RESOLUTION NO. 823

A RESOLUTION GIVING NOTICE OF PUBLIC NOTICE IN THE MATTER OF PUBLIC INVOLVEMENT IN WESTERN BYPASS STUDY ISSUES.

WHEREAS, the Oregon Department of Transportation (ODOT) is conducting a Western Bypass Study to identify and resolve issues related to accommodating major existing and future (year 2010) state, regional, and intra-county travel needs within the project study area; and

WHEREAS, this jurisdiction is in the Western Bypass Study area.

NOW, THEREFORE, THE CITY OF WILSONVILLE RESOLVES AS FOLLOWS:

1. This City of Wilsonville hereby includes the regular schedule of meetings of the Western Bypass Study Citizen Advisory Committee and Technical Advisory Committee as part of its citizen involvement process and encourages its citizens to participate in that public process.

2. The City of Wilsonville anticipates that the results of the Oregon Department of Transporation (ODOT) study, including public involvement of its citizens, will be utilized to develop its planning alternatives for circumferential travel in coordination with state, regional, and other local governments.

3. The following "Public Notice" of the City of Wilsonville's participation in the Western Bypass Study process shall be published once in a newspaper of general circulation consistent with the citizen involvement program:

PUBLIC NOTICE

"Notice is hereby given that, with respect to Western Bypass Study issues, in addition to the public involvement provisions set forth in the City of Wilsonville's Comprehensive Plan and regulations, the regularly scheduled meetings of the Western Bypass Study Citizen Advisory Committee and Technical Advisory Committee shall be part of the City of Wilsonville's citizen involvement process.

"This is consistent with adoption of the Western Bypass Study Coordination Agreement by the Wilsonville City Council. Under this intergovernmental agreement, the Wilsonville City Council will consider during the two-year study process: (1) the Purpose and Need Statement, (2) recommended strategies, (3) selection of a Preferred Alternative Strategy, (4) consistency of the Preferred Alternative with the Wilsonville City Council's comprehensive plan and (5) design or alignment decisions. To obtain information on meeting dates, contact the Oregon Department of Transporation's Project Manager at 653-3298."

ADOPTED by the Wilsonville City Council at a regular meeting thereof this 15th day of April, 1991 and filed with the Wilsonville City Recorder this date.

Gerald A. Krummel

GERALD A. KRUMMEL, Mayor

ATTEST:

Pamela Munsterman

PAMELA MUNSTERMAN, City Recorder Pro-Tem

SUMMARY of Votes:

Mayor Krummel	Aye
Councilor Chandler	Aye
Councilor Carter	Aye
Councilor Lehan	Aye
Councilor Van Eck	Aye

City of
WILSONVILLE
in OREGON
30000 SW Town Center Loop E • PO Box 220
Wilsonville, OR 97070
(503) 682-1011

COMMUNITY DEVELOPMENT DEPARTMENT
MEMORANDUM

DATE: APRIL 9, 1991

TO: HONORABLE MAYOR & CITY COUNCILORS

FROM: STEVE STARNER
COMMUNITY DEVELOPMENT DIRECTOR

RE: WESTERN BYPASS STUDY - STATEMENT OF PURPOSE AND NEED

Please find attached to this memo a copy of the Statement of Purpose & Need, a statement summary prepared by ODOT; an interoffice memo from Michal Wert, ODOT Project Development Manager; and a recent (April 4, 1991) article from the Oregonian. The Western Bypass Study document, Statement of Purpose & Need, will be discussed during the regular council meeting on April 15, 1991, with the intent of reaching a decision to either:

1. Endorse the Statement as presented.

2. Request that ODOT staff amend the Statement to reflect proposed changes in the city's comprehensive plan and zoning map. This option would be appropriate if it were deemed necessary to increase the development of residential density within 100 feet of major transit corridors.

3. Reject the Statement (with findings) and identify specific revisions to the Statement which would be necessary to show support of the purpose and need.

The concept of the Statement, as presented with this memo, was adopted by the Technical Advisory Committee, Steering Committee, and Citizens Advisory Committee in January, 1991. The framework of the Statement will continue to be modified as alternative strategies for the Western Bypass are developed. Eventually, the Statement will be used to support the Environmental Impact Statement which would accompany the development of an alternative transportation facility.

The findings and conclusions of the Statement are not without opposition. Sensible Transportation Options for People (STOP) opposes the adoption of the Statement for the following reasons:

1. The Statement tends to overemphasize the circumferential trips (3.3 per cent) that begin and end in the study area.

2. Traffic that might use a rural bypass is only a small fraction of the trips present on key congested arterials.

3. Under existing conditions, rush hour congestion on Highway 217 is highly segmented with certain stretches being chronically congested and others non-congested. Until the traffic on 217 can be characterized more clearly, it is premature to define a purpose or need for a transportation improvement.

The Statement of Purpose & Need is intended to document transportation problems without forming any conclusions about possible alternatives for solutions. It is clear that transportation problems in the study area will be significant by 2010, unless a regional effort is made to reduce or alleviate existing and future traffic congestion. As specific transportation alternatives and strategies are considered, the intent of the Statement is to not condone or argue against any of the ideas, but to serve as a base for establishing the need for transportation improvements.

ss:md

pc: Project file

WESTERN BYPASS STUDY

Oregon Department of Transportation

Statement of Purpose and Need

Prepared for
OREGON DEPARTMENT OF TRANSPORTATION
(ODOT)

Prepared by
Parsons Brinckerhoff Quade & Douglas, Inc.

PARSONS
BRINCKERHOFF
QUADE &
DOUGLAS, INC.

This statement of purpose and need was adopted in concept by Western Bypass Study committees on the following dates:

Technical Advisory Committee	January 08, 1991
Steering Committee	January 16, 1991
Citizens Advisory Committee	January 29, 1991

This document summarizes information developed on the study to date and provides a framework to begin development of alternative strategies. Although the language of the conclusions was specifically adopted by study committees, several recommendations to text changes have been received. This is a fluid document and will continue to be modified throughout the study. It will be summarized as the purpose and need chapter of the Environmental Impact Statement.

WESTERN BYPASS

Statement of Purpose and Need

APPENDIX

A Background Reports and Studies Upon Which the Statement of Purpose and Need was Developed

B Western Bypass Study Goals and Objectives

C Levels-of-Service Definitions

D Select Link Analysis

STATEMENT OF PURPOSE AND NEED

OVERVIEW

The Oregon Department of Transportation (ODOT) has initiated preparation of a "Corridor-Level" or First Tier Environmental Impact Statement (EIS) and associated alternatives analysis to address the broad transportation needs in the Southwest Portland Metropolitan area. This first tier analysis will be followed by a detailed "Design-Level" EIS to develop specific design parameters of the alternatives selected through the corridor level EIS. This First Tier study focuses on regional transportation needs, primarily circumferential, in the southwestern Portland metropolitan area. These traffic conditions, examined over a twenty-two year period from 1988 to 2010, are expected to worsen based on growth in travel due to continued implementation of adopted land use plans, regional population and employment forecasts and shifts in trip-making characteristics. Future regional transportation demands within the study area are expected to overtax the capability of existing and future committed transportation facilities, thus making some form of action necessary.

This Statement of Purpose and Need Report identifies the need for major transportation improvements within the Western Bypass Study Area, and describes the context in which the project planning is being carried out. The report details major components of the existing transportation system within the Western Bypass study area, including an analysis of the current and future demands on the existing transportation system and the need for additional transportation improvements. A summary of the planning context and study structure is provided to identify local jurisdictions involved in the study, and to briefly document planning activities which preceded the Western Bypass study.

STUDY AREA

Geographic Description-Metropolitan Area

The Western Bypass Study Area is a part of the Portland metropolitan area as shown in Figure 1. The Portland Metropolitan area is the fastest growing region in the State and encompasses portions of Multnomah, Washington and Clackamas Counties in Oregon and Clark County, Washington. With a total population of 1,334,200 persons, the regional population is almost half that of the State. The metropolitan area is located in northwest Oregon, in the Willamette Valley at the convergence of two rivers, the Columbia River, which forms the Washington/Oregon boundary, and the Willamette River. The region is uniquely situated between the Oregon Coast, 75 miles to the west, and the Cascade Mountains, 50 miles to the east. The Interstate 5/205 corridors pass through the region and provide a link between southern California and Vancouver, Canada.

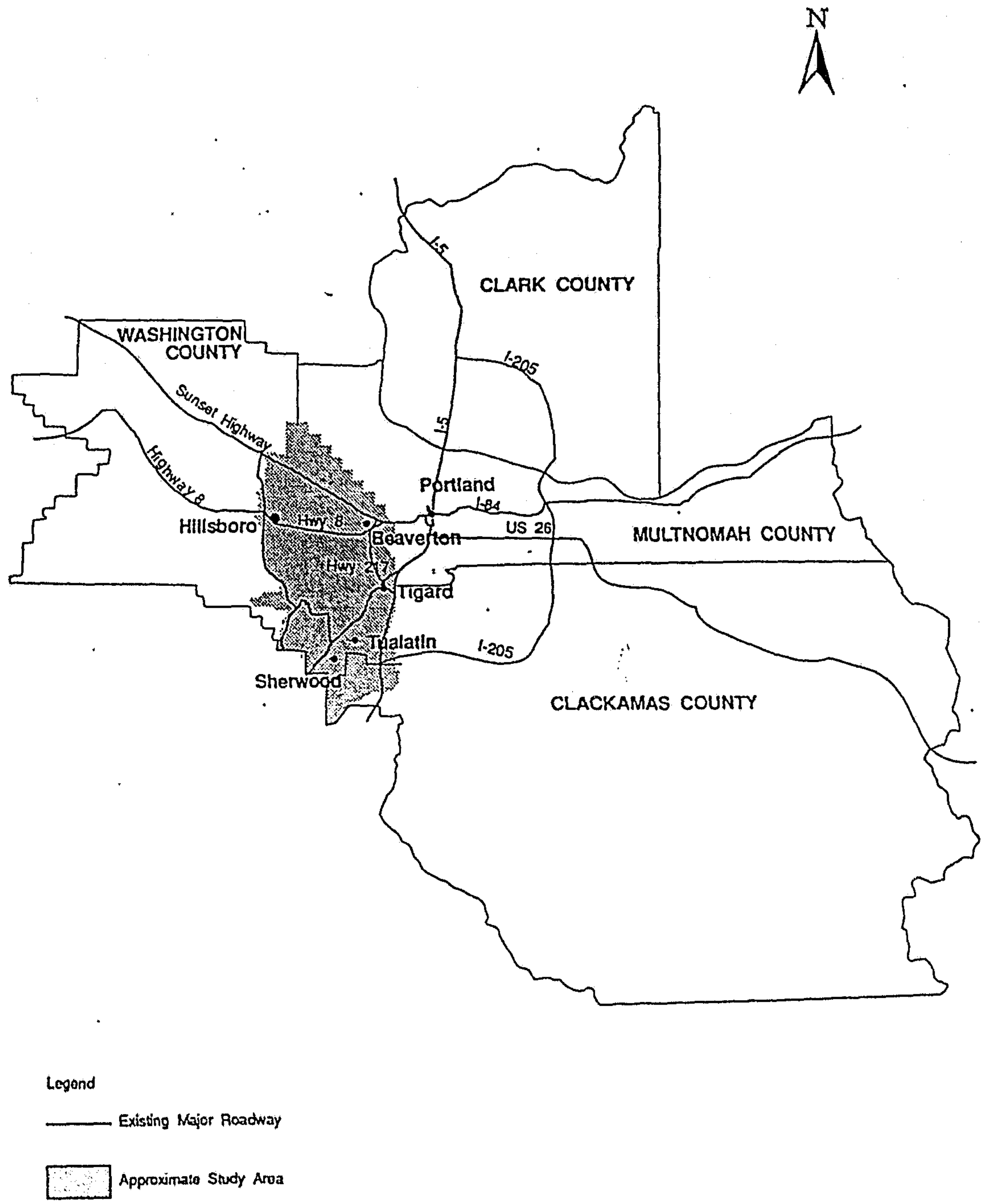

Figure 1
PORTLAND METROPOLITAN AREA

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Western Bypass Study

The Portland area also links other major transportation routes, including Interstate 84, which is an east-west route connecting the region with Idaho, Utah and points east, and Highway 26, which links the metropolitan area to the Oregon coast as well as Mt. Hood and eastern Oregon. Many visitors travel through the metropolitan area, and many visitors stay in the area.

The City of Portland is the commercial and financial center for the region, with major activity centers including the Port of Portland and Portland International Airport, both of which provide a trade and commerce connection with Japan and the Pacific Rim. The City is also a center of government, with federal, state, regional and local government offices located in the Central Business District (CBD), including federal and county courthouses.

Western Bypass Study Area

The Western Bypass Study Area is located in the western Portland metropolitan area and is the fastest growing portion of the region. The study area is roughly bounded on the north and east by the Washington County-Multnomah County and Washington County-Clackamas County lines. On the south, the study area is bounded by the Willamette River and the Washington County-Yamhill County lines: On the west, the study area is approximately bounded by Oregon State Highway 219 and McKay Creek. The size of the study area is approximately 20 miles north by south, and 10 miles east by west, covering over 200 square miles.

Geography in the study area ranges from the Chehalem Mountains in the southern portion, across the Tualatin Valley floor to the rolling terrain approaching the Tualatin Mountains in the northern portion of the area. Cooper and Bull Mountains rise in the middle of the study area, posing a physical barrier to direct access among some of the major population centers because of steep terrain. The area is also crossed by the Tualatin River and several major creeks and numerous tributaries. This network of waterways results in many areas of wetlands and aquatic environments throughout the study area.

The Portland area Urban Growth Boundary (UGB) separates land that is designated for urban development from land that is designated for farm and/or forest use, as shown in Figure 2. A large portion of land in Washington County and in the study area is located outside the UGB and is currently in farm or forest use. Urban development within the study area has generally concentrated within the UGB.

The study area contains several centers of high technology development, in the Sunset Corridor along Highway 26 between Hillsboro and Beaverton, and in the cities of Beaverton, Tualatin and Wilsonville. There are several large companies located in these areas, including the U.S. headquarters for a number of firms. Other business centers include large business parks located in Beaverton, Tigard, Tualatin and Hillsboro.

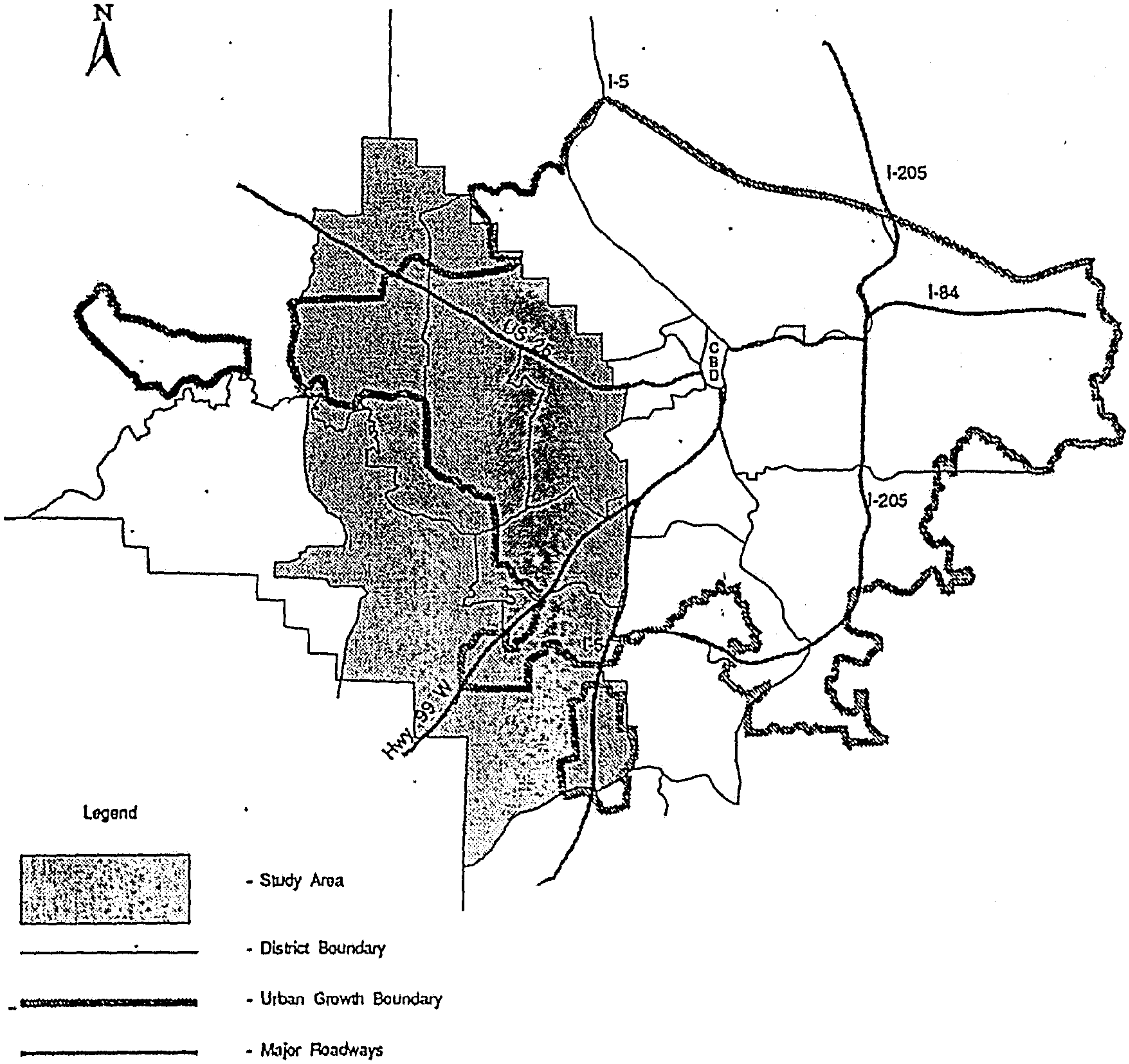

Figure 2
URBAN GROWTH BOUNDARY

Western Bypass Study

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The City of Hillsboro is also the center of county government, with County offices and the County Courthouse and Jail Facility. Hillsboro is the location of the primary general aviation airport in the Portland Metropolitan area, and the County Fairgrounds, which attracts visitors from both inside and outside the region. The fairgrounds has an average annual attendance of 750,000 persons, with growth projected to increase to 2,440,000 visitors per year over a potential of 200 use-days by 2002.

Other recreational attractions include the Hagg Lake Recreational Area located between Gaston and Forest Grove, which offers boating, swimming and picnicking, and the numerous wineries located in Washington County. Various transportation routes that pass through the study area provide direct links to the Oregon coast, including Highway 26 and Highway 99W.

Jurisdictions Affected

The study area encompasses a number of cities including Beaverton, Durham, Hillsboro, King City, Tigard, Tualatin, Sherwood, and Wilsonville, in addition to numerous communities in unincorporated Washington County. Each of the jurisdictional entities has representation within the Western Bypass Study Committee structure.

The nature of the transportation problem under study is of regional significance and the outcome of the study will also have a significant effect on other jurisdictional entities outside the immediate study area. These jurisdictions rely on travel to and through the study area for employment and the movement of goods and services. Several such as the City of Portland and Clackamas and Multnomah Counties, will have the opportunity to formally participate in the study, as they are members of the Joint Policy Advisory Committee on Transportation (JPACT), the regional transportation committee for METRO. Other jurisdictions are provided regular updates on the study and can participate through a variety of public and agency outreach programs.

Population and Economic Base

Population and number of households have steadily increased since 1960 and reflect a period of overall economic growth for the region. Washington County has been the fastest growing county in the State in the 1980s. Total population within the study area in 1988 amounted to 245,600 persons, nearly 18.5 percent of the region's total 1,334,200 residents. This population tended to be concentrated in or near the existing municipalities of Beaverton, Tigard, Tualatin, Sherwood, Wilsonville, and Hillsboro.

The 1988 employment base within the study area accounted for 136,300 jobs, more than 19 percent of the total 704,600 jobs within the metropolitan region. Eighteen percent of the jobs within the study area were retail oriented, while the other 82 percent were distributed amongst various non-retail employment categories. Employment within the study area also tended to be concentrated near existing municipalities. The cities of Beaverton, Tigard, Tualatin, Wilsonville, and Hillsboro had the highest concentrations of employment in both the retail and other employment fields.

Strong economic growth in Washington County has accompanied the rapid population growth that has characterized the County in the past several years. Population growth in the County has attracted employers to the area, while growth in population has created the demand for many supporting business activities. Several cities already experiencing growth continue to be attractive with the availability of large tracts of industrial land and proximity to the Portland CBD and international airport and port facilities.

In addition to the employment centers within the Western Bypass study area, employment centers in the Portland Central Business District (CBD), on Portland's Eastside, and in Clackamas County, provide destinations for cross-town commuters traveling from Washington County. These areas also provide workers who commute to jobs in Washington County.

The fertile soils, moderate temperature and damp climate make the Tualatin Valley one of the most productive agricultural regions in Oregon and the nation. These factors produce an opportunity for a wide variety of farm crops with above average yields. Approximately 60 agricultural commodities are produced commercially in Washington County. Farmers in the County have tended to assemble a number of small parcels of land which are not necessarily contiguous and may be rented to form one productive unit. Existing trends indicate a decline in the production of fruits and vegetables resulting in the closure of food processing plants in Washington County. The value of farm lands in the County is many times higher than the State average for farmland. Agriculture continues to play an important role in the County's diverse economy.

By the year 2010, the existing patterns of residential development and employment within the study area are expected to intensify, supported by adopted land use plans. The study area is expected to grow by over 60 percent in population and over 73 percent in employment. Furthermore, retail employment is expected to garner a greater percentage of the study area's total employment as compared to 1988. This study area growth will nearly double that of the region as a whole (See: 1988 Existing and 2010 No-Build, Forecasting Analysis Results, October 26, 1990).

WESTERN BYPASS STUDY GOALS AND OBJECTIVES

In order to identify key issues within the study area and therefore the need for improvement, the goals and transportation objectives of the community must be identified. These goals and objectives provide a framework by which various transportation alternatives can be developed, evaluated, and compared against each other. The goals and objectives were synthesized from land use plans of communities within the study area, from state-wide planning goals and objectives, and from concerns expressed by citizens and from study committee representatives. The goals and objectives for the study were adopted by the Citizens and Technical Advisory Committees, the Steering Committee, and by ODOT and are contained in the appendix to this report. Goals as adopted are as follows:

Goal 1: Conduct the Western Bypass Study in an open, objective and expeditious process allowing input from all sectors of the community and considering all reasonable alternative solutions to transportation problems that comply with local, regional, state and federal plans and regulations.

Goal 2: Develop a solution to transportation problems related to accommodating major existing and future (year 2010) state, regional, and intra-county travel needs primarily north-south or circumferential within the project study area:

Goal 3: Develop a solution to transportation problems that is sensitive to local and regional environmental issues and community needs, consistent with local, regional, state, and federal plans and regulations.

Goal 4: Consider economic and social factors in the identification and development of a solution to transportation problems for the study area, consistent with local, regional and state plans.

THE PLANNING PROCESS

Supporting Documentation and History of Previous Studies

The need to address circumferential travel in the study area has been discussed since the 1950's. This discussion has intensified because of rapid growth in the region which is projected to continue. In 1987, the Metropolitan Service District (METRO) completed the Southwest Corridor Study which documented system deficiencies, evaluated alternatives, and recommended construction of a major new highway, or bypass, from Tualatin to Hillsboro to serve this circumferential travel demand. Other arterial and transit-related improvements were also recommended. The Southwest Corridor Study concluded that this new circumferential transportation facility was needed to accommodate the future development of the southwest metropolitan area supported by adopted local land use plans.

The Tualatin-Hillsboro corridor was adopted into the 1988 Washington County Transportation Plan as a transportation facility for further evaluation. Other improvements in the county's system were planned under the assumption that a bypass facility would be constructed.

The Tualatin-Hillsboro corridor was adopted into the Regional Transportation Plan (RTP) 1989 update. The RTP stated that "The circumferential and suburban radial corridors provide the capacity for statewide travel through the region and for travel among developing suburban areas without the need to enter the downtown Portland sector. Sufficient highway capacity to serve the level of growth contained in the adopted local comprehensive plans in these corridors cannot be adequately provided through improvements to the existing system and additional facilities are required." The RTP stipulated that actual construction of the facility was to be subject to a determination that the facility is consistent with local comprehensive plans and state land use policies, and recommended a detailed assessment of the impacts through the EIS process.

Following the adoption of the Southwest Corridor Study by METRO into the RTP, the Oregon Department of Transportation initiated the Western Bypass Study to conduct an environmental analysis including developing and evaluating alternatives for providing the increased circumferential transportation capacity proposed in the Southwest Corridor Study. New data on the population and employment base for 1988 and 2010 have been developed for this study to document regional transportation problems and evaluate alternatives. This first tier environmental analysis and Statement of Purpose and Need is a part of that effort.

A series of studies and reports, as well as various engineering and planning maps, have been prepared to develop this Statement of Purpose and Need. These reports include the 1988 Existing and 2010 No-Build, Forecasting Analysis Results Report, published October 26, 1990; the Statement of Goals and Objectives, adopted June 27, 1990; and various background report summaries. A list of the background studies and reports used in the development of this Statement of Purpose and Need is included in Appendix A.

Tiered EIS Process

The environmental analysis and First Tier Environmental Impact Statement will be prepared in accordance with the Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA). Sections 40 CFR 1502.20 and 1508.28 of the NEPA regulations regarding "Tiering" are specifically applicable to the Western Bypass Study. These sections allow the lead agency (Federal Highway Administration-FHWA) and support agency to use tiering to "eliminate repetitive discussions of the same issues and focus on the actual issues ripe for decision at each level of environmental review" (40 CFR 1502.20). Furthermore, FHWA's Rules and Regulations suggest and encourage that for major transportation actions, the tiering of the EIS process is appropriate. "The first tier EIS would focus on broad issues such as general location, mode choice, and area wide air quality and land use implications". The second tier would address site-specific details of project impacts, costs, and mitigation measures" (Federal Register/Vol. 52, No. 167, 8-28-97).

As stated in both NEPA and the FHWA regulations, the purpose of using a tiered environmental analysis method is to facilitate timely decisions on complex issues. Once such decisions are made, the process allows the lead agency to proceed without needing to revisit or repeat analysis of previous decisions. Thus, once decisions are made, they provide a firm and stable foundation on which to base future decisions.

In recognition of the importance in gaining inter-jurisdictional, agency, and community support at each step in the tiering process, ODOT assembled a Citizens Advisory Committee, a Technical Advisory Committee, and a Steering Committee. The responsibility of these committees is to communicate local concerns to the process and to provide technical and political guidance and advice.

ODOT is also conducting a Public Involvement Program to encourage public participation in the study process. A series of workshops and open houses are being held at decision points in the study. A mailing list of over 2000 citizens has been compiled for notification of public events and periodically, newsletters are mailed.

EXISTING AND FUTURE TRANSPORTATION FACILITIES

Existing Regional Roadway System

As shown in Figure 3, the existing regional roadway system consists of radial and circumferential facilities in relationship to the location of the Portland CBD. East to west or southwest-oriented facilities tend to be radial providing passage from the Portland CBD to major activities in the suburbs on the west side. A few circumferential roads connect these radial facilities to provide north-south mobility. Circumferential roadways on the southern end of the study area provide for east-west movement. The unique geography of the study area underlies the lack of a north-south road system infrastructure. An extensive network of creeks and tributaries, the wide flood plain of the Tualatin River, and the hilly terrain across the study area provide a system of constraints that have prevented construction of a continuous grid system through the study area especially circumferentially north and south. The existing roads in the study area have evolved from a network of farm-to-market roads that have been upgraded and maintained over time. This road system followed the existing terrain which was not conducive to a grid system.

Unless otherwise noted, listed traffic volumes in the following discussion of the existing roads and traffic volumes were recorded in 1988.

East-West or Radial Facilities

Interstate 5, Sunset Highway (US 26), Highway 99W, Canyon Road/Tualatin Valley Highway, Beaverton-Hillsdale Highway/Farmington Road, and Scholls Ferry Road are radial facilities connecting the Portland CBD to suburban areas to the west and southwest of Portland.

Interstate 5 is a major West Coast transportation route, providing a direct link between southern California and Canada and passing through the Portland CBD. It is a two-way, six-lane facility which serves between 6,000 and 6,500 vehicles per hour (vph) per direction during the PM peak hour. In 1988, Interstate 5, just south of Highway 99W, west of Tigard junction, carried a weekday traffic volume of 68,500 vehicles per day (vpd). The same facility, just south of Highway 217, carried an average weekday traffic volume of 102,400 vpd.

Highway 99W provides a primary connection between Tigard and Sherwood. It diverges from Interstate 5 prior to entering the study area and continues south to Newberg. It is a five-lane roadway with two northbound lanes, two southbound lanes, and a center median/two-way left-turn lane. It carried between 11,900 vpd south of Beaverton Hillsdale Highway and 47,600 vpd near Highway 217 in 1988. Major intersections along Highway 99W are located at Highway 217, Durham Road, and Tualatin-Sherwood/Edy Road.

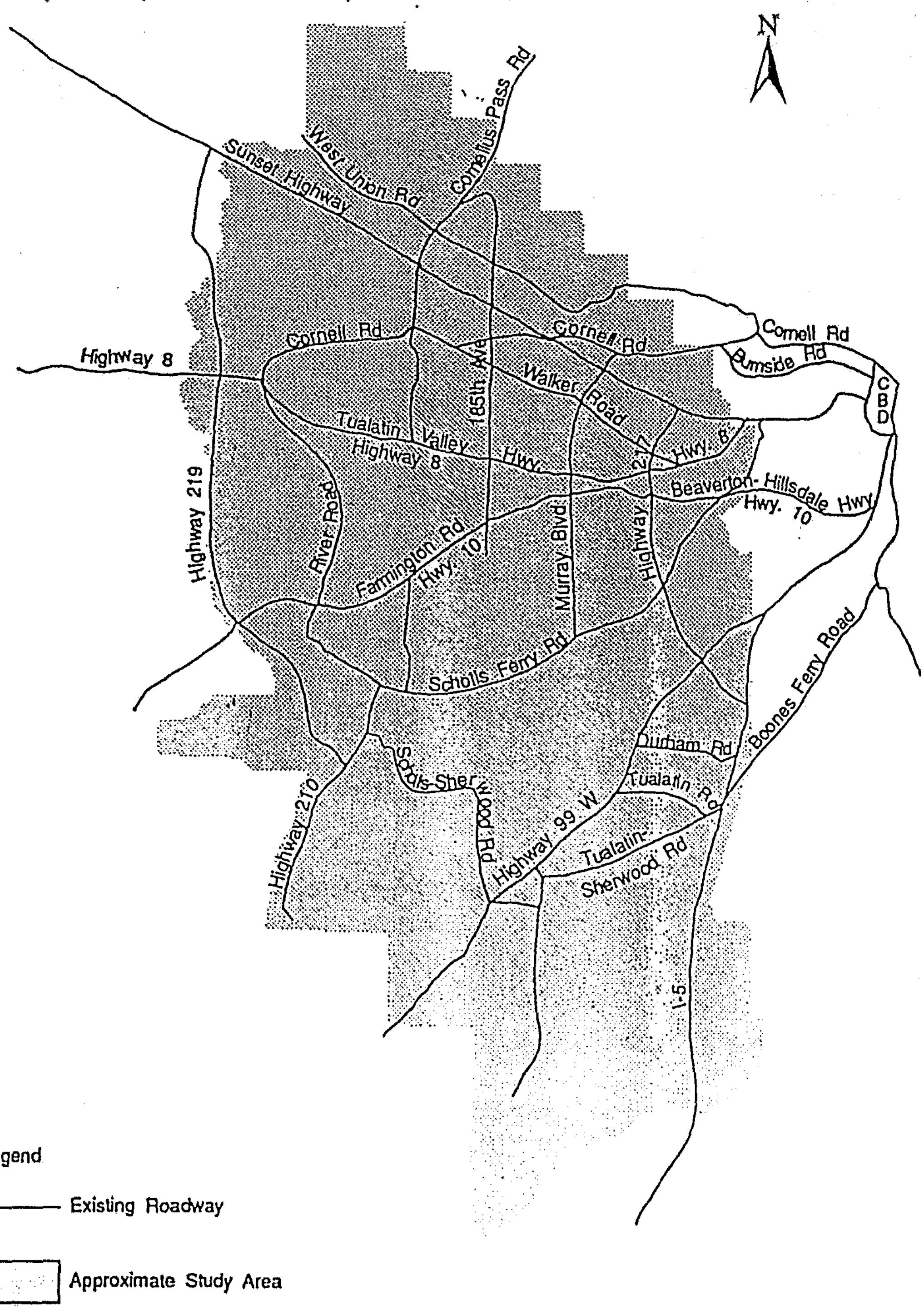

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Figure 3
ROADWAY NETWORK

Western Bypass Study

Sunset Highway is a major commuter route connecting the Portland CBD to Hillsboro, Beaverton, and the northern Sunset Corridor suburbs, and continuing on to the Oregon coast. It is a four-lane highway in the study area. Its average weekday traffic volumes range from 17,000 vpd, near the North Plains Interchange, to 125,500 vpd, recorded east of the Washington Park/Zoo Interchange. Major interchanges within the study area include Sylvan (Scholls Ferry Road), Canyon Road, Highway 217/Barnes Road, Murray Boulevard, Cornell Road, 185th Avenue, and Cornelius Pass Road.

The Tualatin Valley Highway (Highway 8) is a five-lane principal route. It stretches from Highway 217 to Forest Grove. East of Highway 217, Highway 8 becomes Canyon Road and it ends at Sunset Highway. It carried between 19,100 vpd, recorded southwest of Canyon Lane, and 41,800 vpd, recorded east of 185th Avenue.

Farmington Road (Highway 10) is a two-lane roadway from Highway 219 to Murray Boulevard where it becomes a five-lane roadway, and finally merges with Beaverton-Hillsdale Highway as it nears Highway 217. In 1988, traffic volume ranged from 2,700 vpd, at the west edge of the study area, and 20,200 vpd, recorded east of SW 160th Avenue.

Other major radial facilities are Walker Road, linking Beaverton to Hillsboro via Cornell Road; Cornell Road, connecting North Sunset Corridor to Hillsboro; Farmington Road, connecting Portland to Gaston and western Washington County; and Scholls Ferry Road, connecting Portland to Scholls.

North-South or Circumferential Facilities

There are a limited number of north-south or circumferential facilities in the study area. Many of the circumferential links in the Western Bypass study area stretch between Scholls Ferry Road and Sunset Highway including: Murray Boulevard, 185th Avenue, 170th Avenue, Cornelius Pass Road/216th Avenue/219th Avenue, and Glencoe Road/First Avenue/Highway 219. These roadways consist of both major and minor arterials, with the exception of Highway 217 which is classified as a freeway facility. Almost all of these facilities serve as major connections between the Sunset Corridor and the Beaverton, Tigard, areas, but they are discontinuous routes and can result in out-of-direction travel and use of circuitous road systems.

The only continuous circumferential facility within the Western Bypass study area is Highway 217, connecting Sunset Highway on the north to Interstate 5 on the south. It is a four-lane freeway facility linking Lake Oswego, Tualatin, Tigard and Beaverton. Its capacity ranges between 4,000 and 4,500 vph per direction. Average weekday traffic volumes ranged between 73,200 vpd, recorded south of Beaverton-Hillsdale Highway (Highway 10) Interchange, and 99,000 vpd, recorded south of the next southbound interchange at SW Allen Boulevard. There are no alternate north-south facilities in the study area to relieve the traffic demands on this highway, which in 1988 included a significant portion of trips made between the north and the south/southeast portions of the study area.

Tualatin, Durham, and Tualatin-Sherwood/Edy Roads are located south of the City of Tigard. These roadways are the primary links on the southern end of the study area, connecting Highway 99W and Interstate 5.

Existing Transit System

The study area is currently served with transit by the Tri-County Metropolitan Transportation District (Tri-Met) as is the rest of the Portland metropolitan area. Within the Western Bypass study area an all-bus network of radial routes is strongly orientated toward the Portland CBD. Routes typically run west, southwest, and south along major regional arterials and transportation corridors, depending upon their orientation within the study area. A timed-transfer system involves transit centers where buses in the area meet at regular intervals, a system of feeder buses and trunk line buses, and a "pulse" scheduling system to provide timely, interconnected service. Primary arterials accommodating transit within the study area include the Tualatin Valley Highway, Sunset Highway, I-5, Farmington Road, Scholls Ferry Road, Beaverton-Hillsdale Highway, and Highway 99W. These primary arterial routes are shown in Figure 4.

Although the radial trunk routes are primarily oriented to serve work-related commute trips to and from the Portland CBD, they also accommodate some demand for non-work trips destined for the CBD. However, because these routes are designed to provide direct service to the CBD, and thus rarely deviate from their direct paths, their ability to collect and distribute large numbers of passengers within the study area is limited to their immediate corridors. These trunk routes must rely on feeder routes to supply such collection and distribution functions. Most trunk routes in the study area run on headways of 20 minutes during peak operations, and on 30 minute headways during off-peak operations. Capacities of the various routes depend on the number of buses being used, headway spacing, and the size of the vehicles being operated on the route.

Non-CBD bound trips (i.e., cross-town trips and local trips) are generally not served well by CBD-oriented trunk routes. To provide better service to potential cross-town transit patrons, Tri-Met has developed a network of suburban transit centers. These transit centers are fed by a number of local transit routes which provide collection and distribution operations. The various suburban transit centers are connected by several cross town routes which allow for travel and for cross-town trips between transit centers. The CBD oriented transit routes also interact with this transit center network, providing direct access to the CBD. This suburban transit service suffers from the lack of roadway grid continuity and circumferential routes in the study area.

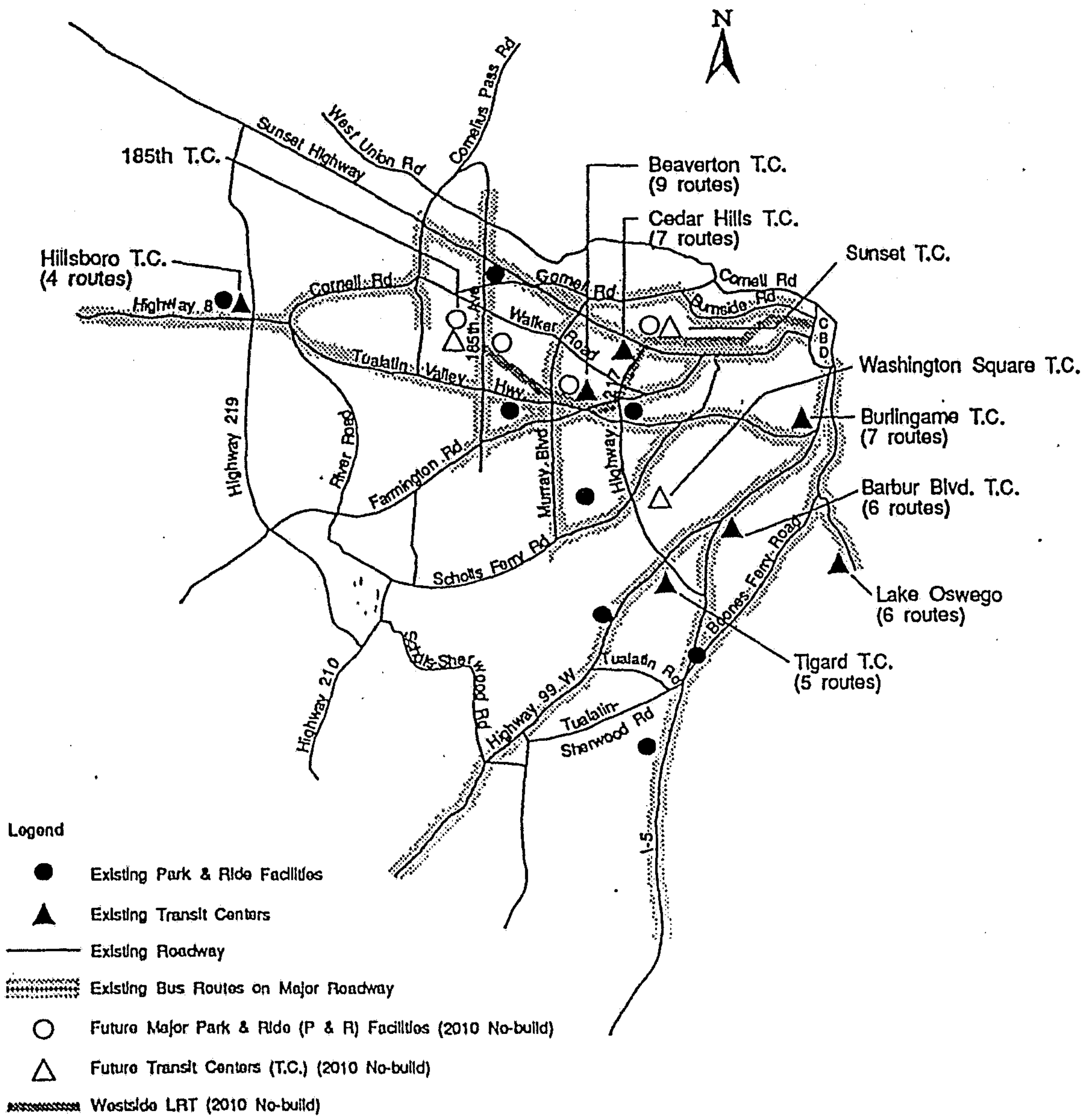

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Figure 4
1988 EXISTING TRANSIT FACILITIES AND 2010 NO-BUILD TRANSIT FACILITIES SERVING THE STUDY AREA
Western Bypass Study

Within the Western Bypass study area, travelers are served by a transit center network which includes four suburban transit centers: Tigard, Beaverton, Cedar Hills, and Hillsboro Transit Centers. Additionally, another three transit centers (Lake Oswego, Barbur Boulevard, and Burlingame) are within close proximity to Western Bypass study area communities, as shown in Figure 4.

In addition to the network of transit centers, Tri-Met also maintains a number of park-and-ride facilities within, or on the perimeter of the Western Bypass study area. Currently, the study area is served by eight park-and-ride lots of 200 or more spaces each. These facilities are pictured in Figure 4.

The system of suburban transit centers, local routes, cross-town connectors, CBD-oriented trunk routes, and park-and-ride facilities is effective in allowing Tri-Met to continue serving their traditional transit market (i.e., CBD-oriented commuter trips) while at the same time providing some measure of local connectivity and circulation. However, limitations on the transit system such as a lack of through-roads oriented towards cross-town travel, lower densities, and dispersed employment centers, reduce transit effectiveness in the Western Bypass study area.

In addition to the all-bus network in the Western Bypass study area, Tri-Met provides the Tri-County LIFT Program, a door to door dial-a-ride service for persons with special transportation needs.

Future No-Build Transportation System

In order to develop future base traffic projections, a future No-Build transportation system for the Western Bypass study area was defined. The analysis of the deficiencies associated with the future No-Build alternative will be used to develop alternative solutions for improved travel. The No-Build is the alternative against which the other alternatives will be compared. This system consists of both transit- and highway-oriented facilities. The system includes all transportation facilities and networks which existed in 1988 plus any transportation projects with committed funding as of 1990 which will be implemented by the year 2010 (see Figure 5). In addition to these funded projects, the future No-Build transportation system also includes the Westside Light Rail Line to 185th Avenue and its accompanying improvements (see Figure 4). The definition of the No-Build alternative was adopted by the Citizens Advisory, Technical Advisory, and Steering Committees.

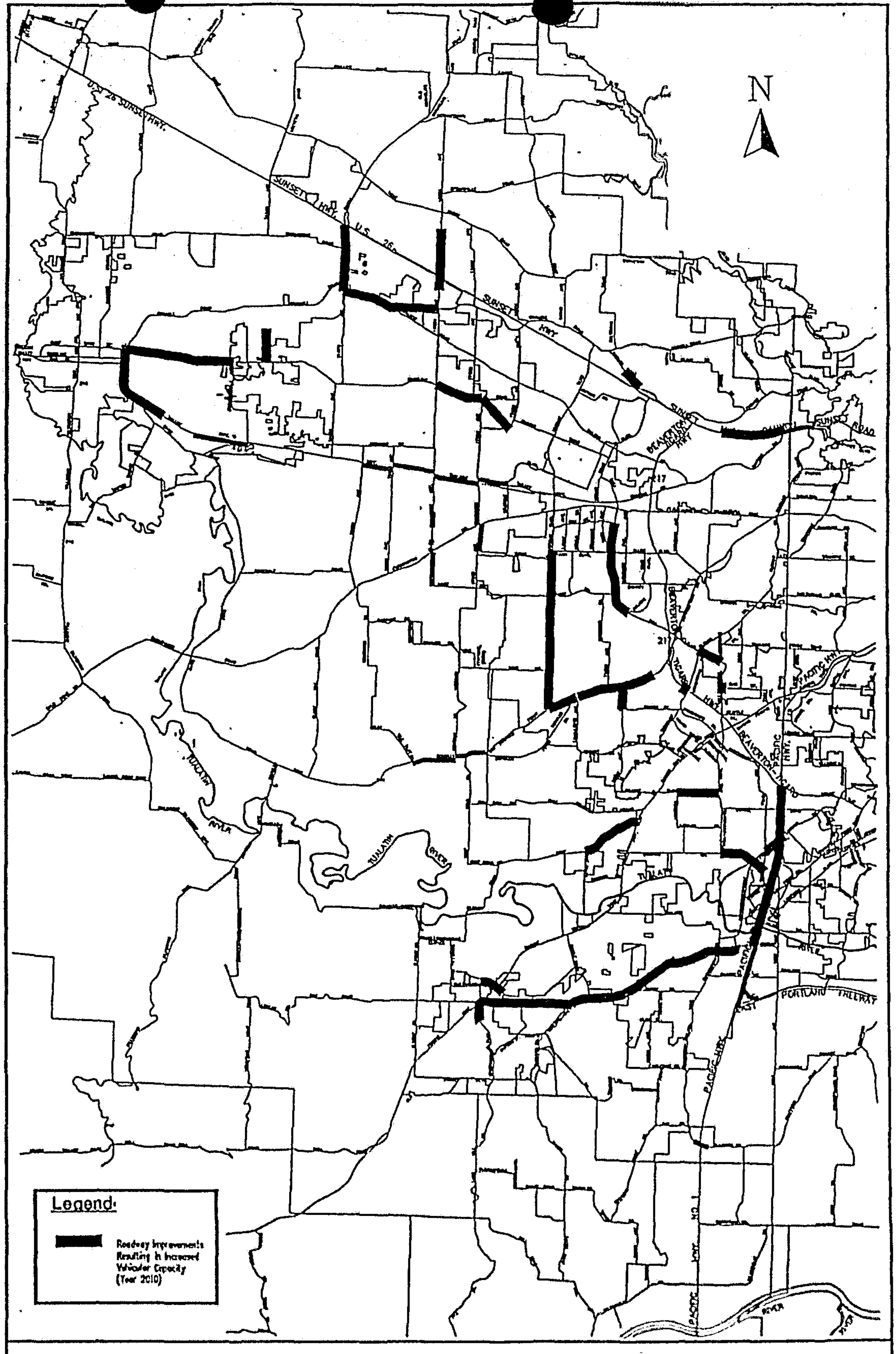

Figure 5
ROADWAY CAPACITY IMPROVEMENTS
INCLUDED IN YEAR 2010 TRAFFIC MODEL
Western Bypass Study

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REGIONAL AND STUDY AREA GROWTH

Population and Employment Growth

The region is growing at a very fast rate and the study area is the most significant area of growth for both population and employment within the region. The study area will continue to become a more significant regional force, and the demand for mobility will increase accordingly.

Population growth in the Portland Metropolitan region is expected to continue to lead the State and, as can be seen in Table 1, will increase by 34.8 percent between 1988 and 2010. Within the region, the study area is expected to continue to be the area of greatest growth with a population increase of 60.3 percent. The same relationship is true in the economic sector, where employment will increase by 38.2 percent in the region and 73.4 percent in the study area. With the past trends in growth in population and employment continuing, the study area's share of the region's population will increase from 18.5 percent in 1988 to 22.0 percent in 2010, while the study area's share of the region's employment will increase from 19.3 percent to 24.3 percent during that same period.

Travel Growth

Person trips are projected to grow significantly in the region, and person trips will grow proportionally faster in the study area than the region as a whole. As the study area grows more quickly in both employment and population there will be more opportunity to travel for work, commercial, retail and recreational activities to and within the study area. Data related to person trips are summarized in Table 1.

The study area accounted for 19.5 percent of the total trips in the region in 1988. This percentage is expected to increase to 23.8 percent by the year 2010. Overall, person trips related to the study area will grow by about 66.8 percent between 1988 and the year 2010. In comparison, person trips related to the region will grow by 36.8 percent.

The higher rate of growth observed for non-work person trips may occur because there will be more opportunities to travel within the region and the study area, as the environment becomes more urbanized and as the economy shifts to a service-oriented base.

By definition, work purpose trips include those from home to work and from work to home only. Non-work purpose trips include school, college, shopping, recreation, and other trips. Neither of these trip purposes include walk and bike person trips. However, shown in Table 2 is a distribution of the total regional and total study area trips by mode, including walk and bike trips. As can be seen, walk and bike trips comprise a minimal proportion of the total trips in both 1988 and 2010.

TABLE 1
POPULATION, EMPLOYMENT, AND TRAVEL GROWTH IN THE REGION AND STUDY AREA (IN THOUSANDS)
1988 Existing and 2010 No Build

	REGION			STUDY AREA		
	1988	2010	Percent Growth	1988	2010	Percent Growth
POPULATION	1,334.2	1,799.0	34.8%	246.5	395.2	60.3%
Percent of Region				18.5%	22.0%	
EMPLOYMENT						
Retail	118.5	184.1	55.4%	25.4	46.7	83.9%
Other	586.1	789.7	34.7%	110.9	189.7	71.1%
Total Employment	704.6	973.8	38.2%	136.3	236.4	73.4%
Percent of Region				19.3%	24.3%	
PERSON TRIPS BY PURPOSE						
Work Trips	937.9	1,226.7	30.8%	183.9	297.5	61.8%
Auto Trips	743.0	942.2	26.8%	154.5	248.8	61.0%
Carpool Trips	128.5	171.2	33.2%	24.3	39.3	61.7%
Transit Trips	66.3	113.3	70.9%	5.0	9.4	88.0%
Non-Work Trips	3,531.3	4,887.7	38.4%	689.4	1,159.1	68.1%
Auto Trips	3,447.7	4,779.7	38.6%	683.9	1,150.0	68.2%
Transit Trips	83.6	108.0	29.2%	5.5	9.1	65.5%
Total Person Trips*	5,407.0	7,341.1	35.8%	1,057.1	1,754.1	65.9%
Percent of Region				19.6%	23.9%	
PERSON TRIPS BY MODE						
Auto Trips	4,190.7	5,721.8	36.5%	838.4	1,398.8	66.8%
Transit Trips	149.9	221.4	47.7%	10.5	18.5	76.2%
Carpool Trips**	128.5	171.2	33.2%	24.3	39.3	61.7%
Total Person Trips*	4,469.1	6,114.4	36.8%	873.2	1,456.6	66.8%
Percent of Region				19.5%	23.8%	
VEHICLE TRIPS BY PURPOSE						
Work Trips	796.3	1,008.4	26.6%	164.1	264.3	61.1%
Non-Work Trips	2,647.2	3,665.4	38.5%	526.5	884.5	68.0%
Total Vehicle Trips***	3,443.5	4,673.8	35.7%	690.6	1,148.8	66.3%
Percent of Region				20.1%	24.6%	

Notes:
*Does not include walk and bicycle trips.
** Carpool Trips are not defined for non-work purpose
***Excludes commercial vehicle trips as well as external vehicle trips (i.e., trips coming from areas outside the region).

TABLE 2
DAILY PERSON TRIPS BY MODE (IN THOUSANDS)
1988 Existing and 2010 No-Build

	1988 Existing				
	Walk & Bike Trips	Auto Trips	Carpool Trips	Transit Trips	Total Trips
Study Area	33.9 3.7%	838.4 92.4%	24.3 2.7%	10.5 1.2%	907.1 100.0%
Region	214.8 4.6%	4,190.7 89.5%	128.5 2.7%	149.9 3.2%	4,683.9 100.0%
Region without Study Area	180.9 4.8%	3,352.3 88.8%	104.2 2.8%	139.4 3.7%	3,776.8 100.0%
	2010 No-Build				
	Walk & Bike Trips	Auto Trips	Carpool Trips	Transit Trips	Total Trips
Study Area	59.2 3.9%	1,398.8 92.3%	39.3 2.6%	18.5 1.2%	1,515.8 100.0%
Region	334.2 5.2%	5,721.8 88.7%	171.2 2.7%	221.4 3.4%	6,448.6 100.0%
Region without Study Area	275.0 5.6%	4,323.0 87.6%	131.9 2.7%	202.9 4.1%	4,932.8 100.0%
	Growth between 1988 and 2010				
	Walk & Bike Trips	Auto Trips	Carpool Trips	Transit Trips	Total Trips
Study Area	74.6%	66.8%	61.7%	76.2%	67.1%
Region	55.6%	36.5%	33.2%	47.7%	37.7%
Region without Study Area	52.0%	29.0%	26.6%	45.6%	30.6%

Mode Choice

Modal transportation options available to travelers within the Portland region and the Western Bypass study area includes the single occupant vehicle, shared ride or carpool option, and transit. Although biking and walking are also modal options available to travelers, they comprise only a small portion of the total trips in the region in comparison to the mechanized modes. These non-mechanized modes will be discussed in subsequent sections.

As shown in Table 3, the single occupant vehicle is and will continue to be the primary mode of choice for work trips in both the region and the study area. Carpool trips, defined only for work-related trips, comprised a much smaller portion of the trip-making totals within the region and study area. They represented only 13.7 percent of the total work trips in 1988 and only 13.2 percent in 2010 (see Table 3). The proportion of the total study area work trips by carpool will remain nearly constant, ranging between at 13.3 percent and 13.2 percent (see Table 3). Transit, consisting of a bus only system in 1988 and a combination bus and light rail system under the 2010 No-Build scenario, is shown to carry fewer work travelers than do carpools in both 1988 and 2010 within the study area.

Reliance on the automobile is even more dominant for non-work purposes than work purposes. The definitions of modal options differ slightly for work and non-work purposes. For non-work purposes, single occupancy vehicles and multi occupancy vehicles are not differentiated between in Metro's modeling process. These two modes are included in a single mode identified as the auto mode. Transit is defined for the non-work purpose as it was for the work purpose trip.

For the non-work purpose, auto trips accounted for nearly 98 percent of the region's trips in both 1988 and 2010 (3,447,700 trips and 4,779,700 trips respectively). For study area non-work trips, the auto mode accounted for 99 percent of the total in both 1988 and 2010 (683,900 trips and 1,150,000 trips, respectively). Transit accounted for the remaining 2 percent of the total non-work trips in the region and 1 percent in the study area in both 1988 and 2010.

Trip Types

For the study, trips within the region and the study area were grouped into four trip types: local (or shorter than average trip lengths of six miles), regional, interregional, and through trips. These trip types are defined for the region and the study area as shown in Figure 6 and 7. For this analysis, "study area trips" were defined as those trips which were either attracted to the study area, generated within the study area, or passing through the study area.

TABLE 3

MODE CHOICE BY PURPOSE IN THE REGION AND STUDY AREA (IN THOUSANDS)

1988 Existing and 2010 No-Build

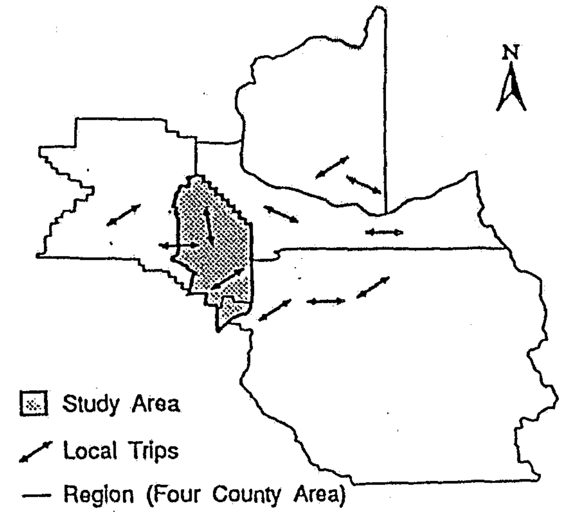
	REGION				STUDY AREA			
	1988	Percent	2010	Percent	1988	Percent	2010	Percent
PERSON TRIPS BY PURPOSE								
Work Trips								
Auto Trips	743.0	79.2%	942.2	76.8%	154.5	84.0%	248.8	83.6%
Carpool Trips	128.5	13.7%	171.2	14.0%	24.4	13.3%	39.3	13.2%
Transit Trips	66.4	7.1%	113.3	9.2%	5.0	2.7%	9.4	3.2%
Total Trips	937.9	100.0%	1,226.7	100.0%	183.9	100.0%	297.5	100.0%
Non-Work Trips								
Auto Trips	3,447.7	97.6%	4,779.7	97.8%	683.9	99.2%	1,150.0	99.2%
Transit Trips	83.6	2.4%	108.0	2.2%	5.5	0.8%	9.1	0.8%
Total Trips	3,531.3	100.0%	4,887.7	100.0%	689.4	100.0%	1,159.1	100.0%
Total Person Trips*	4,469.2		6,114.4		873.3		1,456.6	

Note:
*Does not include walk and bicycle trips.

Local Trips

A local trip is defined as one of less than 6 miles in length which has both its origin and destination within the region.

The 6 mile length used to define the local trip is equal to the average trip length observed within the region.



Regional Trips

A regional trip is defined as one of more than 6 miles in length, with both its origin and destination within the region.

Note that regional trips can pass through the study area while remaining within the region.

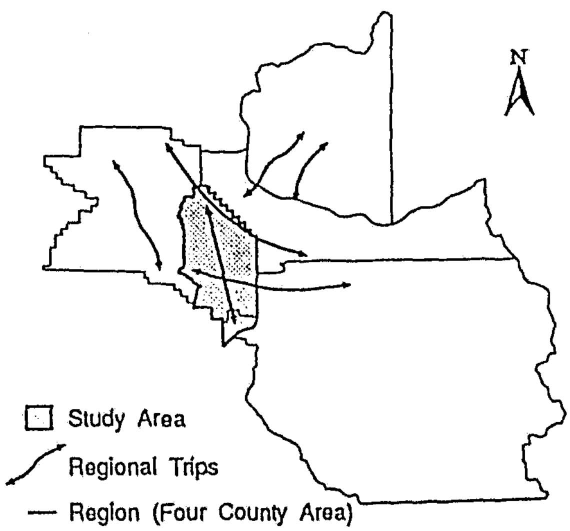


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Figure 6
TRIP TYPE DEFINITION

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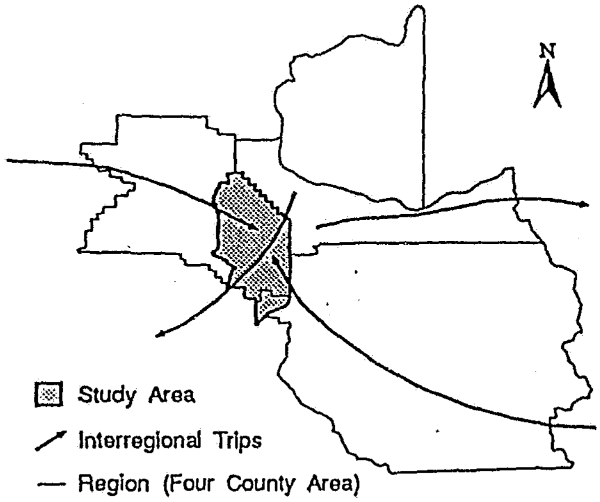
Interregional Trips

An interregional trip is defined as having one trip end within the region and one trip end outside the region. Thus, an interregional trip will have either its origin or its destination within the region, but not both.

Note that interregional trips can pass through the study area while fulfilling the criteria of an interregional trip.



Through Trips

A through trip is one which has neither its origin nor its destination within the region. These trips may pass through the study area or skirt around it.

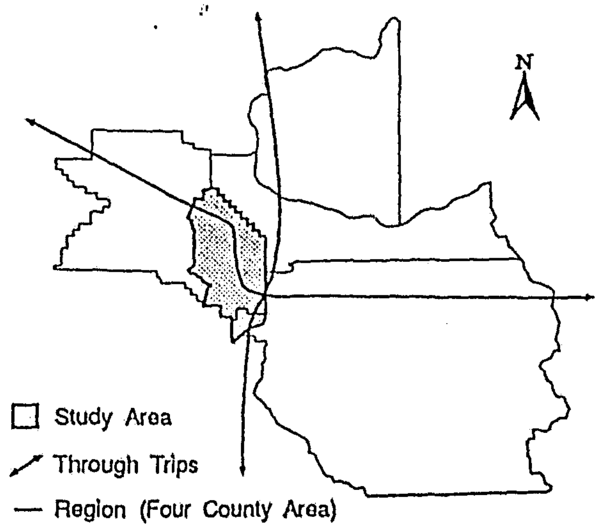


Figure 7
TRIP TYPE DEFINITION ... CONTINUED

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A high percentage of trips in the study area were (in 1988) and will be (in 2000) less than six miles in length. This high percentage of local trips in both 1988 and 2010 is not unique to the study area, and in fact is characteristic of the Portland region and most other urban areas. Individual households within the region and the study area are estimated to make on average ten trips per day. Many of these trips will be of less than six miles in length. These numerous local trips will generally outnumber regional, interregional, and through trips and are a major component of regional travel demand.

As demonstrated in Figure 8, the analysis of trip types showed that 62 percent of the total daily study area trips which occurred in 1988 were local trips. This compares to 28 percent daily regional trips, 9 percent daily interregional trips, and 1 percent daily through trips. However a high proportion of longer than six mile regional trips are tied to the study area. Although interregional trips beginning or ending within the study area account for only 9 percent of the total daily study area trips, they represent 23 percent of the regions total daily interregional trips. Similarly, although trips passing through the study area and the region amount to only 1 percent of the total study area trips, they represent 73 percent of all the through trips passing through the Portland Metropolitan region on an average daily basis.

Likewise for the 2010 No-Build Scenario, the analysis of trip types indicates that 68 percent of the total daily study area trips will be local, 22 percent will be regional, 9 percent will be interregional, and 1 percent will be through trips. Interregional trips beginning or ending within the study area will represent 27 percent of the region's total daily interregional trips while through trips traversing the study area will represent 76 percent of the total daily trips passing through the region.

As shown in Figure 9, the distribution of trips from the region is similar to that demonstrated by the study area for both 1988 and 2010. A notable difference between the study area and regional distributions of trip types is the fact that, for the study area, the regional, interregional, and through trip categories generally reflect higher percentages of the total study area trips than do their regional counterparts. This fact reflects the high percentage of total interregional and through trips which pass through or begin and end within the study area. It also is indicative of a suburban environment in which many of the trips made by local residents to access employment and retail centers must be greater than six miles. However, the shift away from regional trips to more local trips within the study area, as shown in Figure 8, demonstrates that the study area is expected to gradually become more integrated in its land uses reducing the need for its residents to travel long distances to access work or local amenities.

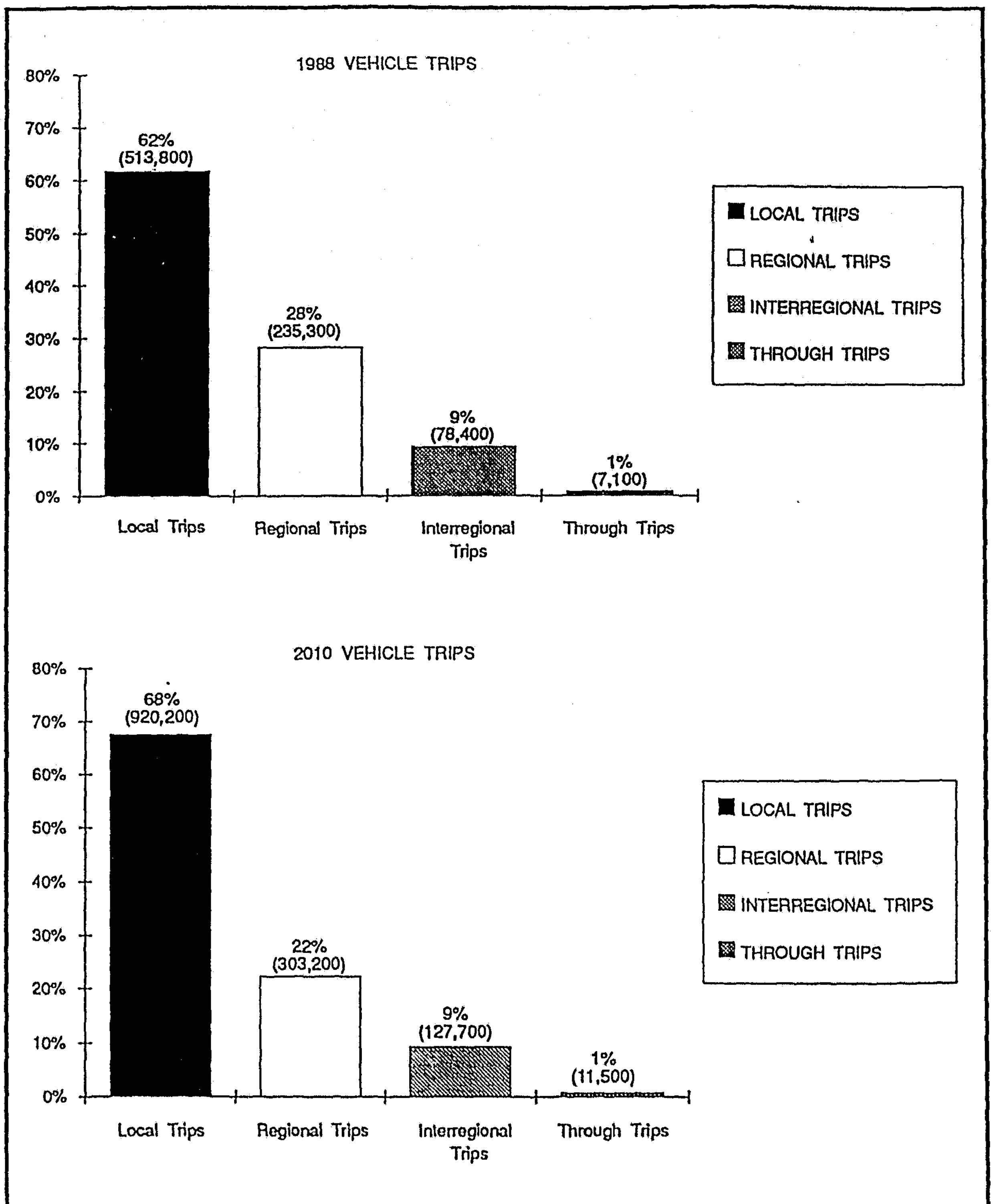

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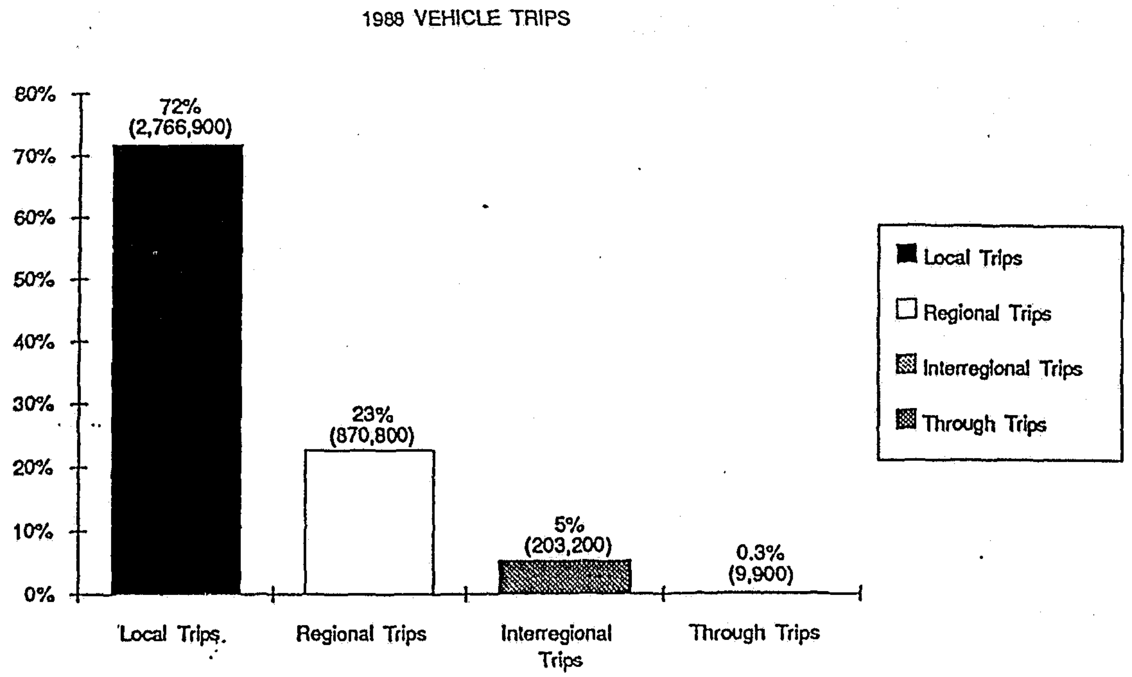
Figure 8

DISTRIBUTION OF 1988 AND 2010 VEHICLE TRIPS ORIGINATING IN, DESTINED TO, OR PASSING THROUGH THE STUDY AREA

Western Bypass Study



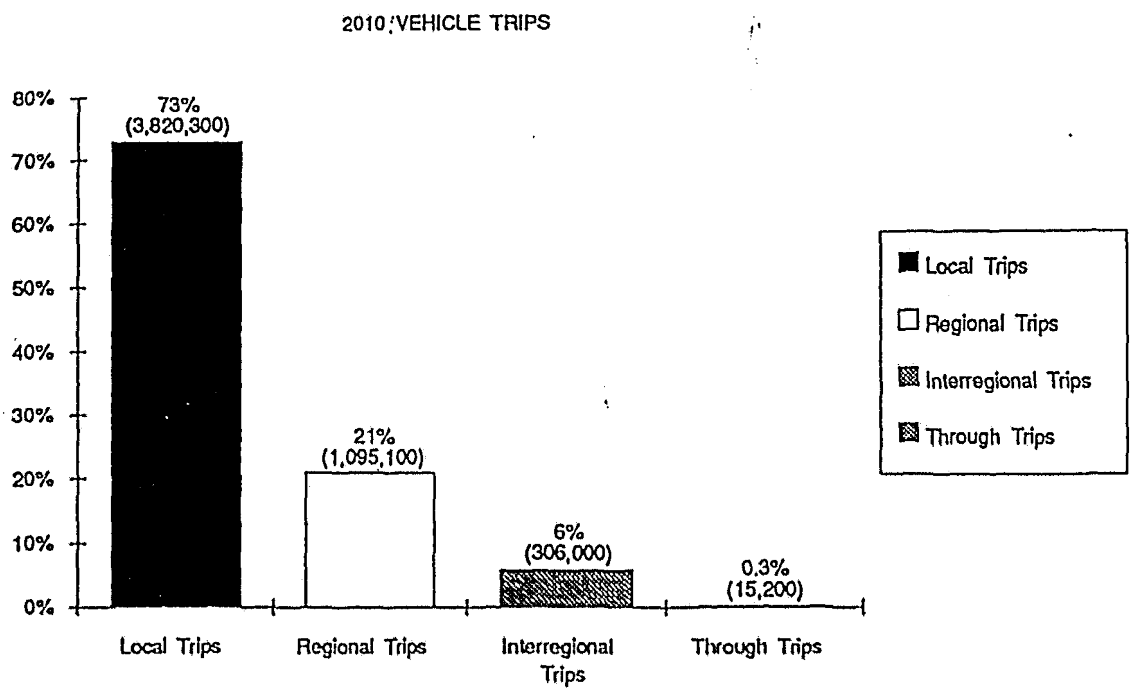


Figure 9

DISTRIBUTION OF 1988 AND 2010 VEHICLE TRIPS ORIGINATING IN, DESTINED TO, OR PASSING THROUGH THE REGION

Western Bypass Study

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Vehicle Trip Distribution

Between 1988 and 2010 the percentage of study area vehicle trips will grow as a whole. Moreover the percentage of these vehicle trips which remain in the study area will increase. These increases in percentages of both work and non-work trips remaining within the study area reflect the fact that both population and employment are expected to increase significantly within the study area and at a faster rate than for the region as a whole, thus providing more opportunities to both live, work, and shop within the study area.

Within the region, total work and non-work vehicle trips will grow by 35.7 percent. Total work and non-work vehicle trips generated by the study area are expected to grow by 66.3 percent during the same period. The study area's share of the region's work and non-work vehicle trips in 1988 amounted to 20.1 percent. This proportion is expected to increase to 24.6 percent by the year 2010.

Of the total work vehicle trips generated in the study area in 1988, 60 percent stayed within the study area and the remaining 40 percent was dispersed to other parts of the region. By the year 2010, study area internal trips are expected to increase to over 70 percent of total vehicle trips while almost 30 percent will continue to be distributed to other parts of the region.

Analysis of North-South or Circumferential Travel Between Districts Within the Study Area

An adopted goal (Goal 2) for the Western Bypass Study is to develop a solution to transportation problems related to accommodating major existing and future (year 2010) state, regional, and intra-county travel needs primarily north-south or circumferential within the project study area. Circumferential travel is any person trip which is directed between or across radial routes, and is not limited by trip length or purpose. Circumferential travel in most of the study area (north and central portions) would be oriented north-south. Circumferential travel in the southeastern portion of the study area would be oriented east-west. Certain trips in this category may use radial routes for a portion of the trip to travel in the circumferential direction.

In order to further investigate travel patterns an analysis was conducted to estimate north-south or circumferential travel between districts within the study area. This analysis did not include study area trips that both begin and end within the same district, some of which would be directed north-south or circumferential. Districts were defined as a means to aggregate information for simplifying the detailed data available for analysis. The location or boundaries of these eight districts are shown in Figure D-1 of Appendix D.

There is a significant demand for north-south or circumferential travel within the study area. Table 4 lists the number of trips between and within the eight districts in the study area. The shaded volumes in Table 4 indicate trips that are north-south or circumferential between these eight districts in the study area. North-south or circumferential trips which begin and end within the same district within the study area are not included in the shaded volumes. Trips which do not have both ends in the study area are not included in this table.

In 1988, these circumferential trips between districts comprised 29 percent of the total internal study area person trips. In 2010, these trips are expected to constitute 28 percent of the total internal study area trips.

If trips are divided by mode, transit versus auto, it can be seen that for 1988, 30 percent of transit trips and 29 percent of auto trips remaining within the study area were north- south or circumferential between districts. In 2010, the proportion of circumferential transit trips between districts will reduce slightly to 28 percent, while the auto percentage will reduce slightly to 28 percent.

These levels of circumferential trips between districts in the study area, by both auto and transit modes, are significant. They represent a significant proportion of the trips being made within the study area. In 1988, they account for 183,452 trips, and in 2010 for 323,168 trips daily, or a 76 percent increase in north-south or circumferential travel between districts within the study area, between 1988 and 2010.

TABLE 4

ANALYSIS OF NORTH-SOUTH / CIRCUMFERENTIAL TRAVEL BETWEEN DISTRICTS WITHIN THE STUDY AREA

1988 Study Area Summary Matrix

I/J	(6) BEAVERTON			(7) TIGARD			(8) TUALATIN/WILSONVILLE			(9) SCHOLLS		
DISTRICTS	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT
(6) BEAVERTON	117,475	863	118,338	27,422	179	27,601	3,756	19	3,774	785	2	787
(7) TIGARD	27,422	179	27,601	45,563	266	45,830	8,407	34	8,441	848	2	850
(8) TUALATIN / WIL	3,756	19	3,774	8,407	34	8,441	29,985	122	30,106	959	2	961
(9) SCHOLLS	785	2	787	848	2	850	959	2	961	1,541	3	1,544
(11) ALOHA	38,135	225	38,359	5,960	33	5,993	998	6	1,004	733	3	736
(12) HILLSBORO	4,960	29	4,989	603	6	608	248	2	250	412	2	414
(13) N. SUNSET	18,159	101	18,260	2,282	13	2,295	425	3	428	121	1	122
(14) HELVETIA	305	1	306	45	0	45	11	0	11	7	0	7
TOTAL->	210,996	1,418	212,414	91,330	534	91,864	44,788	187	44,975	5,406	16	5,422
N/S CIR ->	49,336	299	49,635	44,918	266	45,184	14,804	66	14,869	2,232	8	2,240
% N/S CIR ->	23%	21%	23%	49%	50%	49%	33%	35%	33%	41%	51%	41%

I/J	(11) ALOHA			(12) HILLSBORO			(13) NORTH SUNSET CORR.			(14) HELVETIA			TOTAL STUDY AREA TRIPS		
DISTRICTS	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT
(6) BEAVERTON	38,135	225	38,359	4,960	29	4,989	18,159	101	18,260	305	1	306	210,997	1,418	212,414
(7) TIGARD	5,960	33	5,993	603	6	608	2,282	13	2,295	45	0	45	91,330	534	91,864
(8) TUALATIN / WIL	998	6	1,004	248	2	250	425	3	428	11	0	11	44,788	187	44,975
(9) SCHOLLS	733	3	736	412	2	414	121	1	122	7	0	7	5,406	16	5,422
(11) ALOHA	63,613	427	64,040	15,079	68	15,147	13,888	136	14,024	767	1	768	139,172	899	140,071
(12) HILLSBORO	15,079	68	15,147	56,778	285	57,062	4,733	56	4,789	1,014	1	1,015	84,007	448	84,454
(13) N. SUNSET	13,888	136	14,024	4,714	55	4,769	19,383	134	19,517	1,017	0	1,017	59,989	442	60,431
(14) HELVETIA	766	2	768	1,013	2	1,015	1,012	5	1,017	372	0	372	3,530	10	3,541
TOTAL->	139,171	900	140,071	84,007	448	84,454	59,983	448	60,431	3,537	3	3,541	639,218	3,955	643,173
N/S CIR ->	22,344	180	22,525	7,191	66	7,257	39,588	309	39,897	1,844	2	1,846	182,256	1,196	183,452
% N/S CIR ->	16%	20%	16%	9%	15%	9%	66%	69%	66%	52%	67%	52%	29%	30%	29%

2010 Study Area Summary Matrix

I/J	(6) BEAVERTON			(7) TIGARD			(8) TUALATIN/WILSONVILLE			(9) SCHOLLS		
DISTRICTS	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT
(6) BEAVERTON	137,357	864	138,221	35,031	185	35,216	8,172	31	8,203	771	2	773
(7) TIGARD	35,031	185	35,216	66,509	388	66,897	20,060	89	20,149	1,014	3	1,018
(8) TUALATIN / WIL	8,172	31	8,203	20,060	89	20,149	79,187	342	79,530	2,191	6	2,197
(9) SCHOLLS	771	2	773	1,014	3	1,018	2,191	6	2,197	1,579	7	1,586
(11) ALOHA	59,086	322	59,408	11,175	63	11,238	2,794	17	2,812	1,614	7	1,621
(12) HILLSBORO	5,853	29	5,882	1,091	8	1,099	500	4	503	1,118	4	1,122
(13) N. SUNSET	23,487	137	23,624	2,800	19	2,820	728	6	734	149	2	150
(14) HELVETIA	363	1	365	61	0	61	22	0	22	10	0	10
TOTAL->	268,120	1,573	269,693	137,743	756	138,499	111,654	496	112,150	8,447	31	8,478
N/S CIR ->	64,690	353	65,044	70,220	365	70,584	32,467	153	32,620	5,082	19	5,101
% N/S CIR ->	24%	22%	24%	51%	48%	51%	29%	31%	29%	60%	60%	60%

I/J	(11) ALOHA			(12) HILLSBORO			(13) NORTH SUNSET CORR.			(14) HELVETIA			TOTAL STUDY AREA TRIPS		
DISTRICTS	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT
(6) BEAVERTON	59,086	322	59,408	5,853	29	5,882	23,487	137	23,624	363	1	365	268,120	1,573	269,693
(7) TIGARD	11,175	63	11,238	1,091	8	1,099	2,800	19	2,820	61	0	61	137,743	756	138,499
(8) TUALATIN / WIL	2,794	17	2,812	500	4	503	728	6	734	22	0	22	111,654	496	112,150
(9) SCHOLLS	1,614	7	1,621	1,118	4	1,122	149	2	150	10	0	10	8,447	31	8,478
(11) ALOHA	174,382	1,265	175,647	35,829	171	36,000	38,665	275	38,940	1,675	5	1,680	325,222	2,125	327,347
(12) HILLSBORO	35,829	171	36,000	121,818	688	122,506	9,901	109	10,010	1,367	4	1,371	177,477	1,016	178,493
(13) N. SUNSET	38,665	275	38,940	9,901	109	10,010	42,676	371	43,048	1,219	6	1,225	119,625	925	120,550
(14) HELVETIA	1,675	5	1,680	1,367	4	1,371	1,219	6	1,225	282	1	283	4,999	18	5,017
TOTAL->	325,222	2,125	327,347	177,477	1,016	178,493	119,625	925	120,550	4,999	17	5,017	1,153,287	6,938	1,160,225
N/S CIR ->	55,925	368	56,292	13,976	129	14,105	75,730	547	76,278	3,135	9	3,144	321,225	1,942	323,168
% N/S CIR ->	17%	17%	17%	8%	13%	8%	63%	59%	63%	63%	53%	63%	28%	28%	28%

PERCENT INCREASE IN TRIPS BETWEEN 1988 AND 2010

I/J	(6) BEAVERTON			(7) TIGARD			(8) TUALATIN/WILSONVILLE			(9) SCHOLLS		
DISTRICTS	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT
TOTAL->	27%	11%	27%	51%	41%	51%	140%	165%	140%	56%	93%	56%
N/S CIR ->	31%	18%	31%	56%	37%	56%	119%	133%	119%	126%	125%	126%

I/J	(11) ALOHA			(12) HILLSBORO			(13) NORTH SUNSET CORR.			(14) HELVETIA			TOTAL STUDY AREA TRIPS		
DISTRICTS	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT	AUTO	TRANSIT	TOT
TOTAL->	134%	136%	134%	111%	127%	111%	99%	106%	99%	41%	409%	42%	80%	75%	80%
N/S CIR ->	150%	104%	150%	94%	94%	94%	91%	77%	91%	70%	0%	70%	76%	62%	76%

Identifies circumferential movements staying within the study area

Note:
This table includes trips with both ends (origin and destination) in the study area.
It does not include north-south or circumferential trips within the study area but with either the origin or destination outside the study area.

EXISTING AND FUTURE DEFICIENCIES

The analysis of existing and future transportation deficiencies within the study area was based on a study of roadway levels-of-service during the PM peak hour using Metro's regional forecasting model refined for use on this study. It should be noted that this information was developed at a systems level using updated population, employment and traffic data projected through the year 2010. Individual roadways are analyzed based on volumes of traffic on sections of roadways rather than at an intersection level of detail. Congestion on roadways, therefore, may differ somewhat from those identified in the Washington County transportation plan and the Metro RTP.

Level-of-service (LOS) ratings are used to describe how well traffic flows on a particular facility or through an intersection. Level-of-service is defined by such factors as freedom to maneuver, speed, driver discomfort and frustration, fuel consumption, lost travel time, and delay. Level-of-service on arterials is heavily affected by the type of arterial (principal, minor, suburban, or urban), number of signalized intersections per mile, speed limits, separate left-turn lanes, parking, pedestrian interference, and roadside developments.

Congestion is measured by comparing the relationship between the volume of traffic during the peak hour of travel for a certain section of roadway with the capacity which that same section can reasonably accommodate. The volume of traffic is either recorded in the field or estimated from regional forecasts. Capacity is determined by a number of criteria including number of traffic lanes, type of traffic control, roadway geometry, and speed of travel.

Levels-of-service ratings range from "A" to "F", with "A" being the best rating and "F" the worst. At LOS D small increases in traffic volumes will cause level of service to deteriorate rapidly, and driver comfort is poor. LOS E is indicative of significant congestion, while LOS F represents severe congestion or failure with high driver frustration. Characteristics of each Level-of-Service are detailed in the appendix.

For the purpose of analysis, the relationship between level of service and volume-to-capacity ratios (V/C) was defined such that a V/C ratio of 0.80 or less indicated a LOS of C or better; a V/C ratio of 0.80 to 1.0 indicated a LOS of D or E; and a V/C ratio of 1.0 or greater indicated a LOS of F. These definitions were based on the Highway Capacity Manual, TRB Special Report 209, 1986.

Table 5 summarizes peak hour traffic volumes and levels of service in 1988 and 2010 on selected roadways within the study area. As depicted in Figures 10 and 11, roadway congestion in both 1988 and the 2010 No-Build Scenario occurs throughout the Western Bypass study area. Significant portions of the study area were subject to roadway LOS of D or worse during 1988. This pattern of congestion is expected to worsen by 2010 under the No-Build scenario, spreading over much of the developed portions of the study area. The existing major north-south or circumferential roadways within the study area currently are, or are projected to experience, significant traffic congestion over the next two decades. Due to the lack of these circumferential roadways in the study area, a certain amount of circumferential traffic will use radial routes to move north-south, increasing congestion on them (See Appendix D).

Previous analysis showed that vehicle hours of delay will increase by 246 percent between 1988 and 2010 in the study area and 179 percent in the region. (Forecasting Analysis Results, October 26, 1990). People will spend more time traveling between origins and destinations. As congestion spreads on primary arterials and highway networks such as those identified on Table 5 and Figures 10 and 11, traffic will likely divert to rural roadways and arterials which provide less frustration and possibly shorter travel times. These secondary networks have not been designed for higher traffic volumes and do not provide direct routes. Vehicle miles of travel will increase and safety is likely to become a significant issue.

From the analysis of regional congestion levels, the worst congestion levels tend to be located in the northern and southeast portions of the study area. Bull and Cooper Mountains divide the congestion in the study area into a northern and southern grouping and pose a geographical limitation in extending north-south routes to the southern portion of the study area. These two areas are linked via the congested Highway 217, the only continuous major circumferential facility in the study area. Thus this creates a problem related to both travel within districts at ends of the study area, and travel through the study area affecting mobility within and through the western portion of the region.

To fully describe the congestion occurring within the study area, and to understand the growth in traffic causing the deterioration in levels-of-service, it is instructive to examine a few of the congested roadways within the study area network. In general it can be concluded that many of the major roadways experienced significant congestion in 1988. Over the next two decades these already congested roadways will not be able to accommodate additional volumes of traffic within the peak hour without significant capacity improvements and level of service will further deteriorate. Other major roadways will become congested as traffic shifts to the available capacity on these currently less congested segments. By 2010 there will not be enough capacity to meet the travel demand within the study area in either the radial or circumferential direction.

TABLE 5
SERVICE DEFICIENCIES ON MAJOR ROADWAYS

SEGMENT	1988 Peak Hour Volume (veh/hr)	1988 LOS	2010 Peak Hour Volume (veh/hr)	2010 LOS
Tualatin-Sherwood/Edy Road	1,375	D/E	2,200	F
Highway 99W				
South of Tualatin Road	1,375	C	2,700	C
North of Tualatin Road	1,900	D/E	3,500	D/E
North of Highway 217	4,100	F	4,475	F
Interstate 5				
South of Nyberg Road	8,100	C	11,600	D/E
North of Nyberg Road	9,700	D/E	13,325	F
Sunset Highway				
West of 185th	3,550	F	5,600	F
West of Canyon Road	6,850	F	11,850	F
Highway 217				
North of Hall Boulevard	7,875	D/E	8,700	F

* LOS C indicates a level of service of C or better

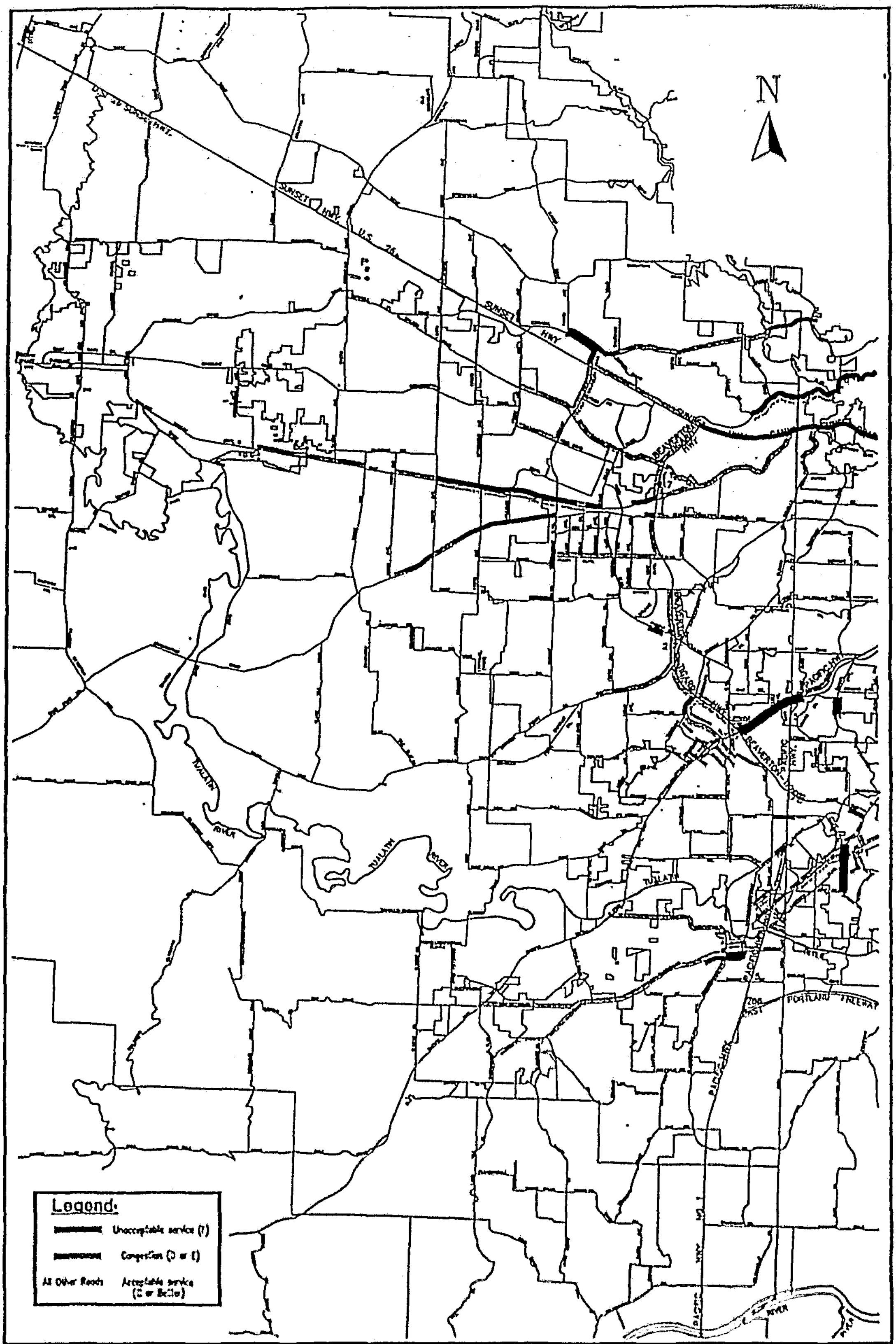

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Figure 10
ROADWAY LEVEL OF SERVICE
1988 EXISTING PM PEAK HOUR
Western Bypass Study

NOTE: * Levels of service are for roadway segments, based on traffic estimates from Metro's model; they may differ from intersection levels of service from other studies.

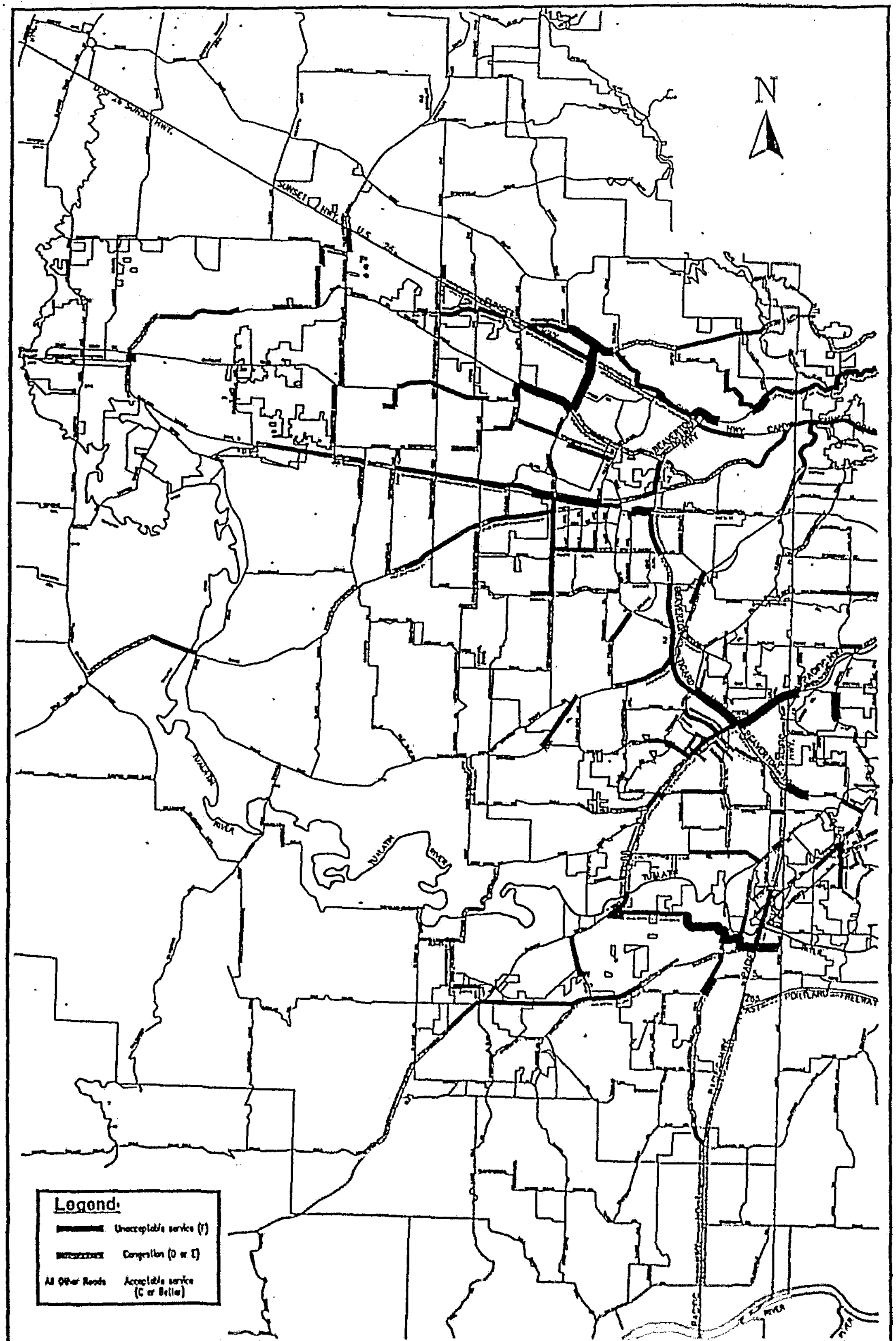

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Figure 11
ROADWAY LEVEL OF SERVICE
2010 NO-BUILD PM PEAK HOUR
Western Bypass Study

NOTE: Levels of service are for roadway segments, based on traffic estimates from Metro's model; they may differ from intersection levels of service from other studies.

Southern End of the Study Area

Tualatin-Sherwood/Edy Road

Tualatin-Sherwood/Edy Road serves as a major connection between Highway 99W and Interstate 5 in the southwest part of Washington County. Traffic conditions on this roadway were at LOS E in 1988. By the year 2010, traffic demand on this roadway segment will increase by 59.4 percent during the PM peak hour. The roadway will not be adequate to serve the traffic demands forecasted even with the committed improvements under the No-Build scenario. Level-of-Service on significant portions of the roadway is expected to deteriorate to LOS F.

Highway 99W

Highway 99W within the study area north of the Tualatin Road Intersection either was operating at poor level of service in 1988 or will be in 2010 under the No-Build Scenario even with committed improvements. Just north of the Tualatin Road Intersection, traffic levels-of-service will worsen from acceptable levels of service in 1988 to LOS of D or E by the year 2010. Traffic volumes on this section will grow by 84 percent.

North of Highway 217, level of service on highway 99W in 1988 was LOS F, and for the 2010 No-Build Scenario will continue at LOS F. Traffic north of Highway 217 will increase by 9 percent between 1988 and 2010. This portion of Highway 99W is already operating at full capacity during 1988 and, as the minimal increase in traffic over the twenty year period indicates, it can accommodate very little additional traffic.

Interstate 5

Interstate 5 is already congested north of Nyberg Road, and conditions will become worse and extend south by 2010 even with committed improvements under the No-Build Scenario. Interstate 5, north of the Nyberg Road interchange during the typical 1988 PM peak hour operated at a LOS of D or E. The total volume carried by this section of I-5 is expected to grow by 37 percent, and the traffic condition will worsen to LOS F.

Traffic conditions on Interstate 5, south of the Nyberg Road interchange in the study area were at a LOS C or better in 1988. This level-of-service will worsen to a LOS D or E by the year 2010 under the No-Build Scenario. Traffic volume will increase by over 43 percent on this portion of Interstate 5.

Other roadways in the southern portion of the study area such as Durham Road, Tualatin Road and portions of Scholls Ferry Road show similar levels of congestion to those described above.

Northern End of the Study Area

Sunset Highway

Much of the Sunset Highway east of Highway 217 is currently congested and, as can be seen in Figure 10, operated at a LOS F in 1988. These poor levels-of-service will continue to exist in the year 2010 even with committed improvements under the No-Build Scenario and, as can be seen in Figure 11 will spread westerly through the Sunset Corridor as travel demand to these areas increases. During the PM peak period, traffic volumes on Sunset Highway, just north of 185th, are expected to increase by 57.7 percent. On the same facility, west of Sylvan traffic volumes are expected to grow by 20.3 percent.

Highway 217 and Other North-South Roadways (north end of the study area)

Highway 217 serves as a major circumferential connection between Tigard and Beaverton and between Interstate 5 and the Sunset Corridor. Most of the facility is currently congested, and this condition will become worse and encompass almost all of this facility by 2010 under the No-Build Scenario.

In 1988, the facility operated at LOS D or E, with the exception of isolated segments between Interstate 5 and Highway 99W and between Allen Boulevard and Denney Road which operated at levels-of-service of C or better. The levels-of-service on the entire facility except the short section between Canyon road and Beaverton-Hillsdale Highway is expected to deteriorate to levels of service D or worse by the year 2010 under the No-Build Scenario.

Other roadways in the northern portion of the study area such as Murray Boulevard, 185th Avenue, Walker Road, Cornell Road, Tualatin Valley Highway, and Farmington Road show similar levels of congestion to those described above in both 1988 and 2010.

MAJOR FINDINGS AND CONCLUSIONS

The analysis of existing (1988) transportation conditions in the study area confirms what travelers in the study area are currently experiencing every day, namely, that peak hour travel demand has exceeded available capacity on many of the major roadways, causing traffic back-ups and delay. Over the next twenty years, peak hour travel conditions will deteriorate even further under the future No-Build alternative. Delay on both radial and circumferential routes will increase as the residents of the study area, as well as workers commuting to the area from other parts of the region, go about their daily activities. The one-hour peak will extend to two or more hours as travelers are delayed in traffic for increasingly longer periods of time or adjust their schedules to travel on the "shoulder" of the peak to try and avoid congestion. Delay on major routes will cause travelers to search for alternate local routes to bypass this congestion. The significant increases in congestion forecast to occur between 1988 and 2010 can be directly linked to population and employment growth in the study area and region, numerous socioeconomic factors and travel characteristics, including the following:

Population, Employment and Travel Growth

- Population and employment is expected to grow at a much faster rate in the study area compared to the region over the next two decades.

- The study area's share of the region's population and employment will increase due to these higher rates of growth relative to the rest of the region. Population in the study area will increase from 18.5 percent of total region population in 1988 to 22.0 percent in 2010 while employment will grow from 19.3 percent to 24.3 percent during that same period. The study area is thus expected to become not only an increasingly important economic component of the Portland metropolitan area but also of the State of Oregon given Portland's dominance in the state economy.

- Employment is expected to grow at a faster rate than population within the study area, with retail employment growing at a faster rate than other types of employment.

- Consistent with adopted comprehensive plans, the type and rate of growth will result in land uses within the study area becoming increasingly more mixed relative to today. The number of trips remaining within the study area will become a greater percentage of the total study area trips, that is, the trips which both begin and end within the study area will become a greater percentage of all trips with one or both ends in the study area.

- With increasing numbers of retail and employment centers, and recreational facilities being located within the study area, the opportunities for travel within the study area will multiply, resulting in increased numbers of shorter (under six mile) trips.

- The major proportion of existing 1988 and future 2010 No-Build trips in both the study area and the region will be trips of six miles or less. This is typical for any major urban area because non-work trips (social, recreational, shopping, and school trips) constitute close to 80 percent of the trip-making in the study area and in the region and tend to be shorter than work-related trips.

- Regional trips with one or both ends in the study area (defined as those trips greater than six miles in length and remaining entirely within the region) will decline from 28 to 22 percent between 1988 and 2010.

- Although interregional and through trips associated with the study area make up a relatively small proportion of total study area trips (10 percent), they represent a significant proportion of the total interregional and through trips attracted and produced or passing through the region (between 40 and 43 percent). Therefore a significant proportion of the metropolitan area's overall longer trips pass through the study area on the existing facilities.

- Work-related trips are forecast to increase by 30.8 percent between 1988 and 2010, reaching 1,226,700 daily work person trips in the study area by year 2010. The study area's share of the region's work trips will increase from 19.5 percent in 1988 to 23.8 percent in 2010, consistent with the fact that the study area is projected to experience more rapid growth in both population and employment than the region as a whole.

- Between 1988 and 2010, study area trips for non-work purposes will increase at an even faster rate than will work-related trips (68.1 versus 61.8 percent), eventually reaching a total of 4,887,700 daily person trips by the year 2010. The study area's share of the region's non-work trips will increase from 19.5 percent to 23.7 percent over the twenty-year period as increasing amounts of non-work related travel attractions are located within the study area to accommodate the growing population.

Travel Mode

- The predominant mode of travel in both the study area and in the region today is the private automobile. However, transit service and use are significantly less in the study area than in the region as a whole (e.g., three percent of work trips in the study area are by transit compared to seven percent for the region).

- Both demand and supply factors influence people's mode of travel. The land use patterns in the study area are characterized by low density employment centers and single-family subdivisions thus making trip origins and destinations relatively dispersed. The road system, serving both buses and cars, is not a complete grid system such as is found in many parts of Portland. Because of the many geographical constraints, the road network has discontinuities and in some areas is built on slopes too steep for transit to maneuver. It is thus difficult to serve many parts of the study area efficiently with fixed-route transit. Existing transit centers and park-and-ride lots provide a means to focus travelers and service at a single location and thereby improve the effectiveness of transit service.

- The automobile will continue to be the predominant mode of travel in both the study area and in the region under the future 2010 No-Build alternative. Some increases in transit use are expected to occur due to the investment in light rail in the Westside Corridor, although these increases in transit use are related primarily to radially oriented trips.

- The percentage of commuters carpooling to work are the same for both the study area and the region in 1988 and under the 2010 No-Build alternative. This mode of transportation has potential for helping relieve traffic congestion in the study area since it requires a lower concentration of households and employment to be attractive relative to fixed route transit. However, time or cost savings need to be realized relative to driving alone in order to get people to carpool.

Analysis of North-South or Circumferential travel

- North-south or circumferential travel represent a significant proportion of the trips being made within the study area. In 1988 north-south or circumferential travel remaining within the study area and travelling between districts comprised 29 percent of the total study area person trips. By 2010 these study area trips between districts are expected to decrease slightly to 28 percent proportion of the total internal study area trips. The total number of the north-south or circumferential trips between districts within the study area will grow by 76 percent between 1988 and 2010. Some of the other trips within the study area beginning and ending within the same district would also be north-south or circumferential, but these are not included in the north-south or circumferential proportions of this analysis.

- An analysis of the existing traffic on Highway 217, the only continuous circumferential roadway within the study area, indicates that a significant portion of trips on that facility in 1988 were made between the northern study area and the southern and southeastern portion of the region. This trend becomes even more pronounced in the 2010 analysis which showed that during the PM peak, as much as one lane of traffic on Highway 217 will be devoted to long distance, circumferential movements between or beyond the northern and southern ends of the study area.

- In both 1988 and 2010, 16 percent of the PM peak hour trips on the major links between I-5 and Highway 99W are destined for Clackamas County or circumferential travel destined outside the study area. An additional 16 percent are destined for the

Portland area. Two-thirds are begin or end in the southeast end of the study area. Only 2 to 3 percent of trips on these east-west/circumferential routes were or will be distributed to the northwestern portion of the study area.

- By contrast, the Sunset Highway does not currently carry large numbers of long-distance, circumferential trips during the PM peak. The majority of study area PM peak hour travel destinations on the Sunset Highway for 1988 and 2010 are distributed between Beaverton and Hillsboro, conveying principally trips westbound from the Portland CBD.

Traffic Congestion

- Because of the large increases in population and employment and the continued reliance on the private auto as the primary mode of transportation in the study area into the future, the existing and future No-Build transportation systems will not provide sufficient capacity for forecasted traffic demands. High levels of congestion on many of the study area roadways, as measured by levels of service, are expected by 2010.

- Major radial roadways will experience significant traffic congestion and delay under the No-Build alternative. Movement of traffic circumferentially, some of which must now be accomplished via radial routes because of a lack of direct circumferential routes, will become more difficult.

- The current deficiency in north-to-south or circumferential roadways within the Western Bypass study area will hamper the movement of both transit and private automobiles. Existing north-south or circumferential roadways such as Highway 217, Murray Boulevard, Tualatin Road, and the Tualatin-Sherwood/Edy Road are or will be heavily congested or do not continue far enough to provide effective circumferential connections between the southern and northern portions of the study area.

- Because of the lack of adequate circumferential routes and the increasing congestion expected by 2010, traffic will likely divert from primary arterials and highway networks to the rural roadway and minor arterial networks within the study area. These secondary networks have not been designed for high traffic volumes. Safety, both on and off the roadway, is likely to become a significant issue.

- Many of the committed roadway improvements included in the No-Build condition were designed under the assumption that a Western Bypass would be in place by 2010 to supply additional transportation capacity. These facilities, in the absence of a Western Bypass, will be insufficient to handle future traffic demands.

- Many of the roadway improvements, included in the 2010 No-Build *scenario*, were designed for horizon years falling significantly short of the 2010 horizon year of the Western Bypass Study. Because many of these roads will not have been designed for 2010 traffic levels, they will provide insufficient capacity for the traffic demands within the study area.

SUMMARY OF PURPOSE AND NEED

Based on the analysis of expected growth and travel patterns, it is clear that transportation problems in the Study area will be significant by 2010 without major strategies to reduce or alleviate existing and future traffic congestion. Analysis of regional congestion levels and specific roadways within the study area indicates that the worst congestion levels are located in the northeast and southeast portions of the study area. Analysis further shows that Highway 217 and existing radial routes are currently relied upon to serve significant north-south or circumferential movements within the study area.

Strategies to reduce or alleviate traffic congestion need to:

- Address the demand for north-south or circumferential travel focusing on the major travel movements and deficiencies within the study area such as movements between economic centers and residential developments. The purpose of the study is not to solve every traffic congestion problem in the study area;

- Recognize the diversity of trip types and trip lengths to be served within the study area, including work versus non-work and local, regional, interregional, and through trips;

- Consider opportunities to not only increase capacity but also potentially reduce demand in the study area, recognizing that there is currently a very heavy reliance on the private automobile;

- Take into account the geographic and environmental constraints and land uses within the study area;

- Consider travel demand in the northeast and in the southeast portions of the study area, as well as travel demand between the northern and southern ends of the study area and through the study area.

APPENDIX A

BACKGROUND REPORTS AND STUDIES

Study	Date Published
Statement of Goals and Objectives	June 1990
Summary of Southwest Corridor Study	October 1990
1988 Existing and 2010 No-Build, Forecasting Analysis Results	October 26, 1990
Travel Patterns and Conditions, Major Findings and Conclusions	October 29, 1990
Evaluation Methodology, Technical Memorandum	October 1990
Select Link Analysis, Technical Memorandum	November 1990

APPENDIX B

WESTERN BYPASS STUDY
GOALS AND OBJECTIVES

Goal 1

Conduct the Western Bypass Study in an open, objective and expeditious process allowing input from all sectors of the community and considering all reasonable alternative solutions to transportation problems that comply with local, regional, state and federal plans and regulations.

Objectives

1.1 Keep citizens, local, regional and state agencies and officials, as well as other interest groups, involved in the study process through public forums and workshops and through newsletters and other media.

1.2 Identify and assess major existing and future state, regional and intra-county travel needs, primarily as they relate to north-south or circumferential access within and through the study area.

1.3 Identify and evaluate the widest range of reasonable alternative solutions to transportation problems, including but not limited to, transit/HOV, street, and highway improvements, and transportation demand management measures, regardless of current funding availability.

1.4 Maintain the study schedule in order to move forward towards the implementation of a feasible and effective solution in a timely manner.

Goal 2

Develop a solution to transportation problems related to accommodating major existing and future (year 2010) state, regional, and intra-county travel needs primarily north-south or circumferential within the project study area:

Objectives

2.1 Reduce congestion on existing streets and highways, as compared to a no-action alternative.

2.2 Improve access through, to/from, and within the study area.

2.3 Reduce through-traffic diversion to rural roads and residential streets.

2.4 Improve safety for both motorized and non-motorized traffic.

2.5 Reduce reliance on the private automobile and reduce or delay the need for additional vehicular capacity through support of transit, ride sharing (carpools/vanpools), and other demand management strategies.

2.6 Develop alternatives that have flexibility to be improved to meet longer term, future needs (beyond the year 2010 and looking toward anticipated growth within the urban area).

Goal 3

Develop a solution to transportation problems that is sensitive to local and regional environmental issues and community needs, consistent with local, regional, state, and federal plans and regulations.

Objectives

3.1 Avoid or minimize negative impacts on the natural environment, e.g., wetlands, water, air, energy, noise, visual, agricultural and forest land.

3.2 Avoid or minimize negative impacts on the built environment, e.g., on existing urban and rural land uses and cultural, historical, and recreational resources.

3.3 Support an urban development pattern that provides for the efficient delivery of urban services, including public transportation, in a manner consistent with state-wide planning goals and with local and regional planning.

3.4 Minimize negative impacts or pressures on the Urban Growth Boundary and identify how various alternatives might affect the rate, type or form of urbanization.

Goal 4

Consider economic and social factors in the identification and development of a solution to transportation problems for the study area, consistent with local, regional and state plans.

Objectives

4.1 Consider the construction, operation and maintenance costs of each alternative.

4.2 Avoid or minimize negative impacts on the integrity and social fabric of the diverse neighborhoods and business communities in the study area (urban and rural).

4.3 Support the economic health of the study area and communities that depend on access through the study area.

APPENDIX C

LEVELS-OF-SERVICE DEFINITIONS

Level-of-Service (LOS) ratings are used to describe how well traffic flows on a particular facility or through an intersection. LOS is defined by such factors as, freedom to maneuver, speed, driver discomfort and frustration, fuel consumption, lost travel time, and delay. Level-of-service on arterials is heavily affected by the type of arterial (principal, minor, suburban, or urban), number of signalized intersections per mile, speed limits, separate left-turn lanes, parking, pedestrian interference, and roadside developments. Levels-of-service ratings range from "A" to "F", with "A" being the best rating and "F" the worst. Characteristics of each Level-of-Service are as follow:

Level-of-Service A

- Free flow conditions
- Vehicles unaffected by other users on the roadway
- Driver comfort is generally excellent for all users
- Very little or no delay

Level-of-Service B

- Stable flow conditions
- Users are aware of other vehicles on the roadway, but no interruption in speed occurs
- Maneuverability is somewhat more restricted than LOS A, but is still relatively uninhibited
- Level of driver comfort is high, but lower than for LOS A
- Very little delay

Level-of-Service C

- Stable flow conditions
- Speed and maneuverability are affected by other users on the roadway
- Level of driver comfort begins to decline
- Some delay is noticeable

Level-of-Service D

- High density stable flow
- Speed and vehicle maneuverability are limited by other vehicles on the roadway
- Level of driver comfort is poor
- Small increases in traffic volumes will cause level-of-service to deteriorate rapidly, and may cause operational problems
- Delay is moderate

Level-of-Service E

Highly unstable flow, at or near the capacity of the roadway

Speeds are low and maneuverability is extremely limited

Small increases in traffic volumes may cause the transportation facility to exceed its capacity, thus causing system failure

Driver comfort is extremely poor and frustration is often high

Delay is typically high

Level-of-Service F

System failure, the roadway is fully saturated

Traffic operation characterized by stop-and-go conditions

Traffic operations are unacceptable to most drivers, frustration is extremely high

Delay is severe and unacceptable

APPENDIX D

SELECT LINK ANALYSIS

A select link analysis is part of the transportation planning software used by METRO. It allows the transportation planner to identify the origins and destinations of travelers on specific roadways.

Based on the analysis of congestion described in the report titled 1988 existing and 2010 No-Build, Forecasting Analysis Results dated October 26, 1990 the study area was broken into a southern and a northern section for the purpose of the select link analysis. The southern portion of the study area consisted of the Tigard, Tualatin/Wilsonville, Sherwood, and Scholls districts while the northern portion included the Beaverton, Hillsboro, Helvetia, North Sunset Corridor and Aloha districts (Figure D-1). These districts are sizeable areas in themselves, and a significant amount of trips can be expected to occur within a given district.

The 1988 analysis is based on the existing transportation system, and the 2010 analysis is based on the No-Build Scenario. Specific roadways in the southern portion of the study area, analyzed for select link information, during the PM peak hour included:

- Highway 99 W, north and south of Tualatin Road, and north of Highway 217
- Interstate 5, north and south of Nyberg Road, and
- The Tualatin and Tualatin-Sherwood Road pair.

The Sunset Highway was evaluated as the major roadway in the northern portion of the study area. Select links on Sunset Highway west of Sylvan Creek and just west of 185th have been analyzed. Highway 217 was included as the major circumferential facility connecting the two parts of the study area. Data from each of the select link analyses follows.

Select Link Analysis: Southern Portion of the Study Area

Tualatin Road and Tualatin-Sherwood Road

During the PM peak hour for year 2010, the trips produced by Tigard, Scholls, Sherwood, King City, and Wilsonville, are expected to increase by almost 74 percent (from 3,000 trips in 1988 to 5200 trips in 2010). Trips attracted to these areas will grow by 72 percent (from 1,400 trips to 2,800 trips). Additionally, the number of trips staying within these areas is expected to grow by 103 percent (from 1,400 trips to 2,800 trips).

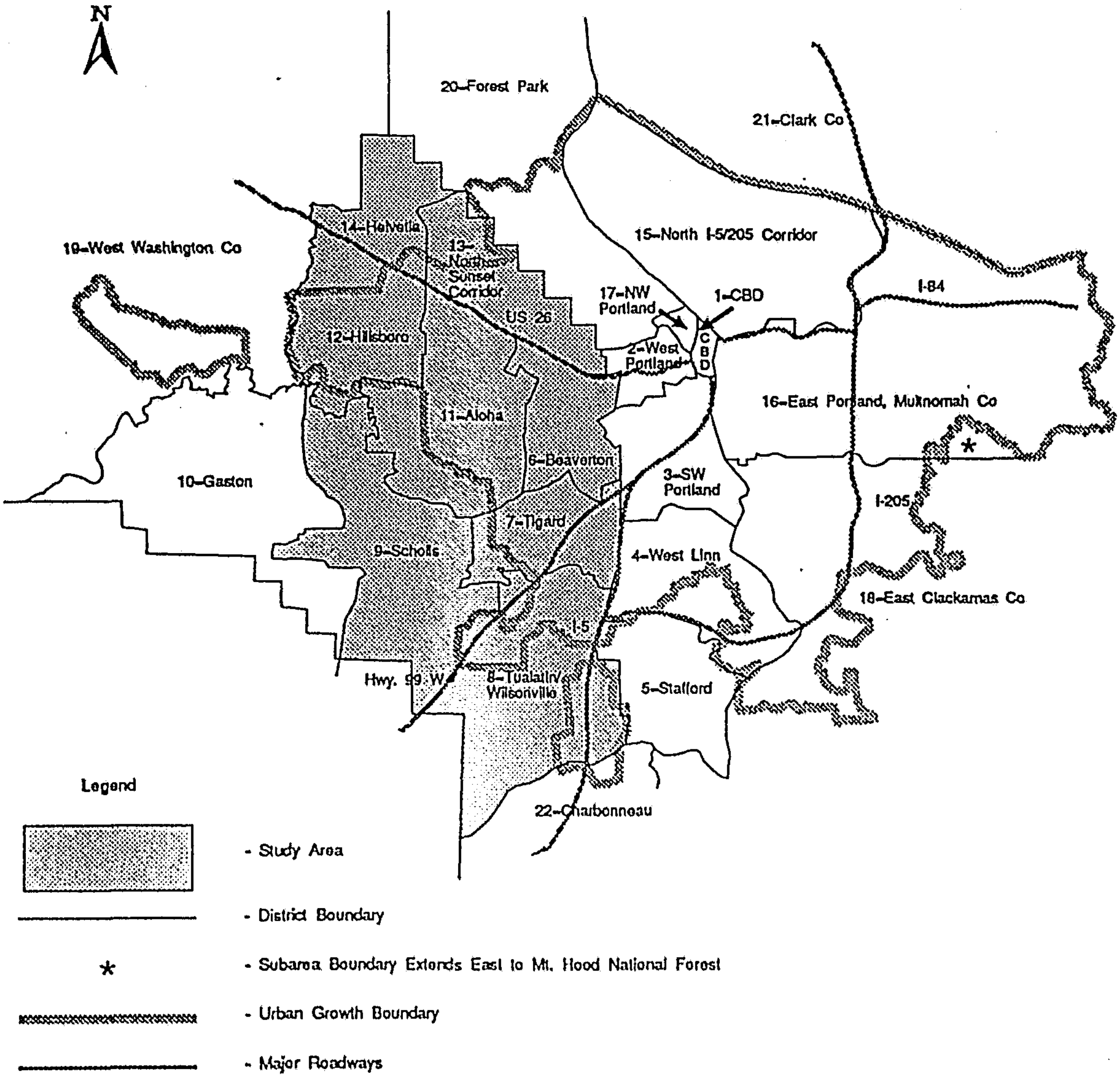

Figure D-1
DISTRICT IDENTIFICATION

PARSONS BRINCKERHOFF

Western Bypass Study

In 1988, during the PM peak hour, almost 64 percent of the total trips on the Tualatin Road and the Tualatin-Sherwood Road began or ended in Tigard, Scholls, Sherwood, King City, and Wilsonville. Almost 16 percent of the total trips were produced or attracted to Clackamas County and another 16 percent were generated or attracted to the Portland area, Multnomah County, and Clark County. Less than 2 percent were distributed to the northwestern portion of the study area along the Sunset Highway corridor. Likewise, only a little more than two percent were destined for locations in the I-5 South Corridor, Gaston, and Western Washington County areas. Of the total trips using these links, over 29 percent stayed within Tigard, Scholls, Sherwood, King City, and Wilsonville.

In comparison, in the year 2010 during the PM peak hour, more than 66 percent of total trips using Tualatin Road and Tualatin-Sherwood Road are expected to begin or end in Tigard, Scholls, Sherwood, King City, and Wilsonville. Fourteen percent will originate in or travel to Clackamas County, and more than 14 percent will travel to or come from the Portland area, Multnomah County, and Clark County. Less than three percent will travel to the northern part of the study area along the Sunset Corridor, and less than three percent will go to the south of the I-5 Corridor. Furthermore, at least 35 percent of the total trips will stay within Tigard, Scholls, Sherwood, King City, and Wilsonville areas.

In conclusion, origins and destinations of trips on connectors between Highway 99W and Interstate 5 are dispersed throughout the region. Trips from the northwest portion of the study area are a small percentage of the total trips using the Tualatin and Tualatin-Sherwood Roads. The majority of all trips using the Tualatin Road and Tualatin-Sherwood Road were generated or attracted to Tigard, Scholls, Sherwood, King City, and Wilsonville, and not the northwest portions of the study area. However, almost a third of the trips were generated or attracted in the Portland area or Clackamas County.

Highway 99W, North and South of Tualatin Road

Highway 99W, north and south of Tualatin Road, demonstrated travel patterns strongly related to the Tualatin, King City, Wilsonville, and Sherwood areas. In 1988, trips within these areas accounted for 44 percent of the total peak hour vehicles using Highway 99W at these locations. This compares to an expected 52 to 55 percent proportion for 2010.

Furthermore, in 1988, about 70 percent of the trips using Highway 99W in the vicinity of the Tualatin Road were generated in the southern portion of the study area. About 27 percent of the trips were generated in areas north and east of the study area, and only about 2 to 3 percent were generated along the Sunset Corridor.

Highway 99W north of Highway 217

Travel patterns on Highway 99W north and south of highway 217 differed significantly from the section north and south of the Tualatin Road intersection. Major trip destinations on the section north of Highway 217 included Beaverton and Tigard, accounting for 52 percent of total trips during the peak hour. Of the total trips, 15 percent originated in Beaverton, 38 percent originated in Tigard. Twenty-two percent were destined for the Portland area, while 14 percent were headed towards the east and north of Portland.

In 2010, travel patterns on this section of Highway 99W remain similar to those in 1988.

Interstate 5, North and South of Nyberg Road

In 1988 during the PM peak hour, approximately 26 percent of the total users on this facility originated in the southwestern part of the study area, 21 percent were produced in Clackamas County, and more than 22 to 26 percent were drawn from the Portland area. Another 13 to 16 percent of the total trips on this portion of I-5 were generated within the I-5 south corridor while the remaining 15 percent originated in areas east and north of Portland, and in the Sunset Corridor.

By the year 2010 during the PM peak hour, travel patterns of traffic using Interstate 5, at the Nyberg Road interchange, will change somewhat. More trips as a percent of the total trips on the link will be produced in the southwestern part of the study area while fewer will be produced in Clackamas County, and from within Portland.

Select Link Analysis: Northern Portion of The Study Area

The analysis of travel patterns in the northern portion of the study area centered on an evaluation of the characteristics of the Sunset Highway near the Canyon Road Interchange and near the 185th interchange, and the northern portion of Highway 217.

Sunset Highway

Because of its primary linkage between the study area and the Portland CBD, the Sunset Highway showed significant numbers of trips interchanging between the Portland area and the Northern part of the study area which create a large amount of east-west movement on this facility. There are fewer trips destined for the southern portion of the study area.

A PM peak hour select link analysis was conducted on the Sunset Highway where it crosses Sylvan Creek, near the Canyon Road interchange. Of the 9900 vehicles using the Sunset Highway at this point during the 1988 PM peak hour, 29.1 percent were destined for the northern portion of the study area, including the Aloha, Hillsboro, Helvetia, and North Sunset Corridor districts. Another 21.4 percent were headed for the Beaverton district.

Only 1.0 percent of the total trips using this facility were headed for the southwest of Beaverton, in the Tigard, Scholls, or Tualatin/Wilsonville districts. This fact suggests that few trips destined for the southern portion of the study area are made via the Sunset Highway.

The remaining 48.5 percent of the vehicle trips using the Sunset Highway near Sylvan Creek during the 1988 PM peak hour were destined for various locations outside the study area. Twenty-four percent were headed for East Portland, the North I-5/I-205 Corridor, and Clark County districts. More than seventeen percent were headed for areas in the Portland CBD, Northwest Portland, West Portland, Forest Park, and Southwest Portland districts. Only 1.7 percent of the vehicles were headed for districts located to the immediate south and west of the Portland CBD, and only 5.6 percent were headed for districts to the west of the study area.

The 2010 PM peak hour distribution of vehicles using the Sunset Highway near Sylvan Creek is similar to the 1988 distribution. 30.9 percent of the traffic was destined for the northern portion of the study area, 19.3 percent for Beaverton, and 1.4 percent for the Tigard, Scholls, and Tualatin/Wilsonville districts. The remaining 46.2 percent of the traffic was destined for various districts to the east of the study area, of which only 2.1 percent was to the southeast.

Traffic using the Sunset Highway near 185th Avenue was similar to that seen near the Sylvan Creek crossing. Traffic at this point on the Sunset suggested that traffic not destined for neighborhoods in the Northern portion of the study area had already left the facility. In 1988, 40.6 percent of the 3,600 vehicles using the facility during the PM peak were destined for the Helvetia, North Sunset Corridor, Hillsboro, and Aloha districts. Another 32.3 percent were headed for districts west of the study area. Only 19.8 percent of the traffic was headed for districts east of the study area and only 7.2 percent was headed for the southern portion of the study area or Beaverton.

In 2010, traffic on the Sunset Highway near 185th Avenue will remain strongly oriented towards the northern portion of the study area. Of the 5,600 PM peak hour vehicles in 2010, 48.1 percent will be destined for the Helvetia, North Sunset Corridor, Hillsboro, and Aloha districts. Approximately 25.3 percent of the trips will be destined for districts to the west of the study area, while 17.6 percent of the trips will be destined for districts east of the study area. Only 9.0 percent of the traffic using the Sunset Highway near 185th Avenue in the 2010 PM peak hour will be destined for the southern portion of the study area and Beaverton.

Highway 217

Highway 217, because of its continuous circumferential link between the northern and southern portions of the study area, can be used to identify potential demand for additional circumferential links within the study area. A significant amount of travel between the northern districts and those districts to the east and south of Beaverton were identified, showing a demand for a circumferential route.

A select link analysis was conducted on Highway 217, north of Hall Boulevard near Scholls Ferry Road. That analysis demonstrated for the 1988 PM peak hour, that 36.5 percent of the 7900 vehicles using Highway 217 near the Hall Boulevard interchange were destined for Beaverton, 20.9 percent were headed for the northern portion of the study area (the Aloha, Hillsboro, Helvetia, and North Sunset Corridor districts), 15.1 percent were headed for Tigard, and that 14.8 percent were headed for districts to the southeast of the study area (the West Linn, Stafford, Charbonneau, and East Clackamas County districts). In addition, 5.2 percent of the vehicles where destined for the Portland CBD and surrounding districts (West Portland, Southwest Portland, Northwest Portland, and Forest Park districts), 1.5 percent were headed for the North I-5/I-205 Corridor, East Portland, and Clark County districts, and only 1.9 percent were destined for districts to the west of the study area. 4.2 percent of the traffic using this portion of Highway 217 was destined for the Tualatin/Wilsonville and Scholls districts.

Traffic distributions in the year 2010 on Highway 217 north of Hall Boulevard and Scholls Ferry Road will be similar to those demonstrated for 1988. Of the 8700 vehicles using this section of Highway 217 during the 2010 PM peak hour, 30.8 percent will be destined for Beaverton, 22.5 percent for the northern portion of the study area, 15.7 percent for Tigard, 18.6 percent for areas to the southeast of the study area and 4.1 percent for the Portland CBD and surrounding districts. Only 1.4 percent will be headed for the North I-5/I-205 Corridor, East Portland, and Clark County districts, 1.4 percent for districts west of the study area, and 5.5 percent to the Tualatin/Wilsonville and Scholls districts.

The 1988 and 2010 select link analyses on Highway 217 also demonstrated that a significant proportion of the traffic using Highway 217 north of Hall Boulevard and Scholls Ferry Road was generated by the northern portion of the study area and by Beaverton (58.6 percent in 1988, and 57.3 percent in 2010).

Trip distributions developed for Highway 217 north of Hall Boulevard and Scholls Ferry Road show that approximately 27.5 percent of the vehicle trips on the facility in 1988 and approximately 30.1 percent in 2010 will be traveling between the Northern portion of the study area (the Aloha, Hillsboro, North Sunset Corridor, and Helvetia districts) and the districts to the east and south of Beaverton (i.e., Southwest Portland, West Linn, Stafford, Tigard, Tualatin/Wilsonville, Scholls, East Clackamas County, and Charbonneau districts). In addition, another 35.5 percent of the traffic in 1988, and another 32.2 percent in 2010, will be traveling between Beaverton and the districts to the east and south of Beaverton.

Select Link Analysis: Other Radial Routes

Farmington Road between 209th Avenue and Highway 217

Relatively few people are traveling on Farmington Road to go north and south through the study area. Approximately 66 percent of the trips using Farmington Road between 209th Avenue and Highway 217 during the 1988 PM peak hour were produced in the Beaverton and Aloha Districts. Fifteen percent were produced in the Portland area (i.e. the Portland CBD, East Portland, and North Portland districts). Eleven percent were produced in the southern and eastern parts of the study area and five percent in the northern part of the study area (i.e., the Hillsboro, Helvetia, and North Sunset Corridor districts). Only three percent of the trips were generated by districts to the west of the study area.

Only 6 percent of the trips using this section of Farmington Road where traveling between the extreme northern and southern parts of the study area, indicating that the majority of the trips were either headed towards the Portland CBD or using Farmington Road locally.

By the year 2010, there is little change expected in the overall distribution of trips using Farmington Road. Trips traveling between the extreme northern and southern portions of the study area are expected to increase slightly and will make up 7.5 percent of the total trips using the facility.

Tualatin Valley (TV) Highway between 219 Avenue and Highway 217

These distributions for the TV Highway indicate that the majority of trips using this facility are traveling east and west accessing residential and employment communities within it.

Trips using this section of the TV Highway were primarily generated or destined for the northern portion of the study area. Twenty-five percent of the 1988 peak hour trips were produced in the Beaverton district, 37 percent in the Aloha district, and 11 percent in the Hillsboro district. The Portland CBD, East Portland, and North Portland districts produced 16 percent of the trips in 1988 along this section of TV Highway. Only 4 percent of the trips were generated by districts in the southern portion of the study area.

Relatively few trips were found to be traveling between the extreme northern portion of the study area and the extreme southern portion of the study area were relatively few. In 1988, only 4 percent of the total trips were of the long circumferential type.

In 2010, distributions of trips are expected to remain similar to those observed in 1988. The Beaverton district is expected to produce 23 percent of the trips, the Aloha district: 44 percent of the trips; and the Hillsboro area: 10 percent of the trips. Again, few trips will be traveling between the extreme northern and southern portions of the study area.

Western Bypass Study
Statement of Purpose and Need
Summary

The Statement of Purpose and Need for the Western Bypass Study summarizes one year of reviewing local plans, collecting data, mapping and working with three advisory committees to develop goals, objectives, and criteria for evaluating potential solutions to north-south and circumferential travel problems. The major findings of the Statement of Purpose and Need are outlined below.

THE REGION AND STUDY AREA - MAJOR FINDINGS

Analysis of existing traffic information tells us what many residents have been saying all along: traffic, especially during the peak hours (morning and evening rush hours), has exceeded the capacity of our roadways, producing backups and delays. The congestion is also causing traffic to divert onto rural and residential roads that were not designed to safely handle this level of traffic. Over the next 20 years, travel conditions will get much worse, given the study's "No-Build" assumptions: 1) development will occur within the guidelines of existing land use plans, and 2) only road/transit improvements with committed funding plus the Westside Light Rail, will be built.

OVERALL TRAVEL PATTERNS

Population and employment growth by 2010 will increase overall congestion, but congestion is also affected by travel patterns - where people go, their mode of travel (their own car, carpool, bus), and the distance they will travel. These are the major findings of the study to date.

- Population and employment will grow substantially, much more than the entire Portland metropolitan region, bringing more people to both live and work within the study area.

    - ♦ study area population will grow by 60% (region by 35%).
    - ♦ study area employment will grow by 73% (region by 38%).

- Because of the increase in housing and employment, people will be able to both live and work in the study area and a larger proportion of trips will stay within the area, will be shorter, and will be non-work trips.

- the number of study area vehicle trips will increase 66% (region 36%).
- there will be over 1.1 million daily study area vehicle trips in 2010 (690,000 in 1988).
- close to 68% of the trips will be less than six miles in length (61% in 1988).

- Under the "No-Build" assumptions, people will still use automobiles as their main method of travel in 2010, and the percentage of commuters carpooling or using transit will remain low until time, cost savings, incentives or disincentives outweigh the advantages of driving one's own car.

  - 95% of trips in the study area will be by automobile.
  - small increases in transit use will occur with light rail, mostly for travel to and from Portland.
  - the percentage of trips made by carpool will remain about the same (less then 3%).

- Geography and land use patterns (where and how the area has developed) are constraints to both transit and roadway service.

  - steep slopes (e.g. Bull Mountain), irregular street patterns, single-family subdivisions, and low-density employment centers make regular bus service and continuous north-south through streets difficult to provide.

Those are the major findings relating to traffic in general - now and projected to the year 2010. But the focus of the Western Bypass Study is more specific to circumferential travel needs.

NORTH-SOUTH/CIRCUMFERENTIAL TRAVEL

As overall traffic within the study area will grow over the next 20 years, so will north-south and circumferential traffic. Key findings include:

- Highway 217 is the only major continuous route in the study area that connects Highway 26 in the north with Interstate 5 in the south.

- By 2010, circumferential traffic alone will grow to equal the capacity of one full lane of traffic on Highway 217 during the afternoon peak hour.

- There is significant congestion now on the major roads that link Interstate 5 and Highway 99W, and traffic is projected to nearly double by 2010.

- Because of the lack of circumferential routes and increasing congestion, more traffic will likely use rural and residential roads - roads that are not designed for highway traffic volumes. Therefore, safety will become an increasing concern.

THE BOTTOM LINE

It is clear that transportation problems in the study area will be significant by 2010 if there are no major improvements to reduce or alleviate congestion. The worst congestion will be found in the northeast and southeast portions of the study area. Analysis of the overall and north-south/circumferential travel conditions, as well as study area constraints, points to a need for strategies that:

- ♦ address major north-south or circumferential travel needs.
- ♦ recognize that the lengths and purposes of trips within the study area will be varied (long, short, work, non-work).
- ♦ consider opportunities to reduce traffic (incentives to carpool, take transit) as well as opportunities to increase road capacity and transit service.
- ♦ consider geographic, environmental and land use factors.
- ♦ recognize the traffic in the northeast and southeast portions of the study area, as well as the travel demand between the northern and southern ends of the study area and through the study area.

STATE OF OREGON

INTEROFFICE MEMO

TO: Western Bypass Study
Intergovernmental Agreement Participants

DATE: April 2, 1991

FROM: Michal Wert Mike
Project Development Manager

SUBJECT: Statement of Purpose and Need

Enclosed is the Statement of Purpose and Need as adopted by the Study Advisory Committees for the Western Bypass Study. This document, as part of the Intergovernmental Agreement process, is presented for endorsement by all jurisdictions in the study area. This document is subject to continued revision including written comments received in the review process from those jurisdictions. A brief summary of major findings is also enclosed.

The Statement of Purpose and Need describes the deficiencies in the transportation system which are to be addressed by the study, and identifies the foundation for developing a solution to these transportation problems. The document is developed according to requirements of the National Environmental Policy Act (NEPA), and will compose a chapter in the NEPA Environmental Impact Statement to be completed for this study.

The section at the end of the Statement titled Major Findings and Conclusions summarizes much of the detail contained in the main body of the text as well as in the Appendix and was the focus for the recommendation of the Study Advisory Committees.

This document represents the conclusion of the first phase of the study which was the documentation of the problem that needs to be resolved. It will provide the framework for developing strategies. The next step in the Intergovernmental Agreement process after review and endorsement of the Statement of Purpose and Need is to review the Strategies developed as solutions to transportation problems. This will occur about mid-summer.

If you have any questions before this item is considered by your Council Commission, please call me (653-3298) or Bill Ciz (653-3240). Thank you for your assistance in expediting this process.

po

cc: Adams, Spence, Ciz, Brannan, Lawson, Greenfield, Lang

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OREGONIAN, APRIL 9, 1991

Answers offered for westside bypass questions

A public meeting is set as a state committee and a private group study the various alternatives

By ASHBEL S. GREEN

of The Oregonian staff

The westside bypass study is like a dormant volcano: It's quiet now, but it's going to explode.

The eruption is scheduled for next spring, when Oregon Department of Transportation officials will decide whether to build a new highway from Interstate 5 to the Sunset Highway or to make extensive improvements to existing roads and promote mass transit.

Either decision will cause tremors.

Most of Washington County's elected officials and business leaders strongly endorse the bypass; land-use activists are equally strong in their opposition.

A panel representing both sides of the debate will meet Thursday to answer questions from citizens. The joint meeting of Citizen Participation Organizations 6 and 10 will begin at 7 p.m. in Farmington View Elementary School, 8300 S.W. Hillsboro Highway.

Those present will include Michal Wert, project development manager for Region 1 of the state Highway Division and the person heading the bypass study; Sen. Joan Dukes, D-Astoria, chairwoman of the Senate Transportation Committee; Sen. Jeannette Hamby, R-Hillsboro; Rep. Tim Josi, D-Bay City; and Meeky Blizzard, executive director of Sensible Transportation Options for People, a citizens group known as STOP that opposes the bypass.

The controversy pits those who believe the bypass is necessary to reduce traffic and promote growth against those who think the highway will cause urban sprawl in rural areas and perpetuate dependence on automobiles.

While the state's committee explores alternatives based on existing land-use plans, a land-use group opposed to the bypass plans to make its own study that will look at rezoning developed and undeveloped areas to eliminate the need for a bypass.

The study by 1000 Friends of Oregon will be the first of its kind in the state and perhaps the country, according to leaders of the group. The group hopes the state will consider the resulting "land-use alternative" instead of the bypass.

The bypass study has been low profile but active. After nearly a year of work, a citizens committee has pared the principal choices to four: a bypass; major mass transit improvements; major improvements to existing roads; and a combination of transit and road improvements.

Planners believe all four are viable choices. Over the next few months they will use computers to test the options based on traffic predictions for the year 2010, said Wert, the official in charge of the project.

The citizens committee is scheduled to look at results of the computer tests in June.

The options are:

- Westside Bypass: Two general alignments are under consideration from I-5 south of Tualatin to the Sunset Highway. The most often-discussed route would hug the urban area and join the Sunset Highway near Cornelius Pass Road. The other route would swing farther west, near Hillsboro Highway, connecting to the Sunset near North Plains.
- Mass transit: The focus is a light-rail line along Oregon 217 and a feeder bus system.
- Major road improvements: Widening and extending roads inside the urban area would include projects to extend Southwest Murray Boulevard south of Southwest Scholls Ferry Road, to widen Oregon 217 and to make Southwest Durham and Tualatin roads major connections between Pacific Highway and I-5.
- Transit and road improvements: Widening Oregon 217 could include lanes for express buses and other high-occupancy vehicles.

The committee also will look at two options deemed less likely to succeed:

- Making only planned improvements common to all options, which include westside light-rail to downtown Hillsboro, widening 217 and extending Murray.
- A "no-build" option of building light-rail only to 185th Avenue and making road improvements for which funding is guaranteed.

Project planners believe the last two alternatives will not solve traffic problems in Washington County. They are studying them for comparison and because, in order to receive federal funds, they must consider a no-build option.

Using the traffic data, the citizens committee in June will decide whether to drop any of the alternatives from the study. Wert expects all four of the main

Please turn to
BYPASS, Page 4

Bypass: Analysis slated following study of options

■Continued from Page 1

options to enter the next stage of the study.

The next phase, scheduled to be finished next spring, will take a much more detailed look at the options.

The analysis will look at how each option will affect existing businesses, farmlands, wetlands, soils, water quality, wildlife, neighborhoods, and traffic.

Meanwhile, 1000 Friends will conduct its study, funded by grants from the Surdna Foundations and the Nathan Cummings Foundation. The study, estimated to cost $150,000 to $175,000, will consider what zoning changes could be made to reduce or eliminate the need for a bypass through the rural area.

The idea of studying transportation projects from a land-use perspective is fairly new, and the study could serve as a national model, said Keith Bartholomew, staff attorney for 1000 Friends.

Some of the most prominent planners in the country will be on the team of consultants hired by 1000 Friends. They include: Samuel N. Seskin, a principal at Cambridge Systematics Inc. in Massachusetts and a course director for the Lincoln Institute of Land Policy; Peter Calthorpe, a San Francisco architect and planner; Michael Dyett, founder of Blayney Dyett Greenberg, a San Francisco land-use and design company; and Hugh Gunn, managing director of The Hague Consulting Group.

Wert said that she would keep track of 1000 Friends' project. The land-use alternative could be incorporated into the state's study later, she said.

A bypass has been in one plan or another for more than 20 years.

A Metropolitan Service District study completed in the mid-1980s concluded that the bypass would best solve Washington County's traffic problems. The project bogged down, however, after appeals by 1000 Friends and Sensible Transportation Options for People.

In response to the turmoil, the state decided on the bypass study now under way.