OREGON DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING ANALYSIS UNIT

NEWBERG-DUNDEE BYPASS
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Induced Growth Analysis
Modeling Methodology And Results

January 23, 2002

Purpose

The Newberg-Dundee Bypass project was considered for funding under the Oregon Transportation Investment Act. The project was modeled to assess potential land use, transportation and economic impacts of constructing or not constructing the project.

Methodology

The first generation statewide model was used to model two scenarios: a Newberg-Dundee Bypass scenario, and a reference case or No-Action scenario. The scenarios were identical in all respects except for the proposed Bypass. The modeling was done at five-year intervals to 2050. The primary modeling assumptions included:

- The Bypass will be a 4-lane limited access highway connecting to Highway 99W from a point east of Newberg to the Dayton Junction west of Dundee.
- No interchange is included at Dundee.
- The Bypass will be 9.5 miles long with a posted speed of 55 miles per hour (mph).
- The Bypass will be open for travel in 2010.
- Land will be made available for urbanization at historic rates (since the beginning of Oregon's land use planning program).[1]

The Bypass and No-Action scenarios were compared with respect to:

- Number of households and jobs in the Highway 99W/18 corridor in Yamhill County
- Passenger and truck trips to and from the corridor area
- Passenger and truck miles traveled
- Passenger and truck hours traveled

The Highway 99W/18 corridor in Yamhill County was apportioned into four zones (from east to west):

- Newberg vicinity (zone 605)
- Dundee/Lafayette/Dayton vicinity (zone 608)
- McMinnville vicinity (zone 607)
- Sheridan/Willamina vicinity (zone 606)

The distributions of households and jobs for the two scenarios were compared for each of these zones and for the corridor as a whole. Modeling focused on Yamhill County. Other areas that use the Highway 99W/18 corridor, such as Lincoln County, may also see some effects of a Newberg-Dundee Bypass but were not included in this modeling effort.

[1]This assumption was also used in the No-Action scenario in the Willamette Valley Alternative Transportation Futures study. See *Modeling Analysis of Willamette Valley Transportation and Land Use Alternatives*, June 2001, Oregon Department of Transportation. Transportation Development Division, Transportation Planning Analysis Unit.

Results

Households and Jobs

The Bypass will result in more growth of households and jobs in the Highway 99W/18 corridor than the No Action scenario. The increase will be small and the number of households and jobs will increase by about the same amount. Almost all of the increased growth with the Bypass will occur in McMinnville. The equal increase in employment and households indicates that the Bypass will make McMinnville more attractive as an employment center as well as a more attractive place to live.

Minimal effects are seen in Newberg because accessibility to the Portland area will remain about the same with or without the Bypass. Generally, small communities along the Highway 99W/18 corridor will experience little difference in job or population growth between the scenarios. Most of these communities do not have the economic base that would attract much new business. The larger economic base in McMinnville will be most attractive to business with improved accessibility to the Portland area under the Bypass scenario.

The results of the modeling and analysis for the Newberg-Dundee Bypass are similar to those reported for the Willamette Valley Forum Alternative Transportation Futures Project.[2] Specifically, both jobs and population move to outlying communities with major highway improvements.

Passenger and Truck Trips

With a Bypass, the model shows more travel between McMinnville and the Portland metropolitan area commensurate with the growth of population and jobs in the McMinnville area. The model shows that travel to and from the McMinnville area would be greater for all trip purposes (commuting, business, shopping, recreation, goods movement, etc.). Commute travel from the Sheridan area to the Portland metropolitan area would increase slightly. On the other hand, the model shows that commuting from Newberg to the Portland metropolitan area would be slightly less with the Bypass and that commuting from Newberg to McMinnville would be slightly more. These results are consistent with the finding that McMinnville's economy and population would grow more with the Bypass than without. If McMinnville has a larger economy, it will generate and attract more trips.

Although the number of trips in the Highway 99W/18 corridor increases and the total miles of system-wide travel increase as well, the total number of system-wide *auto* trips does not increase under either scenario. The Highway 99W/18 corridor will be less congested with better accessibility provided by a Bypass which will also attract drivers from alternative routes or who will otherwise avoid the corridor because of congestion.

[2] See Footnote 1.

Passenger and Truck Miles Traveled

System-wide, passenger and freight miles traveled are greater with the Bypass scenario. Modeling shows that a Newberg-Dundee Bypass will be likely to induce more travel in the Highway 99W/18 corridor and on Oregon's transportation system as a whole. The Bypass provides greater accessibility to the Portland area and makes the McMinnville area more attractive for employers to locate. Increased travel is a consequence of stimulating job growth in McMinnville and reduced cost of travel between McMinnville and the Portland area. Usually, the more economic growth that occurs in an area, the more travel that occurs between major trade and economic centers.

Passenger and Truck Hours Traveled

There are no detectable differences between the scenarios in the system-wide average number of passenger hours traveled or freight hours traveled. This could be the result of several different interactions:

- The greater miles of travel in the Highway 99W/18 corridor could be offset by the higher speeds of travel;
- More development occurs in the relatively less congested Highway 99W/18 corridor and less occurs in other more congested corridors; and/or
- Travelers use the less congested Bypass rather than more congested alternative routes.

Conclusions

There are several conclusions that can be drawn from this modeling analysis effort:

- The Newberg-Dundee Bypass will provide better access to McMinnville, which will help to stimulate the economic growth in the community.
- With the Bypass, there will be greater travel for all purposes between McMinnville and the Portland area consistent with the growth of population and jobs in McMinnville.
- Minimal effects will be seen in Newberg and other smaller communities in Yamhill County as a result of the Bypass.
- Commuter effects vary. Commuting to the Portland area from Sheridan in western Yamhill County will slightly increase as a result of improved accessibility provided by a Bypass. However, commuting from Newberg to the Portland area will decrease slightly and more Newberg residents will commute to jobs in McMinnville.
- Systemwide, the total number of auto trips does not change between the No Action and the Bypass scenarios.
- Although the total miles traveled systemwide are greater with the Bypass, total hours of travel with the Bypass do not increase.