Executive Summary

INTRODUCTION

The Newberg Dundee Transportation Improvement Project (NDTIP) seeks to improve regional and local transportation along the Oregon 99W corridor in the Newberg and Dundee areas by reducing traffic congestion. The NDTIP integrates several related transportation planning efforts and proposes strategies to develop a balanced transportation system comprised of roadway improvements, including the Newberg Dundee Bypass (Bypass), which is the focus of this Tier 1 Location Final Environmental Impact Statement (LFEIS).

The Oregon Department of Transportation (ODOT) is leading the preparation of the LFEIS for the Bypass in coordination with the Federal Highway Administration (FHWA), who is the lead agency under the National Environmental Policy Act (NEPA). The environmental analysis of the project is being conducted in a two-tiered NEPA process. The Tier 1 work, which is the subject of this LFEIS, identifies feasible alternative corridors for the Bypass project, which will culminate in a preferred corridor alternative. The Preferred Alternative, identified in the LFEIS, will be carried forward through the Tier 2 analysis for more detailed study. The Tier 2 work will involve further refinement of the Preferred Alternative, including locating the Bypass within the preferred corridor, evaluation of detailed engineering options, and additional environmental analysis. (A list of activities that will be conducted during the Tier 2 process is included at the end of the LFEIS, Chapter 6.)

The Tier 1 process enables ODOT to identify, acquire and preserve key pieces of the right of way so that it will not be necessary to displace any development on these lands that may occur prior to construction. Following completion of Tier 1 work and prior to completion of the Tier 2 work, ODOT intends to acquire a limited amount of right of way within the approved corridor with federal funds (the corridor will be approved following the completion of the Tier 1 work). Chapter 6 of the LFEIS includes a detailed strategy for this right of way acquisition.

The LFEIS focuses on the Preferred Alternative Modified 3J for the Bypass, which is a combination of Alternative 3J and elements from other Build Alternatives as described in the Location Draft Environmental Impact Statement (LDEIS). The LFEIS reviews the impacts of Modified 3J and includes information, for comparison purposes, on the Build Alternatives and the No Build Alternative (No Build) presented in the LDEIS.

BACKGROUND

Yamhill County residents and ODOT have discussed ways to relieve traffic congestion on Oregon 99W through Newberg and Dundee for many years. In addition, transportation analysis indicates that a state highway bypass is needed to solve congestion problems on Oregon 99W. Newberg, Dundee, and surrounding areas in Yamhill County, Oregon, have experienced substantial growth over the past decade. Newberg, the second largest city in Yamhill County, currently has a population of about 18,000 residents, while Dundee has about 2,600 residents. Oregon 99W serves as the “main street” for both Newberg and Dundee. Oregon 99W connects Newberg and Dundee to the Portland metropolitan area to the northeast and to McMinnville (population 26,499) and the Oregon Coast to the west (See Figure 1-1 in the LFEIS). Because this highway is the most direct route between the Willamette Valley and Oregon coastal communities, tourist traffic has steadily increased as population has grown. Weekday commuters also use Oregon 99W to travel between Yamhill County and the Portland metropolitan area. Through freight truck movement, particularly en route to and from the central coast, I-5 corridor, and/or the Portland metropolitan area, relies on efficient travel through the corridor.

ODOT has conducted several studies since 1990 that have supported the development of the Bypass project. These studies have led to the development of a multi-Purpose and Need statement for the multi-modal project. (See Chapter 2 of the LFEIS for additional information on previous studies conducted.)

The NDTIP contains, in addition to the Bypass, multimodal and land use elements that will be implemented by agencies other than ODOT and FHWA.[1] Though implementation of alternative transportation modes and land use strategies do not directly affect the Purpose and Need for a bypass, they can extend its useful life and provide other benefits. Therefore, while ODOT and FHWA can only implement the Bypass, ODOT will continue to support these other elements of the NDTIP concurrently with and in addition to the Tier 2 work on the Bypass element.

The project's purpose, need, and objectives are described below. Project participants, including ODOT, FHWA, the POST and stakeholders, developed evaluation criteria and measures that relate to the purpose, need, and objectives. The evaluation criteria and measures are tools that were used for analysis and ranking of the alternatives in the LDEIS.

PURPOSE OF PROJECT – NDTIP

The purpose of the NDTIP is to improve regional and local transportation along the Oregon 99W corridor in the Newberg-Dundee area by reducing existing and future traffic congestion. The transportation improvements must also satisfy community values and maintain or enhance economic, social, environmental, safety and energy conditions. Through a collaborative process that balances viewpoints, interests and regulatory requirements, a successful solution will:

- Improve the efficiency and modal options of the transportation system for all its users.
- Provide alternatives to commuting by single occupancy vehicles.
- Improve the movement of through-traffic.
- Enhance and protect the public health and safety of travelers and of communities that transportation facilities traverse.
- Improve existing natural environmental conditions when possible and avoid/minimize/mitigate adverse impacts to natural environmental resources.
- Contribute to the improvement of the economy, social fabric, and overall livability along the Oregon 99W corridor in the Newberg-Dundee area and in the broader area (such as the central coast) that relies on the regional roadway system.
- Satisfy applicable federal, state and local plans, policies and regulations.

NEED FOR PROJECT – NDTIP

Over the past decade, traffic on Oregon 99W in downtown Newberg and Dundee has increased by about 40 percent. Lines of vehicles on Oregon 99W often stretch for more than 1.6 kilometers (1 mile) in both directions on weekdays and weekends. This congestion blocks turning movements and access across Oregon 99W and creates an unfriendly and unhealthy environment for residents, shoppers, and tourists using the downtown areas and people trying to get from one side of town to the other side. Traffic congestion and travel delays have reached unacceptable levels for those who live and work in or travel through Newberg, Dundee and the surrounding areas. This includes local users, businesses, current commuters, freight companies, tourists, and the economically and physically disadvantaged. Traffic volumes are expected to increase substantially over the next 20 years.

OBJECTIVES OF THE PROJECT

Project objectives were defined early by NDTIP project participants. These project objectives were used to guide the development of the Purpose and Need statements for the project and the evaluation criteria

[1] A list of the NDTIP Alternative Transportation Modes and Land Use elements is located in the LDEIS, p. 2-7.

and measures. The project objectives were modified twice, first in 1997 and then again in 2001 when the project entered its current phase (Tier 1). In 1997, project participants developed a list of broad objectives. At that time, the POST used the objectives in deciding which alternatives to forward for the next phase of the study. In 2001, the POST reviewed and slightly modified the 1997 list of project objectives. This review occurred concurrently with the POST's work defining the project's purpose and need. The project objectives used to guide the LDEIS were:

- Improve transportation performance
- Protect human health and safety
- Improve environmental quality
- Maximize benefits to community economics
- Improve social/cultural quality
- Minimize total project costs
- Maximize likelihood of implementation

After development of the objectives, the POST used objectives to develop evaluation criteria and measures to help select alternatives that met the project objectives. The POST had substantial input from the public in its work on project objectives, evaluation criteria and measures. (For more information, see the LFEIS, Chapter 7, Public and Agency Involvement.)

PURPOSE OF BYPASS ELEMENT OF NDTIP

The LFEIS for the Bypass focuses on the function of the state highway to provide for inter-urban and inter-regional mobility as part of the National Highway System (NHS), as opposed to local street improvements and alternate mode transportation elements of the NDTIP that are outside the jurisdiction of ODOT; i.e., specifically, the Bypass element that ODOT and FHWA have the authority to implement.

As stated previously, the NDTIP Purpose is framed to reflect the multiple purposes of that program; the LFEIS is refined and focused on the Bypass element. Therefore the Purpose statement of the NDTIP is refined as follows:

Through a collaborative process that balances viewpoints, interests and regulatory requirements, a successful highway improvement solution will:

- Improve the movement of through-traffic
  - Improve the capacity, efficiency and safety of the state highway system to accommodate current and projected freight and other vehicular traffic volumes in and through Yamhill County in compliance with standards in the Adopted Oregon Highway Plan, 1999.
- Contribute to the improvement of the economy, social fabric, and overall livability along the Oregon 99W and Oregon 18 corridors in the Newberg-Dundee area and in the broader area (such as between Portland and the central coast) that relies on the statewide and regional roadway system.
  - Reduce congestion on Oregon 99W, especially within the Urban Growth Boundaries (see Glossary for definition) of Newberg and Dundee to a level that meets adopted Oregon Highway Plan Mobility Standards.

DESCRIPTION OF PREFERRED ALTERNATIVE, MODIFIED 3J

The LFEIS focuses on the Modified 3J Alternative for the Bypass, which is a combination of Alternative 3J and elements from other Build Alternatives as described in the LDEIS. Modified 3J was developed in

response to direction from the Project Oversight Steering Team (POST), agency stakeholders, and the public to avoid and minimize impacts to resources in the Alternative 3J project area. The POST preferred Alternative 3J because it best avoids and minimizes impacts to resources in the project area, and best provides for route continuity and long-term transportation system function. Modifications made to 3J further minimized impacts to resources and resulted in Modified 3J, the Preferred Alternative. ODOT directed staff to calculate impacts for Modified 3J area to ensure that the Preferred Alternative did not result in any significant environmental impacts which had not been previously evaluated and disclosed in the LDEIS.

The Bypass project area encompasses a section of Oregon 99W that extends northeast across Yamhill County from the Oregon 99W/Oregon 18 intersection to Rex Hill east of Newberg. Modified 3J is a bypass corridor, at least 330 feet wide, located along the south sides of Newberg and Dundee. It is approximately 11 miles long. The eastern terminus of Modified 3J is located east of Newberg in the Rex Hill area at Oregon 99W mile post 20.08. The western terminus is located where Oregon 99W intersects with Oregon 18 (McDougal Corner) west of Dundee near Dayton at Oregon 18 mile post 51.84. The corridor width allows for flexibility during the design phase of the project. The actual width of the Bypass facility will vary, but generally would likely require about 60 percent of the corridor width. Interchange footprints on the corridor also allow space to account for variations in interchange design. Key components of Modified 3J are listed in Table S-1. Figure S-2 shows the location of Modified 3J Alternative corridor.

Modified 3J includes the following four proposed interchanges:

- *Dayton Interchange* – The Dayton Interchange would be located at the junction of Oregon 99W and Oregon 18 and represents the western terminus of the Bypass. This interchange will be a directional interchange providing free flow connections westbound onto Oregon 99W and Oregon 18 and eastbound from those highways onto the Bypass. However, the interchange would not provide movements between eastbound Oregon 18 to westbound Oregon 99W, nor from eastbound Oregon 99W to westbound Oregon 18. The interchange replaces the existing Oregon 18/Oregon 99W intersection at McDougal Corner and the South Dundee Interchange shown in the original Alternative 3J. The LDEIS analyzed the Dayton Interchange as part of Alternatives 3D, 3H, and 3K.

- *East Dundee Interchange* – This interchange is located between Dundee and Newberg and would provide full turning movements. A new connector road would link the interchange at Oregon 99W to the Bypass. The connector road included in Modified 3J is the result of an analysis of three alternative connector alignments evaluated as part of the Goal Exception process. The connector selected through this analysis minimizes impacts to agricultural/Exclusive Farm Use (EFU) land, farm operations and noise. The connector road has no intermediate access points between the Bypass and its intersection with Oregon 99W. The connector road intersection with Oregon 99W includes a grade separation across both Oregon 99W and the parallel railroad tracks. The East Dundee Interchange is located on the “avoid housing” alignment between Dundee and Newberg. The East Dundee Interchange was analyzed in the LDEIS as part of Alternative 3J.

- *Oregon 219 Interchange* – The Oregon 219 Interchange is located in south Newberg along Oregon 219. This interchange is located inside Newberg's UGB and would provide full turning movements. The LDEIS analyzed the Oregon 219 Interchange as part of Alternatives 3H, 3I, and 3J.

- *East Newberg Interchange* – The East Newberg Interchange is located southwest of Rex Hill and represents the eastern terminus of the Bypass. Like the Dayton Interchange, the East Newberg Interchange would be a directional interchange, providing free flow connections from the Bypass onto Oregon 99W eastbound and from Oregon 99W westbound onto the Bypass. The interchange will not provide movements between eastbound Oregon 99W to the westbound Bypass, nor from

the eastbound Bypass to westbound Oregon 99W. The LDEIS analyzed the East Newberg Interchange as part of Alternatives 3G, 3H, 3I, and 3J.

In addition, Modified 3J includes the following features:

- *A four-lane bypass "Expressway."*

  Expressways[2] as defined in the 1999 Oregon Highway Plan (OHP) provide for high-speed, high-volume travel between cities with minimal interruptions. A secondary function is to provide for long-distance, intra-urban travel in metropolitan areas. In urban areas expressway speeds are moderate to high. In rural areas, expressway speeds are high. This facility would also serve as a statewide freight highway.

- *A median.*

  A landscaped median or median barrier will be located between the travel lanes as well as shoulders on both sides of the travel lanes.

- *Bicycle access.*

  Bicycles are permitted to travel on the shoulders of highway facilities in Oregon, In addition, enhanced bicycle facilities may be provided either as part of the roadway cross-section or as a separate, parallel facility. This issue will be addressed as part of the Tier 2 and other associated multimodal studies.

- *Access to the Bypass restricted to interchanges.*

  Access to the Bypass is restricted to interchanges with the exception of Alternative 3I, which has two at-grade intersections. No direct access to the Bypass will be permitted from private properties. The Bypass will be grade-separated. Major county and city roads will be rerouted under or over the Bypass. Other local streets, crossed by the Bypass, will be rerouted around or away from the Bypass or stopped at the Bypass.

- *Bridges crossing larger fish-bearing streams.*

  Bridges will be used to cross larger fish-bearing streams. Smaller drainages might be crossed using fish-passable culverts.

- *Toll roads.*

  "Tolling" might be included as part of the Bypass. The need and feasibility for tolls will be evaluated if appropriate during Tier 2. The travel demand impacts due to tolling and the size and location of tolling facilities is unknown at this time.

- *Improvements needed to meet OHP access management standards.*

  Improvements needed to meet OHP access management standards will be constructed, including road realignments and private driveway consolidations or relocations.

- *A typical operating speed of 55 miles per hour.*

  The Bypass will have a typical operating speed of 55 miles per hour, except for Alternative 3I, which operates at a lower speed around two at-grade intersections in Newberg.

In addition, Modified 3J includes possible improvements to Oregon 99W and local street systems. The Bypass facility may result in the need for improvements to the surrounding transportation network. These improvements will be complementary to the Bypass and will be addressed in the Tier 2 analysis. The proposed improvements implemented during Bypass construction, regardless of the alternative selected, are as follows:

[2] OHP at p. 42, Action 1.A2.

Improvements to Oregon 99W

- Consider the addition of left and/or right turning lanes at key Oregon 99W intersections throughout the project area and a northbound through lane at the Springbrook Road/Oregon 99W intersection.
- Manage access to Oregon 99W by consolidating and/or relocating private driveways and by providing local street connections where feasible.
- Integrate the Bypass with the local street system to maintain connectivity within and among communities.
- Investigate interim improvements to Oregon 99W in Dundee to relieve congestion.
- Investigate the possibility of providing appropriate intelligent Transportation System (ITS)[3] measures on Oregon 99W.

Improvements to Local Street System

- Investigate alternatives for connectivity of local street system. Options could include improving, building and/or interconnecting existing local or collector roadways within and between Newberg and Dundee to provide options to Oregon 99W for local trips.
- Provide pedestrian and bicycle facilities including bicycle and pedestrian links to park-and-ride lots and adequate pedestrian and bicycle crossings along the Bypass. Employ traffic calming measures as appropriate.

[3] ITS is defined as the application of advanced communications, information processing, control and electronics technology to improve the safety and operation of the existing transportation system. ITS is intended to work in conjunction with the existing transportation system to improve its performance for both key operating agencies, such as state, city, and county departments of transportation, as well as for system users, including commuters, transit users, tourists, freight concerns, and others.

Table S-1 Components of Bypass Build Alternatives

Alternative	West End Terminus at Oregon 18 MP 51.84	Between Dayton & Dundee	Between Newberg & Dundee	Crossing of Oregon 219	East End Terminus at Oregon 99W MP 20.08	Other Features
Southern Options						
3C	No interchange; street connection to Oregon 18	South Dundee Interchange	East Dundee Interchange	Overpass	East Newberg Interchange (Full-movement)	
3D	Dayton Interchange (Directional)	No interchange	East Dundee Interchange	Overpass	East Newberg Interchange (Full-movement)	
3G	No interchange; street connection to Oregon 18	South Dundee Interchange	East Dundee Interchange	Interchange	East Newberg Interchange (Directional)	
3H	Dayton Interchange (Directional)	No interchange	East Dundee Interchange	Interchange	East Newberg Interchange (Directional)	
3I	Dayton Interchange (Directional)	No interchange	East Dundee Interchange	Interchange	East Newberg Interchange (Directional)	Lower speed and two intersections in Newberg
3J	No interchange; street connection to Oregon 18	South Dundee Interchange	East Dundee Interchange	Interchange	East Newberg Interchange (Directional)	
Modified 3J	Dayton Interchange (Directional)	No interchange	East Dundee Interchange; minimize housing impacts	Interchange	East Newberg Interchange (Directional)	[4]Adjusted corridor to minimize agricultural, housing, Section 4(f) and traffic impacts
3K	Dayton Interchange (Directional)	No interchange	No interchange	Overpass	East Newberg Interchange (Full-movement)	
Northern Option						
4C	No interchange; street connection to Oregon 18	South Dundee Interchange	East Dundee Interchange	Underpass	East Newberg Interchange (Full-movement)	

[4] See LFEIS, Chapter 2, for Preferred Alternative discussion.

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MODIFIED 3J IMPACTS

This section briefly describes the existing environment and potential impacts from Modified 3J.

Transportation

Existing Traffic

The project area encompasses a section of Oregon 99W that extends northeast across Yamhill County from the Oregon 99W/Oregon 18 intersection to Rex Hill east of Newberg. Newberg and Dundee both share Oregon 99W as their main street. For over a century, businesses and civic buildings have been located along this roadway. Oregon 99W serves as a route of statewide importance for linking the Portland metropolitan area to the Oregon coast via direct connection with Oregon 18. Oregon 99W also links McMinnville to Dundee, Newberg, the Portland metropolitan area and communities farther south in the Willamette Valley.

For direct through and regional trips, travelers have limited options to Oregon 99W. Oregon 219 and Oregon 240 connect with Oregon 99W in Newberg. Oregon 219 crosses the Willamette River south of Newberg and provides a connection to I-5 near Donald via a county road.

Over the past decade, traffic on Oregon 99W through downtown Newberg and Dundee has increased by about 40 percent. Oregon 99W currently operates over capacity during peak periods. Travelers experience severe congestion and delay, especially when tourist traffic combines with commuter traffic. Lines of traffic often exceed 1 mile in length, in both directions in Dundee. At unsignalized intersections and private driveways, motorists have difficulty turning left from or onto the highway because of long vehicle queues and heavy through traffic. This affects access to many businesses. The traffic congestion creates an unfriendly environment for pedestrians and bicyclists. Vehicle accident rates are about 15 percent higher than for similar facilities through the state. Recommendations from the public showed a great deal of concern about traffic congestion in the project area. Their recommendations were consistent with congestion standards set out in the OHP[5]. Consequently, the POST adopted OHP volume-to-capacity (v/c) ratios for traffic congestion as a minimum transportation performance threshold to measure the success of transportation solutions. The v/c ratio helps measure congestion by comparing the amount of traffic on a road to its capacity and is related to more traditional level of service (LOS) measures.

Traffic Impacts

Modified 3J reduces travel time in and through the project area as compared to the No Build. The No Build leaves Newberg and Dundee with much more traffic than the area experiences today. Five of the six key intersections in the area are congested for several hours each day. Downtown Newberg experiences 15 hours of congestion and approximately 56,000 vehicles per day, while Dundee experiences 14 hours of congestion and approximately 47,000 vehicles each day. By comparison, under Modified 3J, the east segment carries approximately 26,500 vehicles per day and the central and western segments each carries approximately 33,000 vehicles each day, alleviating traffic congestion on Oregon 99W.

[5] Brian Gregor, Transportation Planning and Analysis Unit, Oregon Dept. of Transportation, Statewide Congestion Overview for Oregon, February 2004, p. B-9. Congestion is generally defined as: "When the demand for space exceeds people's tolerance, it is called … congestion in the case of roads and other transportation facilities." A technical transportation definition for Oregon 99W, a designated Statewide (NHS) Freight Route, based on the table "Maximum Volume to Capacity Ratios Outside Metro", Adopted Oregon Highway Plan, 1999, p. 80, is: When the maximum volume to capacity ratio for peak hour operating conditions through a planning horizon for state highway section located outside the Portland metropolitan (METRO) area urban growth boundary is exceeded. In the case of Oregon 99W inside the Urban Growth Boundaries of Newberg, Dundee and Dayton, the maximum v/c ratio for Oregon 99W is 0.75; outside these UGBs, the maximum v/c ratio for Oregon 99W is 0.70.

Of the total system-wide trips in 2025, approximately three percent with an origin and destination in the study area use Modified 3J; approximately 16 percent with either an origin or destination within the study area use Modified 3J, and all of the through trips would use the Bypass. Less than 20 percent of the freight trips remain on Oregon 99W if Modified 3J is constructed.

With Modified 3J, Oregon 99W could be reclassified as a "district" level highway[6], which would allow signals to be located at Fox Farm-Dayton Road, Fifth Street, 10th Street, and Niederberger-Parks. The addition of signals in Dundee would enable easier access to and across the highway for motorists, pedestrians, and bicyclists.

Land Use

Geographic features, proximity to the Portland metropolitan area, and existing highway facilities shape the land use environments in Newberg and Dundee. Chehalem Mountain and the Red Hills to the north of Newberg and Dundee, Parrett Mountain to the east, and the Willamette River and the South Yamhill River to the south and west frame the area. Because the area lies about 25 miles southwest of downtown Portland, the four-county metropolitan region (Multnomah, Washington, Clackamas, and Clark Counties) exerts strong influences on land use patterns in northeast Yamhill County. The metropolitan region had a population of 1.7 million people and 1.1 million jobs in 2000. An estimated one-third of the Newberg and Dundee area residents commute to jobs in the larger metropolitan area. However, Newberg, in particular, is a growing employment center in its own right.

The dominant feature of the road network in Yamhill County is the Oregon 99W/Oregon 18 corridor. It serves local and inter-city traffic, commuter traffic to and from the Portland metropolitan area, and tourist/recreational traffic between Portland and the coast, as well as providing direct access to abutting properties throughout much of its length. Oregon 99W also functions as "Main Street" in the downtown areas of Newberg and Dundee. Oregon 219 provides an important link from Newberg to Marion County and I-5.

Land Use Impacts and Goal Exceptions

Modified 3J displaces land within the Urban Growth Boundary (UGB) that is planned for urban housing, commercial, and industrial uses, as well as land outside the UGB in rural areas. It displaces a total of approximately 371 acres, with approximately 25 percent of those acres inside the UGBs of Newberg, Dundee, and Dayton. A small proportion of the 371 acres displaced by Modified 3J is outside of these UGBs and is designated Very Low Density Residential (VLDR), which permits rural residential development, and Agricultural/EFU by Yamhill County's Comprehensive Plan. In the VLDR category, Modified 3J displaces approximately 38 acres, compared to other Build Alternatives, which displace approximately 42 to 146 acres. In the EFU agricultural designation, Modified 3J displaces approximately 200 acres as compared to the other Build Alternatives, which displace between 178 and 227 acres.

In Oregon, new roads, including bypasses, are allowed in urban areas inside the UGB, but new roads outside of the UGB in rural areas, including VLDR and Agricultural/EFU designated land, require exceptions to the Statewide Planning Goals. To minimize the amount of land that would require such exceptions, ODOT modified the Alternative 3J connector road to reduce impacts to rural residential and EFU land, with the resulting connector road alignment found in Modified 3J.

The Bypass decreases the commute time from the study area to the Portland metropolitan area. A faster commute could act as a catalyst for development in areas that are currently considered too far from urban

[6] OHP, p. 41. District Highways are facilities of county-wide significance that function largely as county and city arterials and 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 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.

job centers to have significant commuting pressures. If existing land use laws remain in effect, they should, for the most part, limit development in the vicinity of Newberg and Dundee to locations inside urban growth boundaries and areas already designated for rural residential development. Modeling conducted using a statewide land use and transportation model[7] concluded that, although the Bypass will increase accessibility to significant acreage as discussed below, there will not be any significant indirect impacts to this land or other natural resources as a result of construction of the Bypass. Chapter 4 of the LFEIS presents a general description of the model used and the analysis of indirect land use and transportation impacts in greater detail.

As stated above, new roads in rural areas require exceptions to the Statewide Planning Goals. In September 2004 Yamhill County approved exceptions to three Statewide Planning Goals–3 (Agricultural Lands), 11 (Public Facilities and Services), and 14 (Urbanization) –for two sections of Modified 3J located on rural land. The first section requiring exceptions is the Modified 3J roadway alignment, including its terminal connections to Oregon 99W east of Newberg and to Oregon 99W and Oregon 18 near Dayton. The second section requiring an exception is the East Dundee Interchange, including its road connecting the Bypass to Oregon 99W. The Goal Exception document, "Findings of Fact and Reasons to Support Exceptions to Statewide Planning Goals 3, 11 and 14", and supporting documents are included in Appendix B of the LFEIS.

Consistent with OHP requirements, Interchange Area Management Plans (IAMPs)[8] will be completed for Modified 3J interchanges in Tier 2. The IAMPs will protect the function of the Bypass and its interchanges to accommodate long-distance through traffic and regional trips with either an origin or destination outside of the project area. The IAMPs are also intended to minimize accessibility from the Bypass to surrounding rural lands, and to support the continued rural use of those lands. However, to protect the interchanges before development of the IAMPs, Yamhill County and the cities of Newberg, Dundee and Dayton have approved an amendment to their Zoning Ordinances that includes an Interchange Overlay District. The Interchange Overlay Districts permit development in accordance with the existing zoning, but prohibit zone changes and UGB changes for three years. The Interchange Overlay Districts apply to unincorporated lands within approximately ¼ mile inside UGBs to ½ mile outside UGBs at the end of the ramps to the four interchanges.

Socioeconomics

The cities of Newberg, Dundee and Dayton and the surrounding unincorporated areas of Yamhill County are in the study area. Yamhill County, including the portion where the project is located, is well known for its agricultural industry, particularly its vineyards/wineries and orchards. Nearly half of the wineries in Yamhill County are in the Newberg, Dundee, and Dayton areas. Manufacturing jobs comprise about 18 percent of the labor force, and services make up the largest labor share at 28 percent.

In 2000, Newberg had a population of 18,064. Dundee's population in 2000 was 2,598. The combined population of the two cities was about one-quarter of the total Yamhill County population of 84,992. State of Oregon population projections for Yamhill County estimate an annual growth rate of 2.6 percent from 2000–2010, declining to 2 percent between 2010 and 2020. Growth in Newberg during the next decade is expected at an annual rate of 3 percent. Projections for 2010 to 2020 show growth decreasing to an annual rate of 2 percent. Dundee's population is projected to increase to 5,744 in 2020. This assumes an annual growth rate of 4 percent over the next 20 years.

Compared to the greater Yamhill County, the three cities in the study area have smaller percentages of persons between ages of 45 and 64 and larger percentages of younger residents, suggesting a prevalence of young families.

[7] Gen1 model, developed by ODOT's Transportation Planning and Analysis Unit, is described in LFEIS, Chapter 4.

[8] OHP, p 114, Policy 3C.

As of 2000, Yamhill County had 2,120 employers with 28,640 employees. Services make up the single largest employment sector (more than 6,200 jobs), followed closely by manufacturing (with more than 6,170 jobs), retail (5,320 jobs), and government (4,030 jobs).

Displacements

Modified 3J displaces approximately 108 residences and 14 businesses. ODOT will provide relocation assistance for people displaced from their homes or businesses. ODOT intends to acquire a limited amount of right of way within the approved corridor with federal funds after receiving a Record of Decision (ROD) on the LFEIS and prior to receiving a ROD on the Tier 2 Design Final Environmental Impact Statement document. See Chapter 6 of the LFEIS for an outline of the proposed acquisition program. ODOT will conduct property acquisition, relocation assistance, and compensation procedures in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act.

Economic Impacts

Under the No Build, movement of goods, people, and services between the Portland metropolitan area, Yamhill County, and the Oregon coast is substantially inhibited. Traffic congestion on Oregon 99W makes locally oriented businesses in commercial districts, including wineries, less desirable to visit. Freight mobility is diminished and regional economic growth is impaired.

Modified 3J enhances short-term income and employment, and increases accessibility to business areas around Oregon 99W, which otherwise is impacted by congestion.

The preliminary estimated cost of Modified 3J is approximately $311 million including right of way acquisition. In Yamhill County, about $334,000 of new personal income is generated per $1 million of highway construction spending. The estimated cost of construction of Modified 3J is approximately $270 million. As a result, direct, indirect and induced income impacts from construction spending could generate an estimated $90.2 million of added personal income from highway construction jobs, industries supplying construction materials, and other purchases with new income (as identified above). However, these employment impacts would be reduced after construction is complete.

Modified 3J reduces through-traffic volumes on Oregon 99W for the downtowns of Newberg and Dundee, improves conditions on local streets, and creates a better environment for pedestrians and bicyclists. This may increase the opportunities for visitors to travel to these downtown districts as destinations. Customer visits and business volumes are expected to grow.

Cultural Resources

No prehistoric or historical archaeological sites have been recorded in the Modified 3J corridor or elsewhere in the Newberg, Dundee, and Dayton vicinities. Most land in the corridor is built upon or cultivated. Modified 3J crosses a high terrace above the Willamette River. Archaeological sites are most often found on flat ground near water, with some Willamette Valley sites located on low mounds that rise slightly above the surrounding level terrain.

Between 6 and seventeen properties that are listed on the National Register of Historic Places (NHRP), or potentially eligible for listing on the NHRP occur within the vicinity of Modified 3J and the other Build Alternatives. Additional research regarding these properties will be conducted in Tier 2 of the project.

Air Quality

The project is located within an Oregon designated air quality attainment area for both carbon monoxide and ozone. Therefore the Modified 3J corridor generally meets the clean air levels set by the U.S. Environmental Protection Agency (EPA) in the National Ambient Air Quality Standards.

Noise

The Modified 3J corridor contains noise-sensitive sites. Up to 112 residences and six non-residential sites could be affected by noise caused by Modified 3J. Mitigation of noise-related impacts will be addressed during the Tier 2 evaluation, and will be consistent with the requirements in 23 CFR Part 772. ODOT is considering depressing (below existing street level) part of the Bypass near residences in south Newberg.

Visual Environment

Nine types of landscape areas are found in the project area. These areas differ in terms of landform, water, vegetation and human-created development. Appendix C in the LDEIS contains photographs of several of these landscape areas. Visual impacts to stationary and mobile viewers will vary. Roadway structures are likely to be needed in very steep areas and where Modified 3J crosses creeks in the southern portion of Newberg and southwest of Newberg. Structures in these locations would be visible to both stationary and mobile viewers. Impacts to long-distance views would vary by the amount of pavement and structures that intrude into current long-distance views to the rolling hills beyond Newberg and Dundee. Modified 3J impacts are moderate, since new pavement, vehicles and structures would be visible but views would not be blocked by the new roadway.

Water Resources

The entire project study area drains toward the Willamette River, a river of statewide significance, located south of Newberg and Dundee, approximately 0.5 mile from the project area. The Yamhill River, a major tributary, flows into the Willamette River near the project area. Chehalem Creek, Springbrook Creek, and Hess Creek cross the alternative corridors on their paths to connect with the Willamette River.

Stormwater

Roads and other development can affect water quality and quantity. Modified 3J adds approximately 69 acres of additional paved surface to the project area. There is an increase in impervious surface and in the amount of stormwater runoff. Runoff from roadways contains contaminants that can affect water quality. Mitigation for increases in stormwater runoff and potential water quality impacts will be addressed during the Tier 2.

Floodplains

There are floodplains associated with the streams and rivers in the project area. The Dundee city limits contain areas within 100- and 500-year floodplains of the Willamette River. Newberg city limits contain areas within the 100-year floodplain but do not contain areas within the 500-year floodplain. Modified 3J crosses the 100-year floodplain three times. Commitments to mitigation in future stages of the project were made as part of the agency consultation process.

Biological Resources

Wildlife Ecology

Historically, much of the project area was covered with oak woodland, oak savanna, prairie and upland mixed forests. Animals that are supported in the area include big game, songbirds, and waterfowl. In addition, riparian areas (near waterways) support water-associated birds, beaver (*Castor canadensis*), raccoon (*Procyon lotor*), and black-tailed deer (*Odocoileus hemionus*). Today, these habitats occur as remnants, while much of the landscape has been converted to agricultural, urban, and industrial areas. Modified 3J affects the least amount of herbaceous and agricultural land compared to the other Build

Alternatives. Modified 3J would result in the loss of approximately 34[9] acres of high-quality wildlife habitat, with almost all of the losses occurring to mixed forest habitat. This is one of the lowest impacts to high-quality wildlife habitat among the Build Alternatives. To mitigate harm to wildlife habitat, project engineers will modify the selected alternative's design where possible to avoid removal of high-quality native vegetation. If this is not feasible, areas where vegetation is removed should be replanted with native species whenever practical.

Wetlands

The analysis identified few areas of high-value wetlands, and there would be very few impacts on high-functioning wetlands caused by Modified 3J. Modified 3J impacts approximately less than 0.1 acre of high-functioning wetlands, approximately 1 acre of medium-functioning wetlands, and approximately 11 acres of low-functioning wetlands.

Mitigation measures for wetlands include the reduction of adverse effects, including avoidance and minimization of impacts. Mitigation measures to protect wetland resources will be incorporated into the design phase for Modified 3J. Many of these elements are the same as those for protecting water resources, fish, vegetation and wildlife. Avoidance is the mitigation measure to be considered first, followed by minimization, repairing and rehabilitating, preserving and maintaining, and, finally, compensation.

Threatened and Endangered Fish

Several streams cross the corridor on their path to connect with the Willamette River. These include Chehalem Creek, Springbrook Creek, and Hess Creek. Impacts to fish will potentially occur as habitat is disturbed during the construction of stream and wetland crossings. Modified 3J impacts approximately 18 acres of riparian habitat and crosses approximately 0.6 miles of fish-bearing streams.

To mitigate potential harm to fish and other aquatic species, project engineers will minimize or shift the project footprint when possible to avoid removal of native, mature, or riparian vegetation. If this is not feasible, bridges will be used for crossing larger fish-bearing streams. Smaller drainages might be crossed using fish-passable culverts. Areas where vegetation is removed will be replanted with native species.

Threatened and Endangered Wildlife

The only species of threatened or endangered wildlife in the project area is the bald eagle. The nearest documented occupied bald eagle habitat or nesting territory occurs near the Willamette River. The site of eagle nesting activity is located more than a half-mile away from Modified 3J and beyond the recommended buffer distance suggested by the U.S. Fish and Wildlife Service (USFWS).

Geological Hazards

There is a risk of earthquakes in the project area, with two faults running through the area. The Newberg Fault is a northwest/southeast-oriented fault that passes through downtown Newberg. The Sherwood Fault is a southwest/northeast-oriented fault that begins in Newberg and runs northeast, parallel to and just south of Oregon 99W. Modified 3J and all of the other Build Alternatives cross the Newberg Fault and the Sherwood Fault.

The potential for earthquake-induced landslides is generally greatest in areas where there are hills. Hilly locations in the project area include the bluff next to and overlooking the Willamette River and the slopes of the banks of Chehalem Creek, Hess Creek and other tributaries in southwest Newberg.

[9] To estimate impacts, analysts multiplied the total amount of resources found in each corridor by the percentage (60 percent) of the corridor that will likely be used for Bypass construction. For example, if 100 feet of a resource are in a corridor, and the Bypass is likely to require 60 percent of the corridor, analysts applied a factor of 0.6 to estimate that 60 feet of the 100 feet of the resource would be affected.

Unstable slopes near or within the corridor may need to be regraded to a stable configuration. Identification of segments that need to be regraded will be based on final alignment of the roadway and a detailed geotechnical investigation during the design phase of the project. The detailed geotechnical investigation would include a characterization of subsurface conditions and development of appropriate mitigation measures.

Hazardous Materials

Six hazardous materials sites appear to be within or close to the project area. The Environmental Cleanup Site Information database identifies four sites, and the Leaking Underground Storage Tank (LUST) database identifies three sites. Both lists cite the SP Newsprint Co. The Confirmed Release List (CRL) and the Inventory of Hazardous Substance Sites (IHSS) did not identify any sites near or within the project area.

Modified 3J has the potential for exposing or disturbing hazardous materials sites. Management and handling of the materials for disposal would depend on the type of material found at the site. Exposure to hazardous materials could be avoided or minimized during construction.

Generally, construction of Modified 3J reduces the likelihood of a toxic spill entering a stream or wetland, because the new facility would be designed to protect from spills (for example, stormwater detention ponds could collect spills of hazardous materials from vehicles and prevent materials from reaching streams and wetlands). Streams and wetlands will also be protected during construction through ODOT design and specification requirements for using Construction Best Management Practices.

Energy

Under Modified 3J, travel on the Bypass would consume approximately 50,000 gallons of fuel per day. This represents a decrease of 5,000 gallons per day as compared to the No Build or a savings of 10 percent. The length and speed of travel for each alternative is the basis for determining fuel consumption. Under the No Build, projected average speeds in 2025 are less than 20 mph for about one-half the length of Oregon 99W within the study area. As a result, the analyst understated the No Build fuel consumption, because consumption rates for speeds under 20 mph are not available.

PUBLIC INVOLVEMENT AND AGENCY COORDINATION

The NDTIP and Bypass project used an open and ongoing public and agency involvement process. The process encouraged consideration and selection of the best alternative to solve current and future transportation needs, avoid or minimize impacts to the natural and built environments, and enhance community livability. An integrated, interdepartmental (local, state and federal) planning, recommendation and decision-making procedure completed the public process.

Project priorities included broad public information and involvement as evidenced by extensive media outreach, a project Web site, fact sheets, a video and well-attended public meetings and events in the communities of Newberg, Dundee and McMinnville.

Through written questionnaires, attendance at public and neighborhood meetings, and block party events, more than 1,200 people participated in project scoping. Public and stakeholder input formed the basis for development of new alternatives and for a recommendation from the POST to ODOT as to which alternatives should be analyzed in the LDEIS. Examples of the work conducted in the development of this LFEIS follow.

- The project team maintains a mailing list of 1,790 individuals and organizations who have expressed interest in the project. Fact sheets and other project updates and meeting announcements were regularly distributed to the mailing lists.

- With assistance from Yamhill County, ODOT and the consultant team produced a project Web site providing information and an opportunity for people to submit questions and comments.
- ODOT distributed 22 media releases to regional and local newspapers and radio stations announcing events and reporting on results of POST and public meetings and summits. Project team members also met with the editors and reporters of The Newberg Graphic, The Oregonian SW News Bureau, and the McMinnville News-Register to brief them on the project and answer questions.
- The project team staffed booths in three community events. Written materials and staff to answer questions were available and well received by the citizens. ODOT also distributed project information at block parties and community festivals throughout the spring and summers of 2002, 2003 and 2004.
- In the spring of 2002, project consultants produced a video to explain the project and the current set of alternatives. ODOT sent the video to all POST and Project Advisory Committee (PAC) members and made it available for loan, free of charge, at libraries, city halls, and some movie rental outlets in the project area. ODOT also had the video translated into Spanish for viewing at area churches and other community events.
- The project team conducted special outreach in areas where environmental justice could be an issue. The project maintains a mailing list for Spanish-speaking residents who have requested Spanish-language materials. Other materials, including fact sheets, information packets, and the informational video were translated into Spanish. Efforts to inform residents about the study and the community meetings included more than 1,200 door hangers distributed in English and Spanish, Spanish-language flyers posted at area churches and other gathering places, and a mailing to property owners. Hispanic programming on radio station KLYC included a Spanish-language public service announcement, and ODOT held supplemental meetings to reach out to Spanish-speaking residents. ODOT provided translators and childcare providers at the meetings.
- In a separate but complementary process, the City of Dundee developed a Transportation System Plan (TSP). In three community meetings held for the TSP, participants discussed and commented on the Bypass. This project proceeded on a track parallel to the Bypass project to increase the likelihood of integrating community needs.

LDEIS Public Comment Period

The Federal Highway Administration (FHWA) released the LDEIS on October 1, 2002. The public comment period began the same day and was scheduled to end on November 15. However, due to public demand, FHWA extended the comment period to December 16, 2002. ODOT held four public hearings and accepted written and oral comments. Responses to public and agency comments are included in the LFEIS Appendix F.

Advisory and Other Committees

Multiple advisory committees contributed input and recommendations to the project team. These groups served to enhance the public participation component of the project. Brief descriptions of the different groups and their functions follow.

- The Project Oversight Steering Team (POST) advised the project team and made recommendations to ODOT on selecting a location alternative. Members of the POST included elected officials, directors and managers of the cities of Newberg, Dundee, Dayton and McMinnville, and Yamhill County, ODOT, the Oregon Department of Land Conservation and Development (DLCD), FHWA, the Yamhill Parkway Committee and state legislators.
- A PAC made up of community stakeholders—citizen organizations, businesses, schools and other interest groups, as well as staff from affected city, county, state and federal agencies—provided

input and guidance on the needs and interests of the area's communities. Members also were conduits from the project to the groups, jurisdictions and organizations they represented.

- The Collaborative Environmental and Transportation Agreement for Streamlining (CETAS) replaced the Agency Advisory Committee (AAC), serving to coordinate the regulatory aspect of the location selection process. Agencies making up CETAS are US Fish and Wildlife Service (USFWS), US Army Corps of Engineers (USCOE), Department of Environmental Quality (DEQ), NOAA Fisheries, Oregon Department of Fish and Wildlife (ODFW), Environmental Protection Agency (EPA), ODOT, Department of Land Conservation and Development (DLCD), Department of State Lands (DSL), State Historic Preservation Office (SHPO) and FHWA. ODOT coordinated the work of the CETAS to seek agreement on four concurrence points for the project. They are as follows:
  - Purpose and Need
  - Range of Alternatives to be considered in the NEPA document
  - Criteria for Selection of the Preferred Alternative
  - Preferred Alternative
- The Project Management Team (PMT), made up of representatives from ODOT and the consulting team managed the NDTIP and facilitated discussions between ODOT and DLCD concerning land use and transportation impacts. Project managers also regularly brought members of the Oregon Transportation Commission up to date.

Summit Meetings

Members of the PAC and the POST held "summits" at four key junctures during the scoping period and alternatives analysis process. The summits were all-day work sessions, where these public, agency and jurisdictional partners helped formulate project goals and resolve critical issues concerning the project purpose and need, transportation performance thresholds, regulatory issues, evaluation criteria and measures, as well as review the alternative routes under consideration. Approximately 25 people attended each summit meeting. Together with broader public input, the summits helped inform the POST recommendation-making process.

Statewide Planning Goal Exception

After release of the LDEIS, ODOT initiated the Goal Exception process and conducted the following activities during the development and approval of the Goal Exception and related Comprehensive Plan and Policy amendments and intergovernmental agreements (IGAs).

- Representatives of local and state agencies participated in two workshops to discuss the four interchanges proposed in the Preferred Alternative.
- Pre-application sessions for the IGA process were held in Newberg, Dundee, Dayton and Yamhill County.
- Property owners in the corridor of Modified 3J received a mailing of background information to explain the Measure 56 Notice of Proposed Land Use Policies[10] for the Preferred Alternative sent to them by the local jurisdictions.
- Yamhill County held public hearings and work sessions on the Goal Exceptions, and Newberg, Dundee and Dayton held public hearings on the Comprehensive Plan and Policy amendments throughout the summer of 2004.

[10] The Measure 56 Notice is an Oregon state law requiring 45-day written notice to advise property owners that their county or city government is considering land use policy changes by a specified project that may affect their property.

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