that will be developed for the TSP update may entail local code amendments to ensure that the

⁵ Amendments to OAR 734-051 were adopted in early 2012 based on passage of Senate Bill 1024 and Senate Bill 264 in the 2010 and 2011 Oregon Legislature respectively. The amendments were intended to allow more consideration for economic development when developing and implementing access management rules, and involved changes to how ODOT deals with approach road spacing, highway improvements requirements with development, and traffic impact analyses requirements for approach road permits.

⁶ ODOT Access Management Standards – OHP Appendix C Revisions to Address Senate Bill 264 (2011); http://www.oregon.gov/ODOT/TD/TP/docs/ohp_am/apdxc.pdf



Zoning Ordinance and Land Development Ordinance is consistent with these access management requirements as well as TSP recommendations related to access management.

Statewide Transportation Improvement Program

The State Transportation Improvement Program (STIP) is the four-year programming and funding document for transportation projects and programs for state and regional transportation systems, including federal land and Indian reservation road systems, interstate, state, and regional highways, bridges, and public transit. It includes state- and federally-funded system improvements that have approved funding and are expected to be undertaken during the upcoming four-year period. The projects and programs undergo a selection process managed by ODOT Regions or ODOT central offices, a process that is held every two years in order to update the STIP.

The STIP document is organized by county. Projects within Lake County for which the county is the applicant are presented in Table 4 below. Table 4 presents projects from the 2015-2018 Final STIP.

Table 4 – 2015 – 2018 Final STIP⁷

Project Name	Description	Cost	Year(s)
OR140: Deep Creek Falls Area of Warner Curves	Design, develop & purchase property for future curve correction project	\$1.4 million	2013 – 2015
OR140: Klamath Falls-Lakeview HWY (Antelope Canyon)	Curve corrections, widening, improvements to OR140 corridor	\$5.7 million	2010 – 2015
CMAQ – Lakeview (2013)	CMAQ allocation for FY13	\$72,440	2015
CMAQ – Lakeview (2012)	CMAQ allocation for FY12	\$72,440	2015
Dog Lake Lane: MP 3.1-7.9 Reconstruct (Lake County)	Roadway rehabilitation, base, paving, drainage	\$4.5 million	2015
US395: Cogswell Creek Culvert #03921	Replace culvert	\$280,000	2016 – 2018
OR140: Bowers Bridge & Quartz Creek Culverts	Culvert replacement	\$1.7 million	2014 – 2015
City of Lakeview Street Sweepers	Street sweeper acquisition to reduce PM-10 count	\$301,025	2015
Hart Mtn RD/CR 3-12: MP4 – MP13.5 Chip Seal	Chip seal for pavement preservation	\$323,192	2015
Hart Mtn RD/CR 3-12: MP0.0 – MP4 Pvmt Overlay	Pavement overlay, with grind/inlay at bridges	\$501,505	2015

⁷ Approved by Oregon Transportation Commission December 18, 2014. Pending Federal Highway approval.



Project Relevance: The TSP update analysis will take into account projects that are programmed in the STIP. An expected outcome of this planning process is proposed recommendations to update the STIP to include projects from the updated TSP.

ODOT Highway Design Manual (Updated 2012)

The 2012 Highway Design Manual provides ODOT with uniform standards and procedures for planning studies and project development for the state’s roadways. It is intended to provide guidance for the design of new construction; major reconstruction (4R); resurfacing, restoration, and rehabilitation (3R); or resurfacing (1R) projects. It is generally in agreement with the American Association of State Highway and Transportation Officials (AASHTO) document *A Policy on Geometric Design of Highways and Streets - 2011*. However, sound engineering judgment must continue to be a vital part in the process of applying the design criteria to individual projects. The flexibility contained in the 2012 Highway Design Manual supports the use of Practical Design concepts and Context Sensitive Design practices.

The Highway Design Manual is to be used for all projects that are located on the state highways. National Highway System or Federal-aid projects on roadways that are under the jurisdiction of counties will typically use the 2011 AASHTO design standards or ODOT 3R design standards. State and local planners will also use the manual in determining design requirements as they relate to the state highways in TSPs, Corridor Plans, and Refinement Plans. Some projects under ODOT roadway jurisdiction traverse across local agency boundaries. Some local agencies have adopted design standards and guidelines that may differ from the various ODOT design standards. Although the appropriate ODOT design standards are to be applied on ODOT roadway jurisdiction facilities, local agency publications and design practices can also provide additional guidance, concepts, and strategies for design.

Table 5 – Design Standards Selection Matrix, ODOT Highway Design Manual

Project Type	Roadway Jurisdiction				
	State Highways			Local Agency Roads	
	Interstate	Urban State Highways	Rural State Highways	Urban	Rural
Modernization/ Bridge New/Replacement	ODOT 4R/New Freeway	ODOT 4R/New Urban	ODOT 4R/New Rural	AASHTO	
Preservation/ Bridge Rehabilitation	ODOT 3R Freeway	ODOT 3R Urban	ODOT 3R Rural	AASHTO	ODOT 3R Rural
Preventive Maintenance	1R	1R	1R	NA	NA
Safety- Operations- Miscellaneous/ Special Programs	ODOT Freeway	ODOT Urban	ODOT Rural	AASHTO	ODOT 3R Rural

Project Relevance: The ODOT Highway Design Manual provides design standards on state roadways; analysis for the TSP update and final project recommendations will need to reflect state requirements for state facilities. Standards and guidelines adopted by Lake County should be considered for additional guidance, concepts, and strategies for design.

Lake County Comprehensive Plan (1980, Last Updated 1989)

The Lake County Comprehensive Plan is a long-range policy guide for land use in the unincorporated areas within the county, outside of city urban growth boundaries (UGBs). Existing policies and recommendations are grouped under State planning goals and serve as a framework for planning decisions. Policies provide a combination of specific and general policy directives and recommendations provide tasks and activities for plan implementation. These goals and policies were examined as part of developing Technical Memorandum #1; potential changes to these policies will be considered as part of implementation of the updated TSP (project Task 2.4).

Section XII: Transportation

The Transportation Section includes specific and general transportation policies. Specific policies are directed toward airport facilities while general policies include provisions air and rail facilities, partitions and subdivisions, access, and coordination. Recommendations for updating the Transportation planning guideline were made in the 2002 Lake County TSP (Attachment B).

1. *That the County Transportation Plan will be utilized as a guideline for Plan implementation.*
2. *That the Lake County/Lakeview Airport Master Plan and the Christmas Valley Airport Improvement Plan will be recognized as supplements to the Land Use Plan.*
3. *The publicly designated airports at Lakeview, Christmas Valley and Paisley shall be protected through the application of Airport Approach Zones as recommended and approved by the State Department of Aeronautics.*
4. *That partitioning or subdividing will be authorized only where road improvements capable of meeting present or future access needs are provided for, or made available.*
5. *That physical, social and economic considerations will become an integral part of all transportation planning.*
6. *That roads created by partitioning and subdividing will be designated to tie into existing or anticipated road systems, and that roads (and adjacent curbs and sidewalks) proposed within a UGB may be required to be constructed to the standards required by that city within the urban growth area.*
7. *That subdivision and major partitioning activity will be approved only in those areas where roads meet minimum recommended standards and winter road maintenance can be provided for all-weather vehicular access.*



8. *That transportation improvements will avoid dividing existing economic farm units, unless no feasible alternative exists.*
9. *That air and rail facilities will be protected from encroaching incompatible uses that may have a limiting effect on their future use.*
10. *That the transportation facilities will be centralized to the extent practical.*
11. *That road or street rights-of-way and other public lands will generally not be vacated; but shall be considered for park, open space, utilities and all other possible public use should vacations be contemplated.*
12. *That development requiring access to arterials will be approved only after consideration is given to proposed land use(s) and traffic patterns in the area, not just the specific site. Area-wide needs supersede site-specific needs. Frontage roads and access collection points shall be provided wherever needed. Access control techniques will be used to coordinate traffic and land use patterns, and to help minimize possible negative impacts of growth.*
13. *That the number of access points to arterials will be kept to a minimum and cluster development of commercial and industrial activities encouraged.*
14. *That the cities and County support feasible programs to improve conditions for the transportation disadvantaged, and recognize potential pedestrian and bicycle demands in planning related decisions.*
15. *The County shall coordinate and cooperate with the State Highway Division in the implementation of those projects applicable to the County in the periodic Six-Year Highway Improvement Plans. Implementing regulations shall be designed to accommodate highway improvement projects as much as possible.*
16. *The handbooks published by the State Department of Transportation entitle "Highway Compatibility Guidelines" and "Guidebook for Access Management" shall be utilized as guidelines in the implementation of relevant land use regulations.*

Section XIV: Urbanization

The Urbanization Section includes specific and general policies that provide guidance on the transition of rural uses to urban uses. The following policy relates directly to the transportation system:

4. *That residential areas be located away from activities which generate high traffic counts and/or truck traffic and which might otherwise be hazardous or incompatible with residential uses.*

Other Sections

Relevant plan policies relating to transportation can be found in sections other than Section XIV of the Comprehensive Plan and include:

- Section V: Open Space, Scenic and Historic Areas and Natural Resources



8. *That the number and width of forest roads will be established only to the extent necessary to accommodate anticipated traffic.*
 10. *That transportation and utility corridors will be minimized.*
- Section VI: Air, Water and Land Resource Quality
 11. *That transportation and other sources of excessive levels of noise will be considered in evaluating the suitability of uses proposed in such an area as well as evaluating proposals for development that may create such noise levels.*
 - Section IX: Economic Development
 5. *That suitability of proposed industrial developments will be evaluated according to, but not limited to, the following factors: labor force, materials and market location; transportation, service and other community costs; relationship to the environment and present economic base, and similar consideration.*
 - Section XIII: Energy
 1. *That residential and rural residential development will be encouraged to be located within or in close proximity to communities which can provide for shopping employment, recreation, public transportation, education and other needs of such residents at the least expenditure of energy.*
 2. *That high density residential, industrial and commercial development will be located along major transportation and utility routes to conserve energy.*

Project Relevance: The updated TSP is intended to be adopted as the transportation element of the City's Comprehensive Plan, replacing the 2002 TSP. Recommendations resulting from the TSP update process must either be consistent with existing policies, including those identified above, or the TSP process should include propose amendments to adopted policies. Amendments to the Zoning Ordinance and Land Development Ordinance will also likely be needed in order to implement the updated TSP; proposed amendments will be based on existing, revised or new policies related to land use designations (use and density regulations), plan and code amendment procedures, land use review coordination, and/or protection of transportation facilities.

Lake County Parks and Recreation District Master Plan

Lake County does not currently have a Parks and Recreation District Master Plan. Lake County has one parks and recreation district, the Christmas Valley Parks & Recreation District, and is currently in the process of determining the need for a second in Lakeview (South Lake County). The Christmas Valley Parks & Recreation District manages multiple facilities and properties, including the Christmas Valley Airport, for public recreational activities.

Coordinated Human Services Transportation Plan (2012) and Northern Lake County Supplemental Information (2014)

The Oregon Department of Transportation (ODOT) oversees the Special Transportation Fund (STF) through its Public Transit Division. Every STF Agency is required to develop a written plan that sets out a long-term vision for public transportation in its service area; the Lake County Coordinated Human



Services Transportation Plan (Plan) fulfils this requirement. Lake County's transportation needs are served by Lake County Special Transportation Agency. Oversight is provided by the Lake County Board of Commissioners, which is the designated STF agency for the area. The system provides transportation for seniors, people with disabilities, low-income people that qualify for the Division of Medical Assistance Programs (DMAP), and, if space is available, to the general public.

In northern areas of the County, Inner Court Family Center provides 'Dial-a-Ride' transportation services covering the areas of Paisley, Summer Lake, Silver Lake, Christmas Valley and Fort Rock. They utilize volunteer drivers and STF funds are primarily used to reimburse drivers for use of their private vehicles. The Lake County Senior Citizens Center provides 'scheduled destination' bus transportation (including out-of-county trips and trips designated for shopping and medical needs), on a monthly basis with pick up and return in Christmas Valley. These services are the only public transit system in the Paisley, Summer Lake, Silver Lake, Christmas Valley and Fort Rock communities.⁸ Identified unmet transit needs county-wide include the lack of public transit service, transportation service in the evenings or on weekends, and access to service for some of the remote communities.⁹ Transportation needs in the northern areas of Lake County include moving to paid drivers and dispatchers and increasing the awareness of public transportation options for the general public, especially low income individuals.¹⁰ Transportation priorities for northern Lake County include maintaining and promoting current service levels, expanding services levels as demand and resources allow, and improving service to the low-income and general public.

Project Relevance: The TSP planning process will consider the unmet transit needs identified in the Coordinated Human Services Transportation Plan in the development of the transit element of the updated TSP. The TSP transit element will summarize available services in the county and will include public transit-related policies.

Lake County Airport Master Plan Update (2013)

The update to the 2001 Airport Master Plan was undertaken to assess the role of the Lake County Airport, evaluate the airport's capabilities, forecast future aeronautical activity for the next 20 years, and plan for the timely development of any new or expanded airport facilities needed to accommodate future aviation activity. Chapter 4 details the Master Plan Concept, chosen from four alternatives evaluated in the plan, which is the basis for the Airport Layout Plan in Chapter 6. The planned developments at the airport include extending the runway, a new full parallel western taxiway, an area for airport-compatible development in the airport's northwestern section, reserve areas for future aviation-related development at the runway's southern section, and redesignation of

⁸ Northern Lake County Special Transportation Supplemental Information, p. 4.

⁹ Coordinated Human Services Transportation Plan, p. 8.

¹⁰ Northern Lake County Special Transportation Supplemental Information, p. 15.



property from airport use to general County property (known as surplus property), which is currently in use as a drag racing area.¹¹

The Airport Layout Plan (Chapter 6) includes the current airport layout and proposed improvements to the airport for the 20-year planning period and beyond. Descriptions of the improvements and costs over the next 20 years are included in Chapter Seven, Capital Improvement Plan (CIP).

Project Relevance: Planned enhancements to the airport anticipate future increased aeronautical demand and indicate a future change in land use in the immediate vicinity of the airport. The TSP update process will consider the findings and recommendations of the Airport Master Plan Update in determining future roadway and access needs and will incorporate applicable policies and recommendations from this plan as appropriate.

Lake County Transportation System Plan (2002)

The Lake County Transportation System Plan (TSP) is the County's long-range plan for developing and managing its transportation system. It establishes goals, policies, and improvements to support planned land uses and population growth over the next 20 years. The County provides services to the city of Paisley and the rural communities including Adel, Christmas Valley, Fort Rock, Plush, Silver Lake, and Summer Lake. An outcome of this project will be a separate TSP for the city of Paisley.

The TSP goals and objectives were developed through public input and consideration of other adopted plans, including the Lake County Comprehensive Plan. Potential changes to these policies will be considered as part of implementation of the updated TSP.

The TSP includes rural roadway standards, access management guidelines, transportation demand management measures, modal plans, and an implementation plan. The modal plans address improvements to meet the needs of all transportation modes appropriate to Lake County and include:

- Roadway System Plan
- Pedestrian System Plan
- Bicycle System Plan
- Transportation Demand Management Plan
- Public Transportation Plan
- Rail Service Plan
- Air Service Plan

The TSP establishes a set of standards for the design and management of county roads, primarily based on functional classification designations as described in Table 7-1; typical street design

¹¹ This lease may not be in compliance with FAA grant assurances and the Master Plan Concept includes the recommendation that the approximately 109 acres be surplus and designated as general County property in order to accommodate the existing use. Lake County Airport Master Plan Update, p. 4-6.



standards are provided in Figure 7-1. Access management standards are established along all state highways according to highway classification and are provided in Table 7-3. The TSP does not include established access management and access spacing standards for County roads.

The TSP recommends preparing a Capital Improvement Program (CIP) and a 20-year transportation project list. The prioritized 20-year transportation list is provided in Table 7-11 and categorizes projects as high-, medium-, or low-priority.

Project Relevance: The TSP update process will review goals, policies, standards, and recommended projects from the current plan and will determine what to retain or change in the updated TSP. This project will update transportation improvement projects for all modes, based on current and projected needs. Updated data, stakeholder and community involvement, and evaluation criteria will be used in making these determinations.

Lake County Zoning Ordinance and Land Development Ordinance (1980, Last Updated 1989)

The Lake County Zoning Ordinance (ZO) and Land Development Ordinance (LDO) regulate development within unincorporated Lake County and implement the long-range land use vision embodied in the County Comprehensive Plan. The ordinances contain several sets of requirements that address the relationship between land use development and transportation system development. Those requirements are discussed below and address access and connectivity, design standards, performance standards, traffic impact studies, parking, and development application review.

Street Access and Connectivity

Access and driveway standards are not currently included or referred to in the County ZO. Site plan provisions in ZO Section 23.02 require that proposed circulation and access be shown in site plans, but do not include or refer to circulation and access standards accordingly. The implementation chapter of the 2002 TSP proposed a new section for ZO Article 20 (Supplementary Provisions) on access management; however, it was not adopted. The proposed ZO amendments from the adopted TSP are included in this memorandum as Attachment A.

The TSP provides information on access management and spacing standards for State highways, and establishes standards for County roads for new development and redevelopment.¹²

LDO Section 2.030 requires that each parcel has access to a public or private street via a public street or private easement. The proposed TSP amendments (Attachment A) recommended changing these provisions to also address dedicating right-of-way to County standards if existing right-of-way is

¹² The 2002 TSP states: "The access spacing standard for public street intersections on County roads, both collectors and local roads shall be 500 feet. The access spacing standard for private driveway intersections on collector roads shall be 200 feet and on local roads shall be 50 feet. Where this standard cannot be met, access shall be provided to every lot." (p. 7-11)



insufficient. LDO Section 2.130 sets 1,000 feet as the maximum block length in subdivisions where average lot size is less than one acre. Provisions in this section require two tiers of lots to be accommodated in the block unless the Planning Commission determines that exceptional conditions exist that make this infeasible. LDO Section 2.020 (Relation to Adjoining Street System) requires that subdivisions and major partitions connect their proposed streets with existing and planned streets in adjoining development. The section allows the Planning Commission to make exceptions for sites with topographic constraints.

Pedestrian and Bicycle Access and Connectivity

For on-site pedestrian and bicycle facilities, site plan provisions in ZO Section 23.02 require that proposed circulation and access be shown in site plans, but do not include or refer to circulation and access standards or requirements. ZO amendments proposed in the 2002 TSP included provisions for pedestrian and bicycle on-site circulation as well as accessways to connect cul-de-sacs and dead-end streets to other streets or to provide connections where constructing streets are infeasible (Attachment A).

LDO Section 2.100 states: “When desirable or deemed necessary for public convenience and safety, pedestrian and/or bike ways may be required, particularly as deemed desirable or necessary to connect to cul-de-sacs or to pass through unusually long or oddly shaped blocks.” Similarly, LDO Section 2.130 regarding blocks in subdivisions allows for a walkway (accessway) at least 10-feet-wide to be required through approximately the middle of the block. Supporting policy language regarding accessways was proposed in policy amendments presented in the 2002 TSP (Attachment B).

The County’s 2002 TSP does not indicate that sidewalks or designated bikeways are required on arterials (State highways), paved County roads (collector or local), or gravel County roads (collector or local), the three types of roads for which standards are provided. Only arterials and paved County roads have shoulders and, of these, only arterials have paved shoulders (shoulders of four to eight feet). Paved shoulders can serve as defacto walking and biking facilities. Safe and convenient pedestrian and bicycle facilities in unincorporated Lake County were addressed in proposed policy amendments in the 2002 TSP (Attachment B).

Street Design Standards

The ZO does not currently include a section on transportation standards nor does it reference the standards in the adopted TSP. Design standards for public streets in Lake County are provided in the 2002 TSP.¹³ The TSP includes cross sections for the following: arterials (State highways)¹⁴, paved County roads (collector or local), and gravel County roads (collector or local). A new section on transportation improvements of the ZO was proposed as part of the 2002 TSP (Attachment A);

¹³ Table 7-1 (Street Design Standards – Lake County) and Figure 7-1 (Street Standards – State Highways, Paved County Roads, and Gravel County Roads)

¹⁴ This cross section includes a note that recommended shoulder widths are based on guidelines from the Oregon Department of Transportation (ODOT) Highway Design Manual, Table 4-5(r), and that also refers to Table 6-2 in the TSP for recommended paved shoulder widths on rural highways.



however, these recommended amendments did not necessarily include design standards or references to design standards, and were not adopted.

Section 2.280 of the LDO establishes minimum right-of-way dimensions and street improvements for subdivisions. This section specifies that a subdivider may be required to dedicate additional right-of-way and improve a road to County standards if the development abuts a County road or right-of-way. The design standards in LDO Section 2.280 that are established for streets inside the subdivision are differentiated by a road classification system consisting of arterials, collectors, local streets, and cul-de-sacs as well as by a road classification system internal to the subdivision code.¹⁵ However, this code section does allow for cases when the roads inside a subdivision are required to be built to County standards: “Streets, rights-of-way, and improvements within a development shall be provided as specified in this ordinance or if more stringent, by standards in accordance with adopted County standards and specifications.” Adopted County standards can be taken to mean the design standards in the TSP, which is an adopted document.

Parking

ZO Article 21 addresses off-street parking and loading. ZO Section 21.02 establishes general standards for off-street parking, including the minimum number of off-street parking spaces required for new development, expansion of an existing development, or a change in use. The general standards include an allowance for shared parking in cases when hours of use or operation do not overlap.

ZO Section 21.02 does not include standards for pedestrian circulation around and through parking areas or provisions for bicycle parking. Minimum standards for the number of required bicycle parking spaces for multi-family residential uses, public and commercial uses, and schools were included in recommended ZO amendments in the 2002 TSP (Attachment A).

Performance Standards and Traffic Impact Studies

Chapter 4 of the 2002 TSP presents ODOT volume-to-capacity ratio standards for State highways, and establishes the County’s level of service (LOS) standard as LOS D for County roads and at County road intersections.

The TPR requires that a link be provided between these performance standards and land use development in the County’s development code. Application requirements and approval criteria for discretionary land use review procedures provide this connection in the County’s ZO and LDO in the following ways:

¹⁵ The road classification system in LDO Section 2.280 further categorizes roads as follows:

Class 1 – lot sizes 7,500 square feet to 1 acres

Class 2 – lot sizes 1 acre to 5 acres

Class 3 – lot sizes 5 acres to 10 acres

Class 4 – lot sizes over 10 acres



- In ZO Section 24.01.A, approval criteria for conditional uses include that the proposed development must be in compliance with applicable Comprehensive Plan policies. Although existing Comprehensive Plan Policies do not address impacts on transportation facilities very clearly, amendments to Comprehensive Plan policies proposed as part of the 2002 TSP process do address such impacts. (See the recommended Comprehensive Plan policy amendments in Attachment B.)
- Site plan review provisions in ZO Section 23.03 allow the Planning Commission to take the proposed development's projected traffic impacts into account when preparing conditions of approval.
- Pursuant to application requirements for zone amendments in ZO Section 28.02, the applicant must demonstrate how the amendment will be in substantial compliance with the goals, objectives, and policies of the County Comprehensive Plan and applicable Statewide Planning Goals and LCDC Administrative Rules. This could include Comprehensive Plan policies regarding transportation impacts (if the policies are amended as proposed in the 2002 TSP) as well as the TPR.
- Subdivision requirements in LDO Section 3.080.C identify adequacy of public services to serve the proposed development, including "highway and arterial road networks, and other transportation facilities," as an approval criterion.
- In provisions in LDO Section 3.010 regarding preparation of a tentative subdivision plan, applicants are given the option to submit an Outline Development Plan before a tentative plan, which shall include a written statement "relative to the impact on the carrying capacities of public facilities and services including... serving streets..." However, there are no other requirements for prepare traffic impact studies, nor guidance on what is to be included in an impact study, established in existing ZO and LDO provisions. Amendments recommended as part of the 2002 TSP included basic traffic impact studies requirements (Attachment A).

Coordinated Application Review

Existing ordinance provisions do not require or otherwise explicitly call out coordination of land use application review with other transportation facility owners/managers and service providers. ZO provisions regarding notice of hearings for conditional uses and zone amendments require notice to be sent to property owners within 250 feet of the site (ZO Sections 24.02.C.2 and 28.04.B), which may sometimes include transportation stakeholders. A basis for more extensive and explicit coordination with facility owners/managers and service providers was presented in recommended policy amendments in the 2002 TSP (Attachment B).

TPR Compliance

ZO Section 28.07 establishes criteria for approval of a zone amendment related to compliance with the Comprehensive Plan, including a substantial change having occurred in the area since the zoning was adopted and that the area of the proposed amendment can best facilitate land needs. There are not existing provisions regarding compliance with Statewide Planning Goals and associated rules. Code amendments in the 2002 TSP (Attachment A) recommended adding new code language, Section 28.08, which addresses consistency with the TPR.



Project Relevance: Amendments to ZO and LDO provisions related to transportation – including access management, on-site pedestrian and bicycle circulation, street design standards, bicycle parking, traffic impact analyses, agency coordination, and zone amendment criteria – may be considered and recommended as part of this planning process in order to implement the updated TSP, provide consistency between the ZO, LDO, and the TSP, and strengthen compliance with the TPR.

Transportation Financing

Revenue and Expenditures

Historically, sources of road revenue for Lake County have included federal forest fees, state highway fund revenue, federal grants, interest earnings from the investment fund balance. Transportation revenue and expenditures for Lake County are shown in Tables 6 – 8.

Table 6 – Special Transportation Funds Revenue & Expenses¹⁶

	2010	2011	2012	2013	2014 Adopted
Revenue	\$77,075	\$38,245	\$95,429	\$179,319	\$121,900
Expenses	\$39,921	\$32,905	\$38,004	\$119,323	

Table 7 – Bicycle Trails Revenue & Expenses¹⁷

	2010	2011	2012	2013	2014 Adopted
Revenue	\$53,632	\$60,576	\$67,456	\$15,861	\$21,146
Expenses	\$132	\$133	\$58,903	\$601	

¹⁶ Current Funding Sources: ODOT Entitlement & 5310 Grant Funds. Past Funding Sources: ODOT Entitlement

¹⁷ Current/Past Funding: State of Oregon monies specifically earmarked for construction of bicycle trails

**Table 8 – Road Department Revenue & Expenses**

Revenue	2010	2011	2012	2013	2014 Adopted
Local	\$227,639	\$588,170	\$183,030	\$98,761	\$114,500
State (STP, Reg/Gas)	\$751,861	\$868,065	\$882,780	\$957,006	\$850,000
Federal (Fed Forest Hwy, BLM, Forest Receipts)	\$2,748,089	\$2,659,284	\$1,993,236	\$1,770,752	\$235,978
Carryover	\$205,134	\$354,239	\$546,387		
Total Revenue	\$3,932,723	\$4,469,758	\$3,605,433	\$2,826,519	\$1,200,478
Total Expenses	\$3,932,723	\$4,469,758	\$3,605,433	\$2,793,017	

No Forest Highway monies received in 2010, 2012, 2013, or 2014

Current and Historic Funding Sources

The following section identifies and summarizes existing and potential future funding sources available for implementing the Lake County Transportation System Plan (TSP) update. The funding information provides context for evaluating projects and defining priorities that will allow the County to utilize all available funding opportunities and maximize current resources to preserve and improve current infrastructure.

Key funding sources that have contributed to transportation improvement projects within Lake County over the last several years include the Surface Transportation Program, the County's Road Fund, state funds, and federal grants.

Surface Transportation Program

The Surface Transportation Program (STP) provides flexible funding that may be used by states and localities, such as Lake County, for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.

General Road Fund

The County's General Road Fund revenues are primarily funded through the State gas tax and vehicle registration fees, which are projected to flatten (less than inflation). The expenditures of the General Road Fund are restricted for construction, reconstruction, improvement, repair, maintenance, operation, use and policing of public highways, roads and streets within the County.

Federal Grants

In addition to STP funds, Lake County receives additional funding each year in federal grants, such as the Congestion Mitigation and Air Quality (CMAQ) program and the Federal Transit Administration (FTA) Enhanced Mobility of Seniors and Individuals with Disabilities program.



Other Revenue Sources

Lake County has historically benefited from a number of other revenue sources, such as transportation improvement grants and other miscellaneous programs administered by the Oregon Department of Transportation (ODOT) and the Federal Highway Administration (FHWA). These other revenue sources include:

- ODOT's Statewide Transportation Improvement Program (STIP),
- FHWA's Congestion Mitigation and Air Quality (CMAQ) program,
- ODOT's Bicycle and Pedestrian Grant Program (This particular program ended as a standalone solicitation process in 2012. Grants now distributed through the ODOT STIP "Enhance" process.



December 2002

Lake County Transportation System Plan

8. The Transportation System Plan is cross-referenced with the Comprehensive Plan and conforms therewith.
9. The Lakeview ~~Public Facilities Plan of 1987, Transportation System Plan~~, as adopted by the Town of Lakeview in 2001, contains information on Transportation facilities in the Lakeview Urban Area in which the County has certain planning responsibilities. Therefore, said Plan is hereby referenced and coordinated with this Plan.
10. It is in the public interest that the County coordinate and cooperate with the State ~~highway Division~~ Department of Transportation in the preparation and implementation of the ~~Division's Six Year State Transportation Highway Improvement Plans and Program~~.
10. ~~A number of provisions related to certain highway improvement actions are set forth in State Statutes and are designed to minimize review processes related thereto and potential delays related to such review processes. It is in the public interest that such provisions be incorporated into local land use ordinances as much as possible~~
11. State Statutes and implementing administrative rules contain a number of provisions governing certain uses and actions related to public highways, particularly those designated as "Scenic"; it is in the public interest that similar provisions be included within local ordinances to ensure maximum coordination with said State provisions.
12. It is important that Transportation System Plan be updated periodically to reflect changing conditions and needs.

ADDITIONS TO THE ZONING ORDINANCES

Add the following to Section 1.03 Definitions:

Access connection: Any driveway, street, turnout or other means of providing for the movement of vehicles to or from the public roadway system.

Access management: The process of providing and managing access to land development while preserving the regional flow of traffic in terms of safety, capacity, and speed.

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

Bicycle: A vehicle designed to operate on the ground on wheels, propelled solely by human power, upon which any person or persons may ride, and with two tandem wheels at least 14 inches in diameter. An adult tricycle is considered a bicycle.



Bicycle facilities. A general term denoting improvements and provisions made to accommodate or encourage bicycling, including parking facilities and all bikeways.

Bikeway: Any road, path, or way that is some manner specifically open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are shared with other transportation modes. The five types of bikeways are:

- 1) **Multi-use path:** A paved 10- to 12-foot wide way that is physically separated from motorized vehicular traffic; typically shared with pedestrians, skaters, and other non-motorized users.
- 2) **Bike lane:** A 4- to 6-foot wide portion of the roadway that has been designated by permanent striping and pavement markings for the exclusive use of bicycles.
- 3) **Shoulder bikeway:** The paved shoulder of a roadway that is 4 feet or wider, typically shared with pedestrians in rural areas.
- 4) **Shared roadway:** A travel lane that is shared by bicyclists and motor vehicles.
- 5) **Trail:** An unpaved path that accommodates all-terrain bicycles; typically shared with pedestrians.

Cross access: A service drive providing vehicular access between two or more contiguous sites so the driver need not enter the public street system.

Frontage road. A public or private drive which generally parallels a public street between the right-of-way and the front building setback line. The frontage road provides access to private properties while separating them from the arterial street.

Functional classification: A system used to group public roadways into classes according to their purpose in moving vehicles and providing access.

Joint access: A driveway connecting two or more contiguous sites to the public street system.

Lot, flag: A lot not meeting minimum frontage requirements and where access to the public road is by a narrow, private right-of-way line.

Pedestrian facilities. A general term denoting improvements and provisions made to accommodate or encourage walking, including walkways, accessways, crosswalks, ramps, paths, and trails.

Place of Public Assembly. Structure of place which the public may enter for such purposes as deliberation, education, worship, shopping, entertainment, amusement, awaiting transportation, or similar activity.

Public Assembly Uses: A structure or outdoor facility where concentrations of people gather for purposes such as deliberation, education, worship, shopping, business, entertainment, amusement, sporting events or similar activities, excluding airshows. Public "Assembly Uses" does not include places where people congregate for short periods of time such as parking lots and bus stops or uses approved by the FAA in an adopted airport master plan.



Reasonable access: The minimum number of access connections, direct or indirect, necessary to provide safe access to and from the roadway, as consistent with the purpose and intent of this ordinance and any applicable plans and policies of Lake County.

Reasonably direct: A route that does not deviate unnecessarily from a straight line or a route that does not involve a significant amount of out-of-direction travel for likely users.

Safe and convenient. Routes that are reasonably free from hazards, and provide a reasonably direct route of travel between destinations, considering that the optimum travel distance is one-half mile for pedestrians and three miles for bicyclists.

Stub-out (stub-street): A portion of a street or cross access drive used as an extension to an abutting property that may be developed in the future.

Walkway: A hard-surfaced area intended and suitable for pedestrians, including sidewalks and the surfaced portions of accessways.



Delete Article 13: Airport Approach Combining Zone: A-A (page 50) and replace with the following:

The Airport Overlay Zone is intended to be applied as an overlay on properties within the air approaches to the Lake County Airport. This overlay district creates certain zones that include all of the land lying beneath the Airport Imaginary Surfaces as they apply to the Lake County Airport. This overlay zone is intended to prevent the establishment of airspace obstructions in airport approaches and surrounding areas through height restrictions and other land use controls as deemed essential to protect the health, safety, and welfare of the residents of Lake County.

Definitions:

Aircraft: Helicopters and airplanes, but not hot air balloons or ultralights.

~~Airport or Aircraft Landing Facility: Any land area, runway, landing pad or other facility designed, used or intended to be used by aircraft, including helicopters and including all necessary taxi ways, hangars and other necessary buildings and open spaces.~~

Airport: The strip of land used for taking off and landing aircraft, together with all adjacent land used in connection with the aircraft landing or taking off from the strip of land, including but not limited to land used for existing commercial and recreational airport uses.

Airport Approach Safety Zone: The land that underlies the approach surface, excluding the RPZ.

Airport Hazard: Any structure, tree, or use of land which exceeds height limits established by the Airport Imaginary Surfaces.

Airport Imaginary Surfaces: Those imaginary areas in space which are defined by the Approach Surface, Transitional Surface, Horizontal Surface, and Conical Surface and in which any object extending above these imaginary surfaces is an obstruction.

Approach Surface. A surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the Primary Surface. The inner edge of the approach surface is the same width as the Primary Surface and extends to a width of: 1,250 feet for utility runway having only visual approaches; 1,500 feet for a runway other than a utility runway having only visual approaches; 2,000 feet for a utility runway having a nonprecision instrument approach; 3,500 feet for a nonprecision instrument runway other than utility, having visibility minimums greater than three-fourths of a statute mile; 4,000 feet for a nonprecision instrument runway having visibility minimums as low as three-fourths statute mile; and 16,000 feet for precision instrument runways. The Approach Surface extends for a horizontal distance of 5,000 feet at a slope of 20 feet outward to each foot upward (20:1) for all utility and visual runways; 10,000 feet at a slope of 34 feet outward for each foot upward (34:1) for all nonprecision instrument runways other than utility; and for all precision instrument runways extends for a horizontal distance of 10,000 feet at a slope of 50 feet outward for each foot upward (50:1); thence slopes upward 40 feet outward for each foot upward (40:1) an additional distance of 40,000 feet.

Commercial and Recreational Airport Uses: Those uses described in OAR 660-013-0100.



Conical Surface. Extends 20 feet outward for each one foot upward (20:1) for 4,000 feet beginning at the edge of the horizontal surface (5,000 feet from the center of each end of the Primary Surface of each visual and utility runway or 10,000 feet for all nonprecision instrument runways other than utility at 150 feet above the airport elevation) and upward extending to a height of 350 feet above the airport elevation.

Horizontal Surface. A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging runways 5,000 feet from the center of each end of the Primary Surface of each visual or utility runway and 10,000 feet from the center of each end of the Primary Surface of all other runways and connecting the adjacent arcs by lines tangent to those arcs.

Noise Sensitive Area. Within 1,500 feet of an airport or within established noise contour boundaries exceeding 55 Ldn.

Non-Towered Airport: An airport without an existing or approved control tower on June 5, 1995.

Primary Surface. A surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the Primary Surface extends 200 feet beyond each end of that runway. When the runway has no specially prepared hard surface, or planned hard surface, the Primary Surface ends at each end of that runway. The width of the primary Surface is 250 feet for utility runways having only visual approaches, 500 feet for utility runways having nonprecision instrument approaches, 500 feet for other than utility runways having only visual approaches or nonprecision instrument approaches with visibility minimums greater than three-fourths of a mile and 1,000 feet for nonprecision instrument runways with visibility minimums of three-fourths of a mile or less and for precision instrument runways.

Runway Protection Zone (RPZ). An area off the runway end (formerly the clear zone) used to enhance the protection of people and property on the ground. The RPZ is trapezoidal in shape and centered about the extended runway centerline. It begins 200 feet (60 m) beyond the end of the arcs usable for takeoff or landing. The RPZ dimensions are functions of the type of aircraft and operations to be conducted on the runway.

Transitional Surface. Extend seven feet outward for each one foot upward (7:1) beginning on each side of the Primary Surface which point is the same elevation as the runway surface, and form the sides of the approach surfaces thence extending upward to a height of 150 feet above the airport elevation (Horizontal Surface).

Utility Runway. A runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight or less.

Visual Runway. A runway that is intended solely for the operation of aircraft using visual approach procedures for which no instrument approach procedures have been approved, or planned, or indicated on an FAA or state planning document or military service airport planning document.

1. **Airport Approach Overlay Zone.** The following regulations shall apply to land within the Airport Approach Overlay Zone. Wherever there is a conflict between the regulations of the underlying zone and the Airport Approach Overlay Zone, the most stringent restrictions shall govern.



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2. Permitted uses within the Runway Protection Zone (RPZ). While it is desirable to clear all objects from the RPZ, some uses are permitted, provided they do not attract wildlife, are below the approach surface and do not interfere with navigational aids.
 - A. Agricultural operations (other than forestry or livestock farms).
 - B. Golf courses (but not club houses).
 - C. Automobile parking facilities.
 3. Permitted uses within the Airport Approach Safety Zone.
 - A. Farm use, excluding the raising and feeding of animals which would be adversely affected by aircraft passing overhead.
 - B. Landscape nursery, cemetery, or recreation areas which do not include buildings or structures.
 - C. Roadways, parking areas, and storage yards located in such a manner that vehicle lights will not make it difficult for pilots to distinguish between landing lights and vehicle lights or result in glare, or in any way impair visibility in the vicinity of the landing approach. Approach surfaces must clear these by a minimum of 15 feet.
 - D. Pipeline.
 - E. Underground utility wire.
 4. Conditional uses within the Airport Approach Safety Zone.
 - A. A structure or building accessory to a permitted use.
 - B. Single family dwellings, mobile homes, duplexes, and multifamily dwellings, when allowed by the underlying zone, provided the landowner signs and records in the deed and mortgage records of Lake County a Hold Harmless Agreement and Aviation and Hazard Easement and submits them to the airport sponsor and the City Planning Departments.
 - C. Commercial and industrial uses, when allowed by the underlying zone, provided the use does not result in:
 - a. Creating electrical interference with navigational signals or radio communication between the airport and aircraft.
 - b. Making it difficult for pilots to distinguish between airport lights and lighting from nearby land uses.
 - c. Impairing visibility.
 - d. Creating bird strike or other wildlife hazards.
 - e. Endangering or interfering with the landing, taking off or maneuvering of aircraft intending to use airport.



- f. Attracting a large number of people
 - g. Buildings and uses of public works, public service, or public utility nature.
5. Procedures. An applicant seeking a conditional use shall include the following information:
- A. Property boundary lines as they relate to the Airport Imaginary Surfaces.
 - B. Location and height of all existing and proposed buildings, structures, utility lines, and roads.
6. Comment. In accordance with OAR Chapter 738 Division 100, City or County Planning Authority shall notify the owner of the airport and Oregon Aeronautics Division about land use permits or zone changes within 5,000 feet of a visual and 10,000 feet of instrument airport so as to provide Oregon Aeronautics Section an opportunity to review and comment.
7. Limitations. To meet the standards established in FAA Regulations, Part 77 and LCDC 660-013-0070, Exhibit 1, no structure shall penetrate into the Airport Imaginary Surfaces as defined above.
- A. No place of public assembly shall be permitted in the Airport Approach Safety Zone or RPZ.
 - B. No structure or building shall be allowed within the RPZ.
 - C. Whenever there is a conflict in height limitations prescribed by this overlay zone and the primary zoning district, the lowest height limitation fixed shall govern; provided, however, that the height limitations here imposed shall not apply to such structures customarily employed for aeronautical purposes.
 - D. No glare producing materials shall be used on the exterior of any structure located within the Airport Approach Safety Zone.
 - E. In noise sensitive areas (within 1,500 feet of an airport or within established noise contour boundaries of 55 Ldn and above for identified airports) where noise levels are a concern, a declaration of anticipated noise levels shall be attached to any building permit, land division appeal, deed, and mortgage records. In areas where the noise level is anticipated to be 55 Ldn and above, prior to issuance of a building permit for construction of noise sensitive land use (real property normally used for sleeping or normally used as schools, churches, hospitals, or public libraries) the permit applicant shall be required to demonstrate that a noise abatement strategy will be incorporated into the building design which will achieve an indoor noise level equal to or less than 55 Ldn. The planning and building department will review building permits or noise sensitive developments.



- F. No development that attracts or sustains hazardous bird movements from feeding, watering, or roosting across the runways and/or approach and departure patterns of aircraft. Planning authority shall notify Oregon Aeronautics of such development (e.g., waste disposal sites, open water impoundments, and wetland enhancements) within the airport overlay zone so as to provide Oregon Aeronautics Section an opportunity to review and comment on the site in accordance with FAA AC 150/5200-33.
 - G. Siting of new industrial uses and the expansion of existing industrial uses is prohibited where either, as part of regular operations, would cause emissions of smoke, dust or steam that would obscure visibility within airport approach corridors.
 - H. Outdoor lighting for new industrial, commercial or recreational uses or the expansion of such uses is limited to prevent light from projecting directly onto an existing runway or taxiway or into existing airport approach corridors except where necessary for safe and convenient air travel.
 - I. The establishment of new water impoundments larger than one-quarter acre in size within the airport boundary and RPZ is prohibited. Wetland mitigation required for projects located within the airport boundary or RPZ may be authorized within the airport boundary where it is impractical to provide mitigation off-site. Seaplane landing areas are exempt from this prohibition.
 - J. The establishment of new landfills near airports, consistent with Department of Environmental Quality (DEQ) rules is prohibited.
 - K. Land use regulations and standards for land use decisions regarding land use compatibility and other requirements of this code shall consider the effects of mitigation measures or conditions which could reduce the potential for safety risk or incompatibility.
8. Permitted Commercial and Recreational Airport Uses at Non-Towered Airports. Within airport boundaries established pursuant to Land Conservation and Development Commission rules, Lake County's land use regulations must authorize the following uses and activities:
- A. Customary and usual aviation-related activities including but not limited to takeoffs, landings, aircraft hangars, tie-downs, construction and maintenance of airport facilities, fixed-base operator facilities and other activities incidental to the normal operation of an airport;
 - B. Emergency medical flight services;
 - C. Law enforcement and fire-fighting activities;
 - D. Flight instruction;
 - E. Aircraft service, maintenance and training;
 - F. Crop dusting and other agricultural activities;



December 2002

Lake County Transportation System Plan

- G. Air passenger and air freight services at levels consistent with the classification and needs identified in the State Aviation System Plan;
- H. Aircraft rental;
- I. Aircraft sales and sale of aeronautic equipment and supplies; and
- J. Aeronautic recreational and sporting activities.

Insert the following new sections into Article 20 Supplementary Provisions:

Section 20.16 Setbacks and Frontage Requirements

The minimum frontage of a lot on a public or private road shall be 50 feet.

Section 20.17 Transportation Improvements.

- A. Uses Permitted Outright. Except where otherwise specifically regulated by this ordinance, the following improvements are permitted outright:
 - 1. Normal operation, maintenance, repair, and preservation activities of existing transportation facilities.
 - 2. Installation of culverts, pathways, medians, fencing, guardrails, lighting, and similar types of improvements within the existing right-of-way.
 - 3. Projects specifically identified in the Transportation System Plan as not requiring further land use regulation.
 - 4. Landscaping as part of a transportation facility.
 - 5. Emergency measures necessary for the safety and protection of property.
 - 6. Acquisition of right-of-way for public roads, highways, and other transportation improvements designated in the Transportation System Plan except for those that are located in exclusive farm use or forest zones.
 - 7. Construction of a street or road as part of an approved subdivision or land partition consistent with the applicable land division ordinance.
- 2. Transportation Uses Subject to Approval



- A. Construction, reconstruction, or widening of highways, roads, bridges or other transportation projects that are: (1) not improvements designated in the Transportation System Plan or (2) not designed and constructed as part of a subdivision or planned development subject to conditional use permit review, which shall comply with the Transportation System Plan and applicable standards, and shall address the following criteria. For State projects that require an Environmental Impact Statement (EIS) or EA (Environmental Assessment), the draft EIS or EA shall be reviewed and used as the basis for findings to comply with the following criteria:
1. The project is designed to be compatible with existing land use patterns, including noise, safety, and zoning.
 2. The project is designed to minimize avoidable environmental impacts to identified wetlands, wildlife habitat, air and water quality, cultural resources, and scenic qualities.
 3. The project preserves or improves the safety and function of the facility through access management, traffic calming, or other design features.
 4. Project includes provision for bicycle and pedestrian circulation as consistent with the comprehensive plan and other requirements of this ordinance.
- B. If review under this Section indicates that the use or activity is inconsistent with the Transportation System Plan, the procedure for a plan amendment shall be undertaken prior to or in conjunction with the conditional permit review.

Insert the following section into Article 20:

Section 20.18 Access Management and Street Connectivity

- A. Purpose. The purpose of this ordinance is to manage access to land development while preserving the movement of people and goods in terms of safety, capacity, functional classification, and performance standards as categorized in the Transportation System Plan. This ordinance shall apply to all arterials and collectors within Lake County and to all properties that abut these roadways.
- B. Joint Use Driveways and Cross Access.
1. Adjacent commercial or office properties classified as major traffic generators (i.e. shopping plazas, office parks), shall provide a cross access drive and pedestrian access to allow circulation between sites.
 2. A system of joint use driveways and cross access easements shall be established wherever feasible and shall incorporate the following:
 - a) A continuous service drive or cross access corridor extending the entire length of each block served to provide for driveway separation consistent with the access management classification system and standards.



December 2002

Lake County Transportation System Plan

- b) A design speed of 10 mph and a maximum width of 22 feet to accommodate two-way travel aisles designated to accommodate automobiles, service vehicles, and loading vehicles;
 - c) Stub-outs and other design features to make it visually obvious that the abutting properties may be tied in to provide cross-access via a service drive;
 - d) A unified access and circulation system plan for coordinated or shared parking areas.
 - e) Shared parking areas shall be permitted a reduction in required parking spaces if peak demands do not occur at the same time periods.
 - f) Pursuant to this section, property owners shall:
 - i. Record an easement with the deed allowing cross access to and from other properties served by the joint use driveways and cross access or service drive;
 - ii. Record an agreement with the deed that remaining access rights along the roadway will be dedicated to Lake County and pre-existing driveways will be closed and eliminated after construction of the joint-use driveway;
 - iii. Record a joint maintenance agreement with the deed defining maintenance responsibilities of property owners.
 - iv. Lake County may modify or waive the requirements of this section where the characteristics or layout of abutting properties would make the development of a unified or shared access and circulation system impractical.
- C. Access Connection and Driveway Design. Driveways shall meet the following standards:
- 1. If the driveway is a one-way in or one-way out drive, then the driveway shall be a minimum width of 10 feet and shall have appropriate signage designating the driveway as a one-way connection.
 - 2. For two-way access, each lane shall have a minimum width of 10 feet and a maximum width of 12 feet.
 - 3. Driveway approaches must be designed and located to provide an exiting vehicle with an unobstructed view. Construction of driveways along acceleration or deceleration lanes and tapers shall be avoided due to the potential for vehicular weaving conflicts.
 - 4. The length of driveways shall be designed in accordance with the anticipated storage length for entering and exiting vehicles to prevent vehicles from backing into the flow of traffic on the public street or causing unsafe conflicts with on-site circulation.
- D. Nonconforming Access Features. Legal access connections in place as of December 18, 2002 that do not conform with the standards herein are considered nonconforming features and shall be brought into compliance with applicable standards under the following conditions:



1. When new access connection permits are requested;
2. Change in use or enlargements or improvements that will increase trip generation.

E. Reverse Frontage

1. Lots that front on more than one street shall be required to locate motor vehicle accesses on the street with the lower functional classification.
2. When a residential subdivision is proposed that would abut an arterial, it shall be designed to provide through lots along the arterial with access from a frontage road or interior local road. Access rights of these lots to the arterial shall be dedicated to Lake County and recorded with the deed. A berm or buffer yard may be required at the rear of through lots to buffer residences from traffic on the arterial. The berm or buffer yard shall not be located with the public right-of-way.

F. Flag Lot Standards

1. Flag lots shall not be permitted when the result would be to increase the number of properties requiring direct and individual access connections to the State Highway System or other arterials.
2. Flag lots may be permitted for residential development when necessary to achieve planning objectives, such as reducing direct access to roadways, providing internal platted lots with access to a residential street, or preserving natural or historic resources, under the following conditions:
 - a) Flag lot driveways shall be separated by at least twice the minimum frontage requirement of that zoning district.
 - b) The flag driveway shall have a minimum width of 10 feet and maximum width of 20 feet.
 - c) In no instance shall flag lots constitute more than 10 percent of the total number of building sites in a recorded or unrecorded plat, or three lots or more, whichever is greater.
 - d) The lot area occupied by the flag driveway shall not be counted as part of the required minimum lot area of that zoning district.
 - e) No more than one flag lot shall be permitted per private right-of-way or access easement.

- G. Lot Width-to-Depth Ratios. To provide for proper site design and prevent the creation of irregularly shaped parcels, the depth of any lot or parcel shall not exceed 3 times its width (or 4 times its width in rural areas) unless there is a topographical or environmental constraint or an existing man-made feature such as a railroad line.



December 2002

Lake County Transportation System Plan

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- H. Shared Access. Subdivisions with frontage on the state highway system shall be designed to indirectly access the highway via a secondary road, either a county or a private road. Partitions or other land divisions of three or fewer parcels shall indirectly access the highway via a secondary road if feasible. If access via a secondary road is infeasible, the partition or other land division shall utilize a single shared access for highway access.
- I. Connectivity. The street system of proposed subdivisions shall be designed to connect with existing, proposed, and planned streets outside of the subdivision.
1. Wherever a proposed development abuts unplatted land or a future development phase of the same development, street stubs shall be provided to provide access to abutting properties or to logically extend the street system into the surrounding area. All street stubs shall be provided with a temporary turn-around unless specifically exempted by the City Engineer and the restoration and extension of the street shall be the responsibility of any future developer of the abutting land.
 2. Collector and local residential streets shall connect with surrounding streets to permit the convenient movement of traffic between residential neighborhoods or facilitate emergency access and evacuation. Connections shall be designed to avoid or minimize through traffic on local streets. Appropriate design, such as narrow streets, traffic control such as four-way stops, and traffic calming measures are the preferred means of discouraging through traffic.
- J. Pedestrian and Bicycle Circulation.
1. On-site facilities shall be provided that accommodate safe and convenient pedestrian and bicycle access within new subdivisions, multi-family developments, and planned developments.
 2. Bikeways shall be required along arterials.
- K. Cul-de-sacs and Accessways.
1. Cul-de-sacs or permanent dead-end streets may be used as part of a development plan; however, through streets are encouraged except where topographical, environmental, or existing adjacent land use constraints make connecting streets infeasible. Where cul-de-sacs are planned, accessways shall be provided connecting the ends of cul-de-sacs to each other, to other streets, or to neighborhood activity centers.
 2. Accessways for pedestrians and bicyclists shall be 10 feet wide and located within a 20-foot-wide right-of-way or easement. If the streets within the subdivision are lighted, the accessways shall also be lighted. Stairs or switchback paths may be used where grades are steep.

Insert the following section into Article 20:

Section 20.19 Traffic Impact Studies



- A. An applicant shall submit a traffic impact study when a proposed land use action affects a transportation facility. The following vehicle trip generation thresholds shall determine the level and scope of transportation analysis required for a new or expanded development:
1. Transportation Impact Study: If a proposed development will generate 400 or more daily trip ends*, then a Transportation Impact Study (TIS) shall be required. The requirements of a TIS shall be established by ODOT and the County Planning Department.
 2. Transportation Site Review: If a proposed development will generate 100 or more daily trip ends but less than 400 daily trip ends, then a Transportation Site Review shall be required. The requirements of a TSR shall be established by ODOT and the County Planning Department.
 3. Projects that generate less than 100 daily trip ends may also be required to provide traffic analysis when, in the opinion of ODOT and the County Planning Department, a capacity problem and/or safety concern is caused and/or is adversely impacted by the development. ODOT and the County Planning Department shall determine the scope of this special analysis.

*Trip ends as defined by the Institute of Transportation Engineers (ITE), Trip Generation Manual, 6th Edition (or subsequent document updates), or trip generation studies of comparable uses prepared by an engineer.

Insert the following into Article 21 (page 82) - Off-Street Parking and Loading:

21.05 Bicycle parking.

- A. A minimum of 2 bicycle parking spaces per use shall be required.
- B. The following Special Minimum Standards shall be considered as supplemental requirements for the number of required bicycle parking spaces.
1. Multi-Family Residences. Every residential use of four (4) or more dwelling units shall provide at least one sheltered bicycle parking space for each unit. Sheltered bicycle parking spaces may be located within a garage, storage shed, basement, utility room or similar area. In those instances in which the residential complex has no garage or other easily accessible storage unit, the required bicycle parking spaces shall be sheltered under an eave, overhang, an independent structure, or similar cover.
 2. Parking Lots. All public and commercial parking lots and parking structures shall provide a minimum of one bicycle parking space for every 10 motor vehicle parking spaces.
 3. Schools. Elementary and middle schools, both private and public, shall provide one bicycle parking space for every 10 students and employees. High schools shall provide one bicycle parking space for every 5 students and employees. All spaces shall be sheltered under an eave, overhang, independent structure, or similar cover.

Insert the following into Article 28 Zoning Amendments:



Section 28.08: Amendments Affecting Transportation Facilities.

A. A Plan or land use regulation amendment significantly affects a transportation facility if it:

1. Changes the functional classification of an existing or planned transportation facility;
2. Changes standards implementing a functional classification system;
3. Allows types or levels of land use that would result in levels of travel or access that are inconsistent with the functional classification of a transportation facility; or
4. Would reduce the performance standards of the facility below the minimum acceptable level identified in the Transportation System Plan.

B. Amendments to the comprehensive plan and land use regulations which significantly affect a transportation facility shall assure that allowed land uses are consistent with the function, capacity, and performance standards of the facility identified in the Transportation System Plan. This shall be accomplished by one of the following:

1. Limiting allowed land uses to be consistent with the planned function, capacity, safety, and operational performance standards of the transportation facility;
2. Amending the Transportation System Plan to ensure that existing, improved, or new transportation facilities are adequate to support the proposed land uses consistent with the requirement of the Transportation Planning Rule; or,
3. Altering land use designations, densities, or design requirements to reduce demand for automobile travel and meet travel needs through other modes.



REVISIONS TO THE LAND DEVELOPMENT CODE

Amend Section 2.280 to reflect the street standards discussed in Chapter 7 of this Plan.

Section 2.030 Access; replace the existing text with the following:

- A. All lots created under this ordinance shall have the minimum required frontage on a dedicated public or private street. If any lot abuts a street right-of-way that does not conform to the design specifications of this ordinance, the owner may be required to dedicate up to one-half of the total right-of-way width required by this ordinance.
- B. Permit Required. Access onto public right of way or change in type of access shall require a permit. Permits are applied for at offices of the Community Development Department.

Add the following text to Section 3.080: Specific Approval Requirements, following existing No. 3.:

- 4. A partition must be accessed either by roads dedicated to the public or by way of United State Forest Service or Bureau of Land Management roads where the applicant has submitted a written agreement with the appropriate land management agency providing for permanent legal access to the parcels and any required maintenance. This provision shall not be subject to variance.



- coordinated review of land use decisions potentially affecting transportation facilities;
 - conditions to minimize development impacts to transportation facilities;
 - regulations to provide notice to public agencies providing transportation facilities and services of land use applications that potentially affect transportation facilities;
 - regulations assuring that amendments to land use applications, densities, and design standards are consistent with the Transportation System Plan.
- Adopt land use or subdivision regulations for urban areas and rural communities to provide safe and convenient pedestrian and bicycle circulation, and to ensure that new development provides on-site roads and accessways that provide reasonably direct routes for pedestrian and bicycle travel.
 - Establish road standards that minimize pavement width and total right-of-way.

In addition, state regulations in ORS 836.600 to 836.630 and OAR 660-013 encourage and support the continued operation of Oregon’s airports by mandating planning for and recognition of airports consistent with their function in the state airport system. The regulations require local governments with jurisdiction over airports to amend their comprehensive plans and zoning regulations to:

- Create an Aviation System Plan;
- Identify and classify airports in their jurisdictions;
- Acknowledge permitted uses on public use airports; and
- Implement land use compatibility and safety requirements.

COMPREHENSIVE PLAN AMENDMENTS

Additions underlined, deletions in ~~strikeout~~, and questions in [CAPS].

Amend Section XII: TRANSPORTATION as follows:

B. Plan Policies

1. ~~That the~~ The Lake County Transportation System Plan shall be ~~is~~ the Transportation Element of the Lake County Comprehensive Plan.
2. ~~That the~~ The Lake County/Lakeview Airport Master Plan and the Christmas Valley Airport Improvement Plan shall ~~will~~ be recognized as supplements to the Transportation System Plan.
3. ~~The publicly designated airports at Lakeview, Christmas Valley and Paisley shall be protected through the application of Airport Approach Zones as recommended and approved by the State Department of Aeronautics.~~



December 2002

Lake County Transportation System Plan

- ~~3.~~ The function of airports shall be protected through the application of appropriate land use designations to assure that future land uses are compatible with the continued operation of the airport.
4. That a partitioning or subdividing will be authorized only where road improvements capable of meeting present or future access needs are provided for, or made available, and that meet state and county access management requirements.
- ~~5.~~ That physical, social and economic considerations will become an integral part of all transportation planning.
5. That roads created by partitioning and subdividing ~~will~~ shall be designated to tie into existing or anticipated road systems consistent with state and county access management requirements, and that roads (and adjacent curbs and sidewalks) proposed within a UGB may be required to be constructed to the standards required by that city within the urban growth area.
- ~~7.6.~~ That subdivision and major partitioning activity ~~will~~ shall be approved only in those areas where roads meet minimum standards and winter road maintenance can be provided for all-weather vehicular access.
- ~~8.7.~~ That transportation improvements ~~will~~ shall avoid dividing existing economic farm units, unless no feasible alternative exists.
- ~~9.~~ That air and rail facilities will be protected from encroaching incompatible uses that may have a limiting effect on their future use.
8. The function of rail facilities shall be protected through the application of appropriate land use designations to assure that future land uses are compatible with the continued operation of the rail facility.
- ~~10.~~ That the transportation facilities will be centralized to the extent practical.
- ~~11.9.~~ That road Road or street rights-of-way and other public lands will generally not be vacated; but shall be considered for park, open space, utilities and all other possible public use should vacations be contemplated.
- ~~12.10.~~ That development Development requiring access to arterials will shall be approved only if consistent with state and county access management standards and after consideration is given to proposed land use(s) and traffic patterns in the area, not just the specific site. Area-wide needs as identified in the Lake County Transportation System Plan shall supersede site-specific needs. Frontage roads and access collection points shall be provided wherever needed. Access control techniques will shall be used to coordinate traffic and land use patterns, and to help minimize possible negative impacts of growth.
- ~~13.11.~~ That the The number of access points to arterials will shall be kept to a minimum and cluster development of commercial and industrial activities encouraged. All accesses must be in conformance with State and county access management standards.



- ~~14.12.~~ ~~That the~~ The cities and County shall support feasible programs to improve conditions for the transportation disadvantaged, and recognize potential pedestrian and bicycle demands in planning related decisions.
- ~~15.13.~~ The County shall coordinate and cooperate with the Highway Division—State Department of Transportation in the implementation of those projects applicable to the County in the in the periodic Six Year Highway Improvement Plans Statewide Transportation Improvement Programs (STIP).
- ~~16.~~ The handbooks published by the State Department of Transportation entitled “Highway Compatibility Guidelines” and “Guidebook for Access Management” shall be utilized as guidelines in the implementation of relevant land use regulations.
14. Lake County shall provide safe and convenient pedestrian and bicycle circulation through the unincorporated portions of the County through the following actions:
- Provision of at least 2-foot wide paved shoulders on existing County roads as they are paved, re-paved or reconstructed as described and prioritized in the Lake County Transportation System Plan.
 - Provision of at least 4-foot paved shoulders on all new arterials and collectors within the unincorporated areas of Lake County.
 - Bikeways and walkways shall be designed and constructed following the guidelines of most recent edition of the Oregon Bicycle and Pedestrian Plan.
 - Bicycle parking facilities should be provided at all new residential multifamily developments of four units or more, commercial, industrial, recreational, and institutional facilities.
15. Lake County shall provide safe and convenient pedestrian and bicycle circulation through the rural service centers of the County (Fort Rock, Christmas Valley, Silver Lake, Summer Lake, and Adel) through the following actions:
- Bikeways (generally shoulders on rural facilities, but does also include bike lanes or separated pathways) shall be included on all new collectors and arterials.
16. Lake County shall provide a clear and objective process for the approval of transportation projects.
17. The Lake County Transportation System Plan is an element of the Lake County Comprehensive Plan. As such, it identifies the general location of transportation improvements and allows the following actions without land use review:
- Changes in the specific alignment of proposed public road and highway projects are permitted without plan amendment if the new alignment falls within a transportation corridor identified in the Transportation System Plan.



December 2002

Lake County Transportation System Plan

- Operation, maintenance, repair, and preservation of existing transportation facilities without land use review, except where specifically regulated.
 - Dedication of right-of-way, authorization of construction and the construction of facilities and improvements, for improvements designated in the Transportation System Plan, the classification of the roadway and approved road standards without land use review.
18. Draft Environmental Impact Studies (EIS) or Environmental Assessments (EA) will serve as the documentation for State projects that require local land use review, if required, in the following circumstances:
- Where the project is consistent with the Transportation System Plan, formal review of the draft EIS or EA and concurrent or subsequent compliance with applicable development standards or conditions;
 - Where the project is not consistent with the Transportation System Plan, formal review of the draft EIS or EA and concurrent completion of necessary goal exceptions or plan amendments.
19. Lake County will protect the operation of existing and future transportation facilities as identified in the Transportation System Plan through the use of one or more of the following actions:
- Consider the impact of all land use decisions on existing or planned transportation facilities.
 - Protect the function of existing or planned transportation corridors through appropriate land use regulations.
 - The County will notify affected cities and the public transportation provider of proposed changes to this TSP.
 - Consider the potential to establish or maintain accessways, paths, or trails prior to the vacation of any public easement or right-of-way.
 - Preserve right-of-way for planned transportation facilities through exactions, voluntary dedication, or setbacks.
20. Lake County will provide coordinated review of land use decisions affecting transportation through the use of one or more of the following actions:
- Coordinate with ODOT to implement the highway improvements listed in the STIP that are consistent with the Transportation System Plan and comprehensive plan.
 - Consider the findings of ODOT's draft Environmental Impact Statements and Environmental Assessments as integral parts of the land use decision-making procedures.



- Notify ODOT of land use actions that require public hearings or that would directly access or abut a state highway. This would include site plan reviews, subdivision and partition applications, conditional use permits, rezones and comprehensive plan amendments.

Amend Section C: Recommendations, as follows:

- ~~1. That a detailed street plan be developed for the Lakeview area, and that zoning ordinance revisions be made to require specific setbacks from centerlines of streets designated as arterials, collectors, and secondary routes.~~
1. The County Commissioners must approve all new roads before they can be accepted into the County Road System.

Amend Appendix H: Transportation Goal Findings, as follows:

1. The Transportation Planning Rule (660-12-045(3)) requires that jurisdictions plan for bicycling and walking as part of the overall transportation system.
2. Section 660-12-045(1) of the Transportation Planning Rule requires that cities and counties amend their land use regulations to conform with the jurisdiction's adopted Transportation System Plan. This section of the Transportation Planning Rule is intended to clarify the approval process for transportation-related projects. The approval process for different types of projects should be clear.
3. Section 60-12-045(2) of the Transportation Planning Rule requires that jurisdictions protect future operation of transportation corridors. In addition, the proposed function of a future roadway and other transportation facilities, such as airports, must be protected from incompatible land uses.
4. Section 660-12-045(2)(d) of the Transportation Planning Rule requires that jurisdictions develop a process for the coordinated review of land use decisions affecting transportation facilities.
 - ~~1. All feasible modes of transportation were considered. Needs of rail, air, highway/roadway, bicycle and pedestrian modes were recognized in the Plan decision making. In addition to the recommendations contained in the Comprehensive Plan, a County Transportation Plan was prepared and adopted, and an Airport Master Plan is being prepared for the Lakeview Airport.~~
5. Both the Comprehensive Plan and Transportation System Plan were based upon local, regional and State transportation needs and inventory information.
6. Both the Comprehensive Plan and Transportation System Plan have attempted to minimize any adverse social, economic or environmental impacts and costs, and to conserve energy.
7. Both the Comprehensive Plan and Transportation System Plan have attempted to recognize the needs of the transportation disadvantaged and to improve services for such, and to facilitate the flow of goods and services so as to strengthen the local and regional economies.



December 2002

Lake County Transportation System Plan

8. The Transportation System Plan is cross-referenced with the Comprehensive Plan and conforms therewith.
9. The Lakeview ~~Public Facilities Plan of 1987, Transportation System Plan~~, as adopted by the Town of Lakeview in 2001, contains information on Transportation facilities in the Lakeview Urban Area in which the County has certain planning responsibilities. Therefore, said Plan is hereby referenced and coordinated with this Plan.
10. It is in the public interest that the County coordinate and cooperate with the State ~~highway Division~~ Department of Transportation in the preparation and implementation of the ~~Division's Six Year State Transportation Highway Improvement Plans and Program~~.
10. ~~A number of provisions related to certain highway improvement actions are set forth in State Statutes and are designed to minimize review processes related thereto and potential delays related to such review processes. It is in the public interest that such provisions be incorporated into local land use ordinances as much as possible~~
11. State Statutes and implementing administrative rules contain a number of provisions governing certain uses and actions related to public highways, particularly those designated as "Scenic"; it is in the public interest that similar provisions be included within local ordinances to ensure maximum coordination with said State provisions.
12. It is important that Transportation System Plan be updated periodically to reflect changing conditions and needs.

ADDITIONS TO THE ZONING ORDINANCES

Add the following to Section 1.03 Definitions:

Access connection: Any driveway, street, turnout or other means of providing for the movement of vehicles to or from the public roadway system.

Access management: The process of providing and managing access to land development while preserving the regional flow of traffic in terms of safety, capacity, and speed.

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

Bicycle: A vehicle designed to operate on the ground on wheels, propelled solely by human power, upon which any person or persons may ride, and with two tandem wheels at least 14 inches in diameter. An adult tricycle is considered a bicycle.