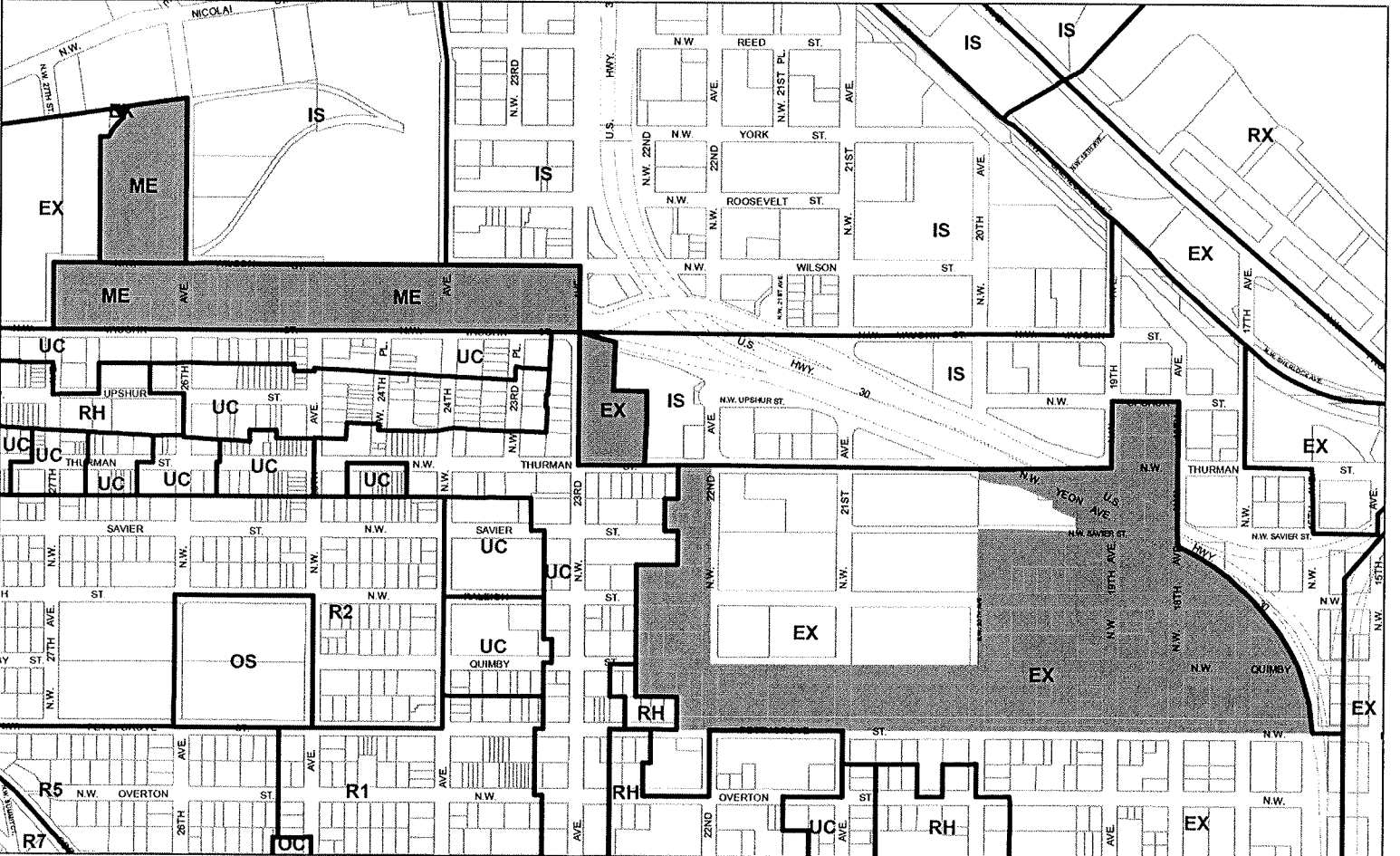
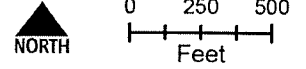
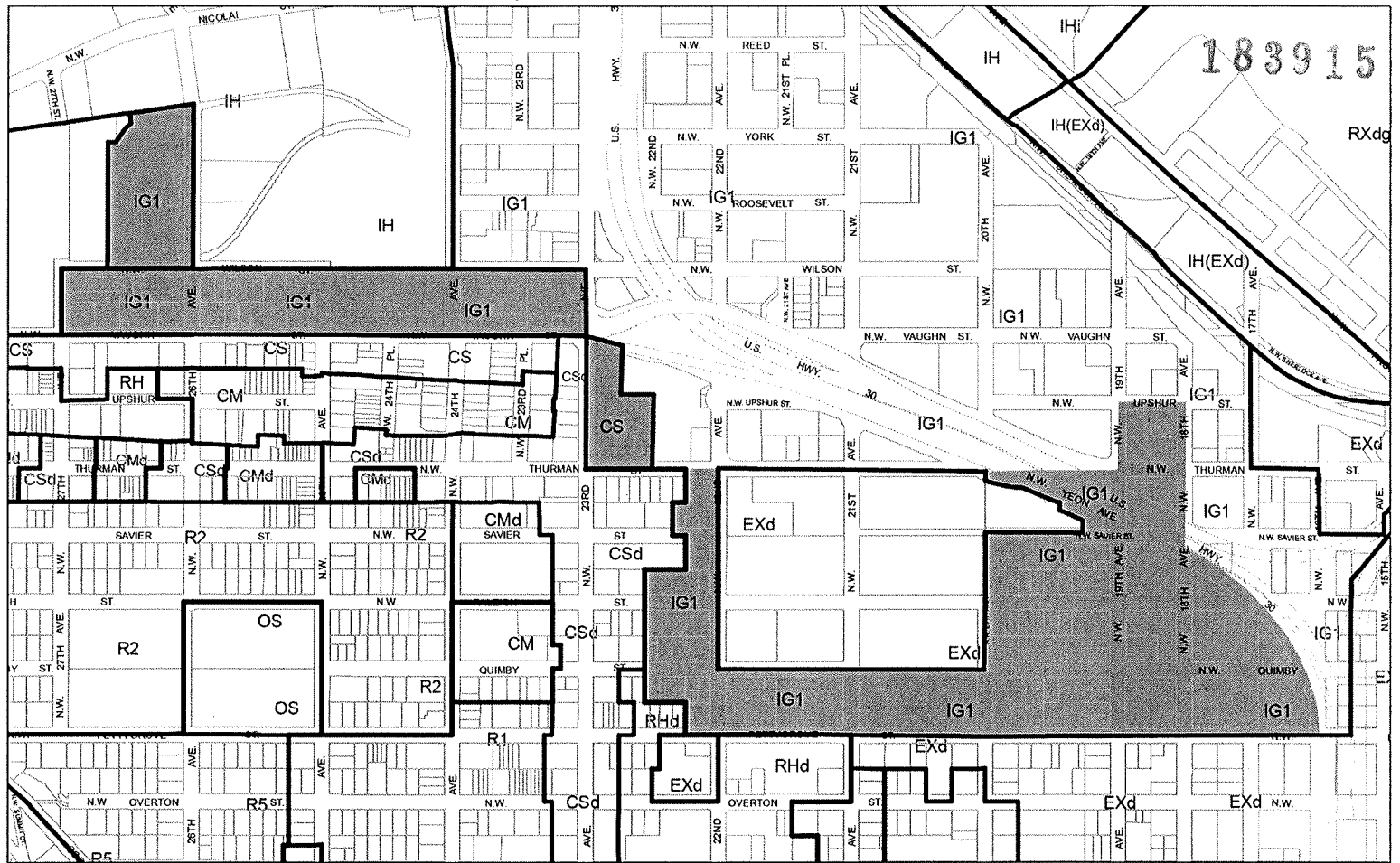


Proposed Comprehensive Plan Map for Project Area



Current Zone Map for Project Area

Exhibit A: 2 of 2



Proposed Zone Map for Project Area

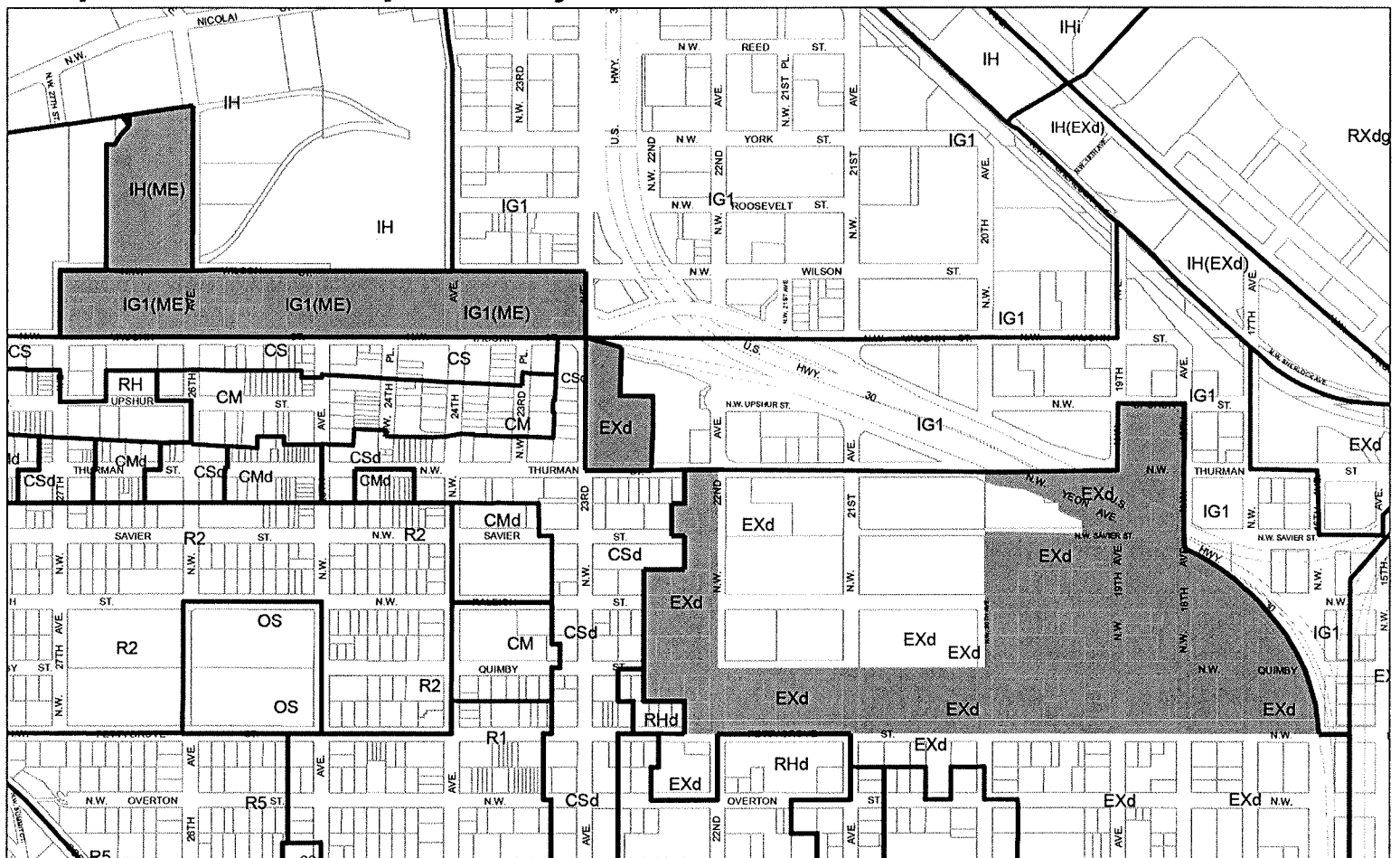
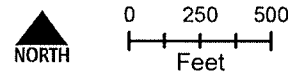


EXHIBIT B:
Northwest District Plan Remand
Transportation Model Technical Report

May 27, 2010

Prepared by:
Portland Bureau of Transportation and
Bureau of Planning and Sustainability

The City of Portland is committed to providing equal access to information and hearings. If you need special accommodation, please call 503-823-7700, the City's TTY at 503-823-6868, or the Oregon Relay Service at 1-800-735-2900.

For more information about the **Northwest District Plan Remand Transportation Model Technical Report**, please contact:

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A digital copy of this report can be found at:
www.portlandoregon.gov/pbs/nwremand

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Executive Summary

In coordination with the Bureau of Planning and Sustainability (BPS), the Transportation Planning Division of the Bureau of Transportation (PBOT) has prepared an updated transportation analysis for the Northwest District Plan (NWDP) to determine whether the zoning changes adopted in the Plan significantly affect one or more transportation facilities in the NWDP area.

In particular, this analysis is intended to address the Land Use Board of Appeals (LUBA) determination that the City provided insufficient data for two transportation impact findings related to the land use changes in the NWDP. LUBA asked the City to provide answers to two questions:

- (1) Will the NWDP cause traffic that changes the functional classification of NW Vaughn Street as a "Neighborhood Collector?"

and
- (2) Will the performance standards at the intersection of NW 23rd Ave. and NW Vaughn St. and the Interstate 405 (I-405) ramp remain at acceptable levels of service?

As part of the analysis, PBOT modeled future growth in the area, which produced projections of 1,050 new households and 3,370 new jobs in the district. This analysis assessed the impacts of growth on the transportation infrastructure in the NWDP area and concluded that:

- (1) NW Vaughn St., which is currently classified as a "Neighborhood Collector," will continue to function as it does today; and
- (2) With planned future mitigation, the I-405 ramp and the intersection of NW 23rd Ave. and NW Vaughn St. will have performance standards above the minimum acceptable level.

I. Background

In the fall of 2003, the Portland City Council adopted the Northwest District Plan (NWDP). The NWDP was appealed to the Land Use Board of Appeals (LUBA) for multiple reasons. Although LUBA upheld most of the NWDP, it remanded the plan on two issues relating to the State's Transportation Planning Rule. LUBA concluding that:

- A. *"[f]or each type of traffic classification, the majority of motor vehicle trips on a street should conform to its classification description ... (and) remand is necessary for the city to address whether [the NWDP] 'significantly affects' NW Vaughn St. for purposes of OAR 660-012-0060(2)(c)..."; and*
- B. *"There may be evidence ... in the record that would allow a reasonable person to conclude that [the NWDP] will not 'reduce the performance standards' of the NW Vaughn St/NW 23rd Ave. intersection and the Interstate 405 on-ramp of the facility 'below the minimum acceptable level identified in the TSP' within the meaning of OAR 660-012-0060(2)(d), but the city has not cited us to it.."*

Therefore, Portland Bureau of Transportation (PBOT) and Bureau of Planning and Sustainability (BPS) produced this updated analysis to look at two particular transportation impacts of the NWDP: 1) whether the land uses allowed by the NWDP would allow NW Vaughn St. to continue to function as a neighborhood collector; and 2) whether the NWDP will significantly reduce the performance standards of the NW Vaughn St/NW 23rd Ave. intersection and the Interstate 405 (I-405) on-ramp.

II. Methodology and Descriptions

The Northwest District Plan (NWDP) transportation analysis was based on data that was developed through use of Metro's model for forecasting development (the "Metro Model") and the Portland Bureau of Transportation's model for forecasting traffic related to the Central City Transportation Management Plan (CCTMP2007).

The study looked at the NWDP area as defined in combining sub areas of the Metro Model (see Plot 1 for sub-model boundary map). The 2005 traffic counts, the most recent available, were used as the base year for current conditions. Development was then forecast through the year 2030.

ODOT has accepted the traffic analysis findings; including the methodology and assumptions used for estimating a "reasonable worst case" of households and employment, both before and after (i.e. without and with the NWDP).

The following provides more detailed explanation of the methodology and defines some of the critical terms used in the analysis.

Description of Base Transportation Model.

In order to analyze the transportation impacts of the NWDP, PBOT established sub-area transportation models that can assess transportation impacts at two different scales –

1. Transportation demand for the area on the macro level using the Visumsoftware package; and,
2. Detailed operations on critical intersections and links using the Synchro/SimTraffic software package.

The aims of the modeling process are to:

- Forecast future traffic growth and travel patterns
- Examine Transportation Planning Rule compliance for impacted Oregon Department of Transportation (ODOT) facilities (i.e. I-405)
- Analyze network traffic conditions and traffic impacts in the study area

The NWDP Visum sub model is a refined version of the Visum model used for the North Pearl District Plan (NPDP). Both sub-models were derived from the Metro Model. The Metro Model is derived from Metro's previously-validated 2005 Regional Transportation Plan (RTP) and 2030 Milwaukie Light-rail (LRT) No-Build models.

While the city model kept most of the modeling assumptions that were utilized for the Metro Model, the following assumptions were altered to refine the model for the focus area:

- a. The city model added finer detail Transportation Analysis Zones (TAZ).
- b. The city model added more detailed local networks with calibrated link and turn characteristics.
- c. For a project sub area, the intersection turn capacities are coded according to its peak hour signal timing plan.
- d. The city model codes Downtown networks with capacity constraints. Metro's regional model codes Downtown streets with un-limited capacity.

The NWDP sub-model boundary is shown in Plot 1. The area bounded by blue lines is the NWDP sub- area, a total of 11 TAZs.

Description of "Neighborhood Collector" street classification

The Transportation Element of the City's Comprehensive Plan describes a neighborhood collector in the following way:

Neighborhood Collectors are intended to serve as distributors of traffic from Major City Traffic Streets or District Collectors to Local Service Streets and to serve trips that both start and end within areas bounded by Major City Traffic Streets and District Collectors.

- Land Use/Development. Neighborhood Collectors should connect neighborhoods to nearby centers, corridors, station communities, main streets, and other nearby destinations. New land uses and major expansions of land uses that attract a significant

- volume of traffic from outside the neighborhood should be discouraged from locating on Neighborhood Collectors.
- Connections. Neighborhood Collectors should connect to Major City Traffic Streets, District Collectors, and other Neighborhood Collectors, as well as to Local Service Streets.
 - Function. The design of Neighborhood Collectors may vary over their length as the land use character changes from primarily commercial to primarily residential. Some Neighborhood Collectors may have a regional function, either alone or in concert with other nearby parallel collectors. All Neighborhood Collectors should be designed to operate as neighborhood streets rather than as regional arterials.

Essentially, Neighborhood Collector Streets should be primarily used for trips in the neighborhood and not for traffic that is trying to move through an area.

Explanation of Level-of-Service (LOS) ratings

Level-of-Service (LOS) is a concept used in transportation planning to describe the operating conditions on a roadway and at intersections. LOS describes operating conditions on a scale from "A" to "F", with A describing a free flowing condition and F describing bumper-to-bumper conditions. If LOS is F, demand has exceeded roadway capacity, which forces excess demand onto parallel routes and extends the peak period. The LOS scale is determined by a mixture of quantitative measures, such as speed, travel time, density of vehicles and delay as well as qualitative observations, such as freedom to maneuver.

Below is a chart that describes the various LOS operating conditions for intersections.

Table 1: Intersection LOS Definitions* LOS	Description
LOS A	Free flow with no delays. Users are virtually unaffected by others in the traffic stream.
LOS B	Traffic flows smoothly with few delays.
LOS C	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays.
LOS D	Delay becomes more noticeable.
LOS E	Traffic volumes are at or close to capacity, resulting in significant delays and average speeds which are no more than about one-third the uncongested speed.
LOS F	Traffic demand exceeds available capacity with very slow speeds, long delays and standing queues at signalized intersections.

The Transportation System Plan (TSP) contains the adopted policies regarding the City's transportation system. Table 11.1, Performance Measures for Regionally Significant Streets – Deficiency Thresholds and Operating Standards, establishes LOS E as the acceptable LOS for the NW 23rd/Vaughn interchange with I-405.

III. Key Findings

The transportation analysis resulted in nine key findings, as follows:

1. **Growth Related to the NWDP.** Land use changes adopted with the NWDP will contribute to the addition of approximately 1,050 new households and 3,370 new jobs in the district by the 2030. Metro's regional model assumes that the NWDP area will have slower household and population growth when compared to City and regional averages.

	2005		2030 Base		2005-2030 growth	
	HH	EMP	HH	EMP	HH	EMP
NWDP	4,970	18,040	6,020	21,410	21%	19%
City	234,700	442,700	299,500	603,100	28%	36%
Region	766,800	1,032,000	1,134,100	1,691,900	48%	64%

2. **Estimate of Pedestrian Trips.** Walking as a percent of daily traffic will increase in the NWDP area from approximately 7% in 2005 to 8% by 2030. This is slightly higher than city averages but less than what otherwise might be reasonably expected to occur in the future.

For example, walk mode splits in the neighboring North Pearl District Plan area are predicted at 13% in 2005 and 20% in 2030. This conservative estimate increases the amount of trips forecast for automobile traffic and could be due to the impact that the industrial area north of Vaughn has on individual transportation choices.

3. **Estimate of Transit Trips.** The NWDP area's transit mode split will grow, but remain modest through 2030. As a percentage of daily trip traffic, transit trips are predicted to increase from 6% in 2005 to 10% in 2030.
4. **Estimate of Auto Trips.** Approximately 80% of all future trips in the study area will be made by automobile. This represents a decrease of nearly 6% over 2005, but this mode split remains relatively high for an area with a substantial infrastructure for transit, bikes and pedestrians. This could be due to study area including the industrial sites north of Vaughn.
5. **Estimate of Bike Trips.** While the model doesn't produce an estimate of the percentage of future trips that will be made by bicycle, one can deduce that these trips will increase from 1% in 2005 to 2% in 2030.
6. **Identification of Access Routes to the District.** The I-405 ramps east of NW 23rd Ave will remain a major route by which traffic accesses the district. During the evening (PM) peak hours in 2005, approximately 28 percent of district traffic used these ramps accounting for nearly 81 percent of total ramp traffic. The next major access routes for district traffic are the streets connecting to the south. The north/south streets from NW 16th Ave to NW 23rd Ave transported about 20 percent of total district traffic during the same PM peak hours in 2005. The relative role of all these routes is projected to remain the same in 2030.

7. **The Role of NW Vaughn for Neighborhood Traffic.** In 2030, with the zone changes, NW Vaughn St will continue to function as it does today. Approximately 85% of the traffic on NW Vaughn St — west of NW 23rd Ave. — starts or ends in the area bounded by Major City streets and District Collectors (NW 16th, W. Burnside, NW Yeon). This area boundary represents the policy description of appropriate service area for a Neighborhood Collector.

The zone changes proposed will have no significant effect on the performance of NW Vaughn St. in regards to its street classification. In 2030, the percentage of trips starting and ending in the area bounded by Major City streets and District Collectors (NW 16th, W. Burnside, NW Yeon) remains the same as today. As described in the TSP, "Neighborhood Collector may have a regional function, either alone or in concert with other nearby parallel collectors." NW Vaughn St, in part, currently provides a regional access function, which is consistent with the City's policy for Neighborhood Collectors located near freeway entrances. Experience elsewhere has demonstrated that mixed use zoning and subsequent development actually increases local trips and displaces non-local trips. Therefore, NW Vaughn St. meets the City's policies for the role of Neighborhood Collectors today and the zone changes will not impact this function.

8. **Estimate of the Impact of North Pearl Zoning Changes.** Development forecast for the North Pearl will not result in a significant traffic increase on the streets or freeway ramps in NWDP area. The analysis of the NWDP traffic impacts reviewed possible traffic impacts from the major land use and transportation recommendations in the recently completed North Pearl District Rezoning project and found the number of trips projected to and from the NWDP area to be insignificant.
9. **Estimate of Future Congestion.** By 2030, congestion during the PM peak in the NWDP area will increase, although not dramatically. The percent of traffic that would encounter congestion increases from 3 percent to 17 percent in terms of vehicle miles, and the total length of congested streets will increase from .6 miles to 2.2. miles. The most noticeable area of congestion is projected on NW Yeon Ave. west of NW Nicolai St. The majority of traffic on these street segments are through-trips connecting to US-30/I-405. The northbound traffic on NW 23rd Ave, south of NW Thurman St, is projected to reach its link capacity at the macro planning level analysis. Because of this, additional micro level analysis was conducted which then showed the intersection performing at an acceptable level of service. The table below summarizes the PM peak 2-hour traffic conditions of the district streets, with the average PM peak 2-hour volumes increasing from 570 to 740.

NWDP Study Area Transportation Model Summary (thick links in Plot 2)	2005	2030
Average link volumes	570	740
Total vehicle miles	23,400	30,900
Total VHT ¹ (h)	1050	1480
Congested streets		
# of links	5	14
Miles	0.6	2.2
Vehicle-miles	780	5250

% of total v-m	3.3%	17.0%
----------------	------	-------

¹ VHT: Vehicle Hour Traveled = Volumes x Travel Time

10. 2030 Performance of the I-405 interchanges.

- a. **The 2030 performance of the I-405 ramp at the NW Glisan and NW Everett intersections will meet City and ODOT mobility standards.** PM peak-hour traffic operational analyses were performed to assess the traffic conditions in 2030 using the 2030 PM2 base model for the intersections with ODOT's freeway facilities. The Synchro model results indicate that all I-405 ramp intersections at NW Glisan/NW Everett Sts will be operated at the level of service (LOS) D or better with a maximum volume to capacity (V/C) ratio of 0.76 occurring during the weekday PM peak hour in year 2030.
- b. **2030 performance of the intersections at I-405 / NW Vaughn / NW 23rd and U.S.30 / NW Nicolai / NW Yeon will change from LOS D to LOS F and mitigation of the impacts at NW Vaughn and NW 23rd should be required.**

The model examined the operational conditions of these intersections for both AM and PM peak hours. The analysis shows that the two ramp intersections currently operate at LOS D or better with a maximum V/C of 0.97 during weekday peak hours. Both of these interchanges are projected to deteriorate to LOS F with V/C readings of 1.06 in the 2030 PM peak hour. Acceptable Level of Service for this type of intersection is D or E, therefore the intersection drops below the acceptable level of service per the City standards since it drops from D to F.

ODOT has reviewed this analysis and concluded that although intersection operations will be below City of Portland mobility standards there is no significant impact on the planned function and performance of the state facility, I-405 and the ramps associated with I-405. No mitigation of the impact on the state facility is required.

However, PBOT has concluded that the impacts on the performance of the NW Vaughn St. and NW 23rd Ave. intersection requires mitigation. The City proposes actions to mitigate the impacts to ensure that the LOS E standard for this intersection is maintained.

As provided in OAR 660-0012-0060(2)(a) and (3)(d) the City finds that the impact of the NWDP land uses will be consistent with the performance standard of LOS E for the intersection through mitigation measures that future development will provide. Specifically, as development occurs and traffic conditions at the intersection deteriorate, it will be necessary to make changes to the intersection and I-405 off-ramp that will improve the operation of the intersection. These mitigation measures, which involve restriping of the intersection, are already identified in the City's transportation system plan. This mitigation will be required as part of future development applications that cause the intersection to deteriorate. See Exhibit B for a detailed description, drawings and cost estimates for the proposed improvements.

III. Conclusion

In summary, the traffic analysis finds that the questions posed by LUBA in the remand of the NWDP are answered affirmatively and the impacts of the NWDP do not change the functional classification of NW Vaughn and do not cause the intersection of NW 23rd and I-405 to fall below performance standards as follows:

NW Vaughn Will Remain a Neighborhood Collector.

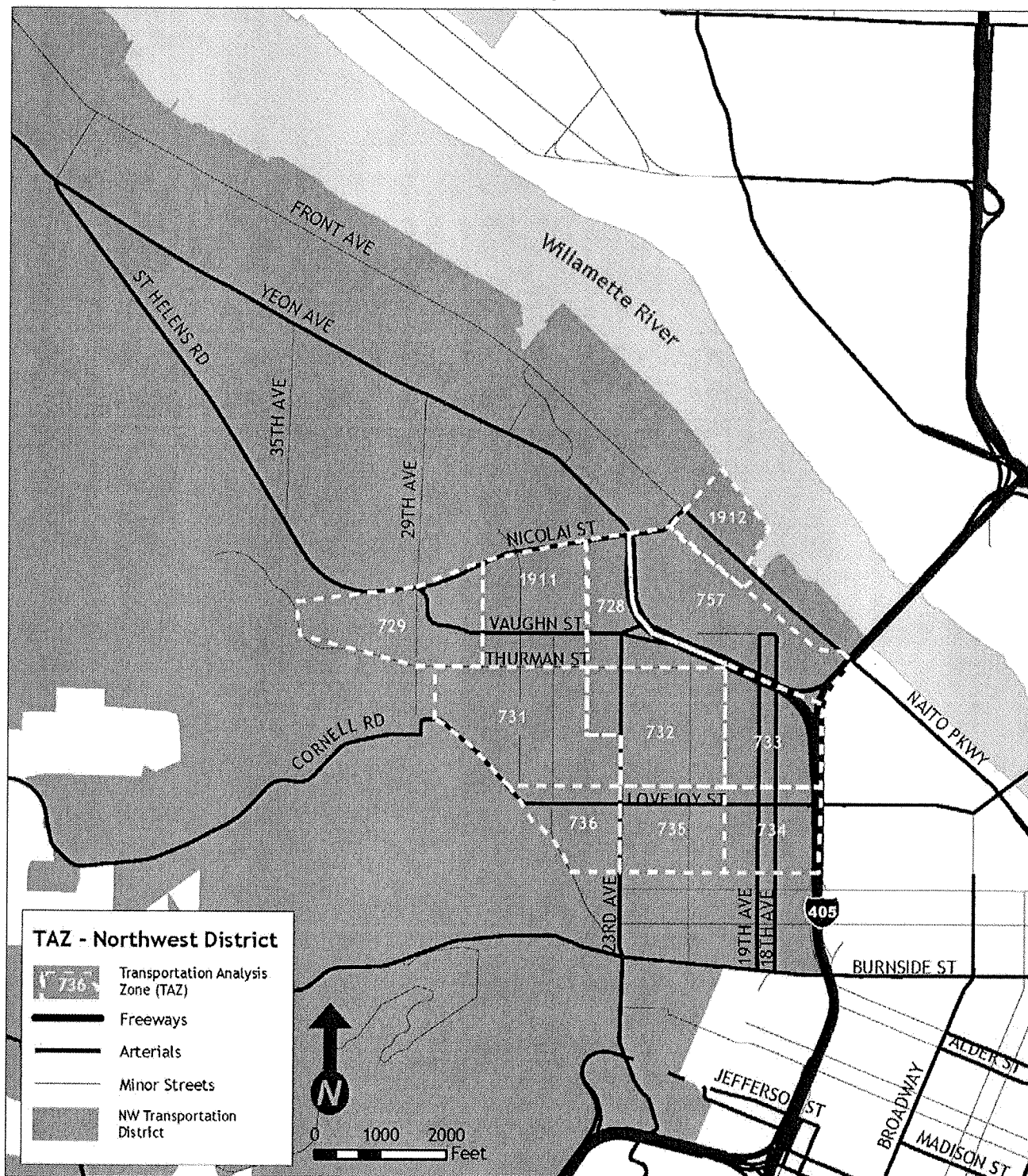
The first purpose of this transportation analysis was to determine whether NW Vaughn St would continue to operate as defined in its classification as a Neighborhood Collector after the implementation of the NWDP. This analysis shows that the zone changes proposed with the NWDP will have no significant effect on the performance of NW Vaughn St, in regards to its street classification.

The I-405 Ramp and the NW Vaughn and NW 23rd Intersection Will Not Fall Below Acceptable Performance Standards.

The second purpose was to determine whether the NWDP will reduce the performance standards of the NW Vaughn St and NW 23rd Ave. intersection and the Interstate 405 (I-405) ramp below the minimum acceptable level. Despite anticipated job and housing growth in the NWDP neighborhood area by 2030, ODOT has concluded that there is no significant impact on the planned function and performance of the I-405 (state) facility. PBOT has concluded that operation conditions will be below City of Portland mobility standards for the city's intersection at some point in the future, and has proposed changes to the interchange to improve the operation and performance of these facilities in the future which will bring the performance standard into acceptable levels and compliance with OAR 660-0012-0060(2).

Appendix A Plots

Plot 1. Sub Model Boundary and Northwest TAZs



District Street Links

The blue links in Plot 2 are marked as the district links for project analysis.

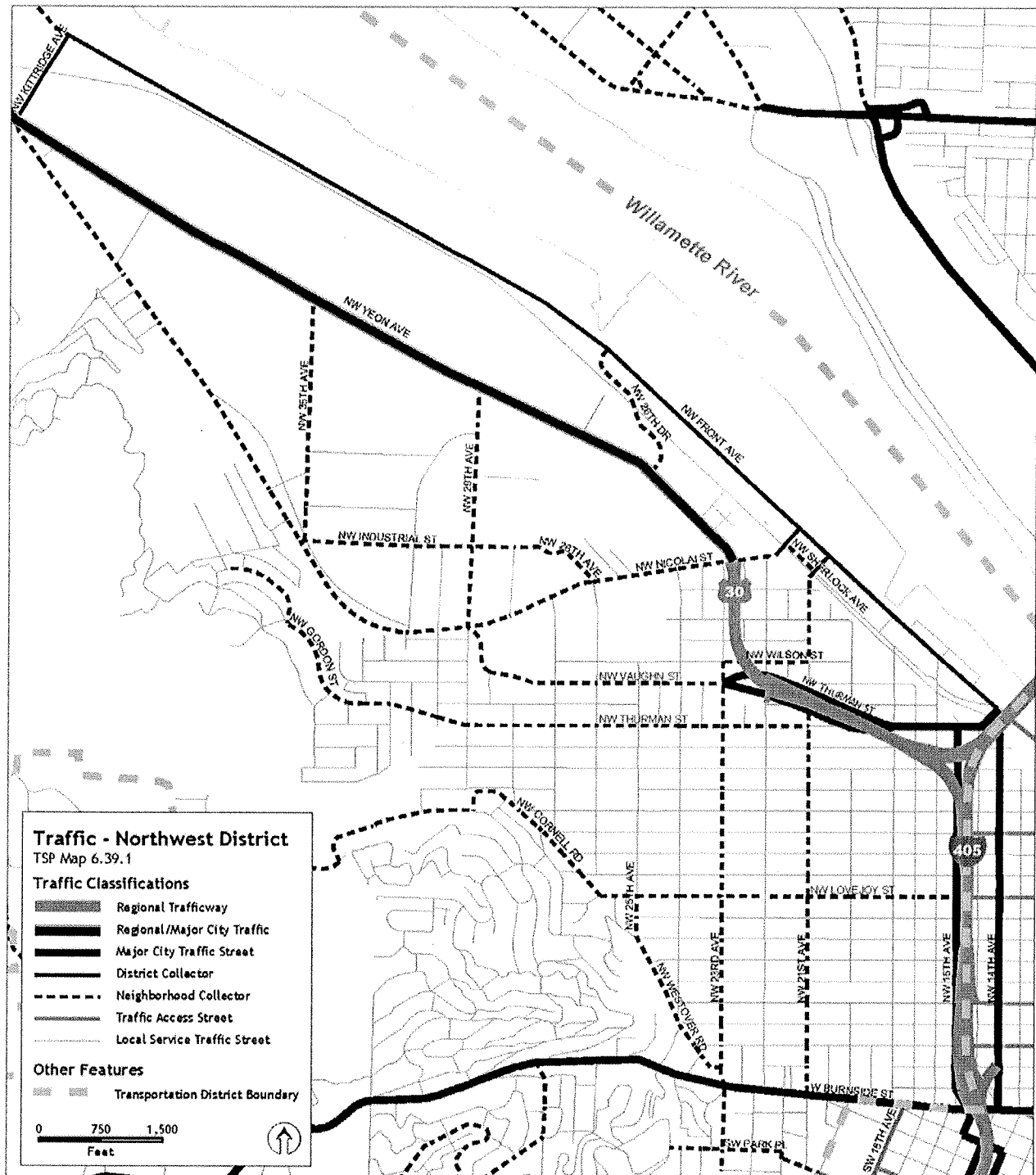
Plot 2. Northwest Sub Model Networks



Network of the District

Plot 3 shows street classifications within the district and vicinity, as identified in the City of Portland TSP.

Plot 3. Street Classifications



Major Transportation Model Assumptions

Although no major transportation projects are planned within the NWDP project sub area by 2030, two are located in the vicinity of the NWDP sub area and were built into the 2030 demand model:

- a. The street car loop project in the North Pearl District area immediately to the east, and
- b. The Burnside/Couch couplet project immediately to the south.

Base Model Calibration

The 2005 PM2 sub model has been calibrated using 2005 PM 2-hour traffic counts¹. A total of 189 counts are used in the calibration process.

Using the NPDP sub model, a further calibration was performed for the NWDP sub model. The main calibration measures include: a) dividing four big TAZs (#729, #755- #757) into eight; and b.) modifying some TAZs' connectors accordingly.

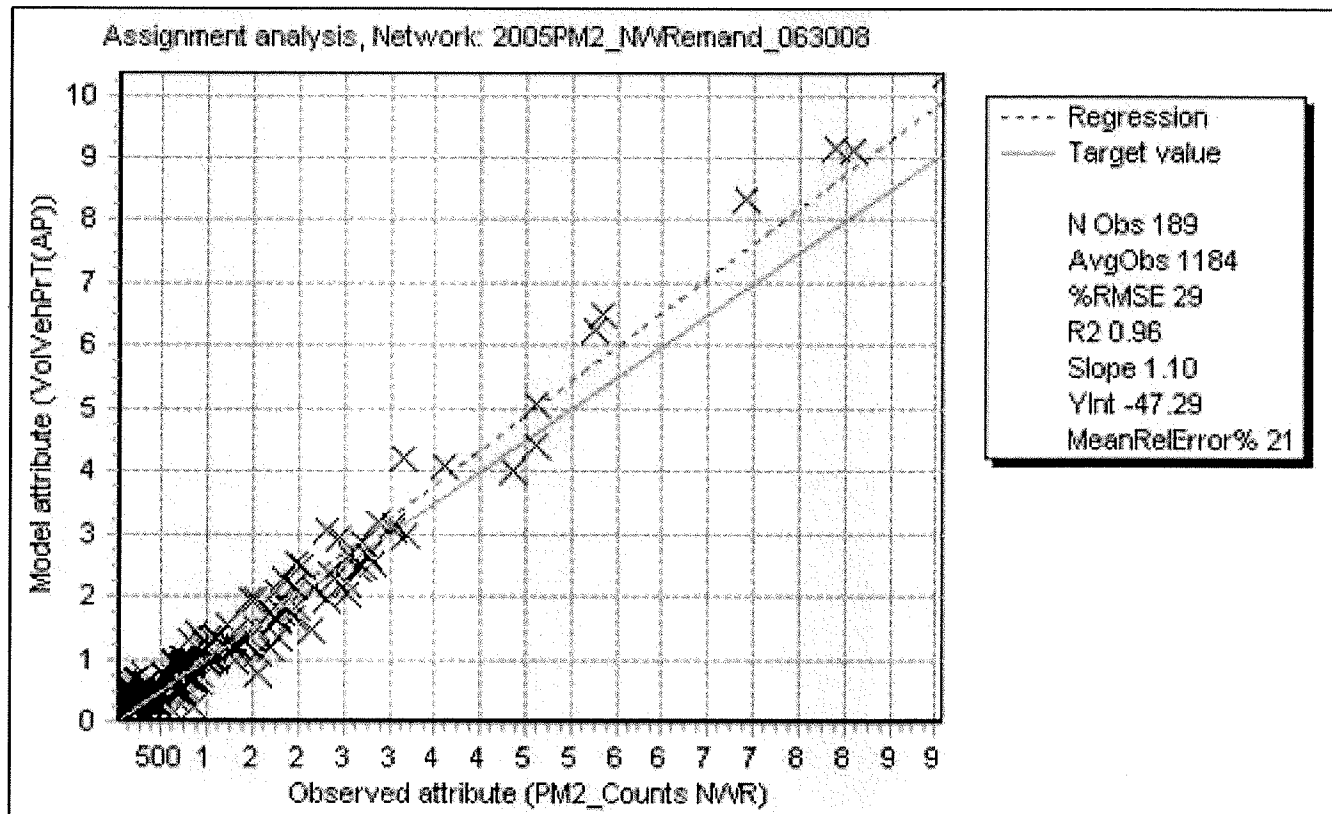
Through the calibration, a correlation of 0.96 was reached between the counts and the assigned traffic volumes (see the assignment analysis regression chart, Plot 4). Plot 5 shows assigned volumes and traffic counts in the core area of the NWDP project. The green links are the links with assignment errors within +-15 percent, while the blue and orange links represent the under or over assignment links, respectively. Assignment errors are measured by the formula of: assigned PM2 link volumes / pm2 traffic link counts.

¹ Some counts are 2007 counts.

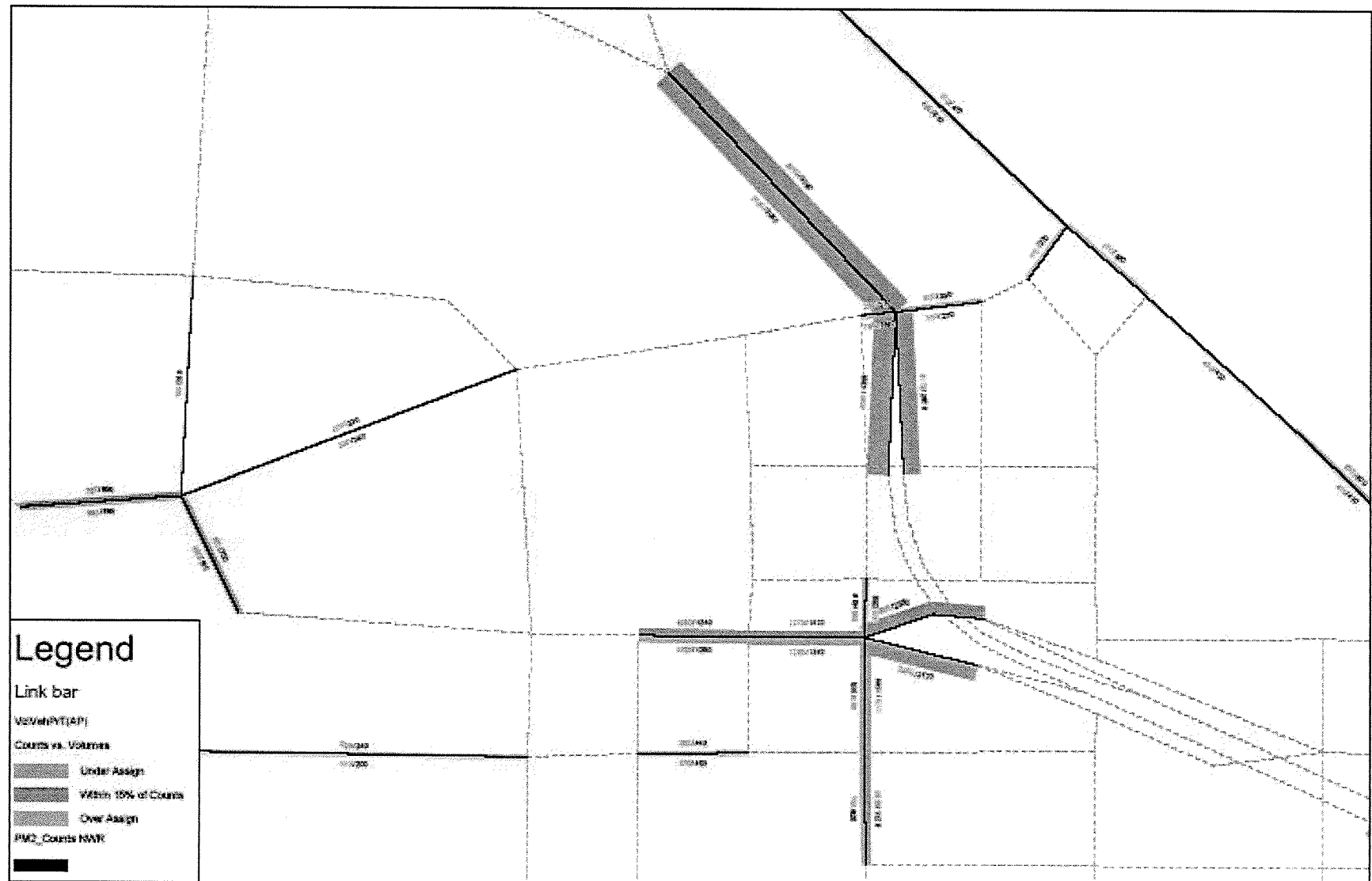
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Plot 4. Assignment Analysis Regression Chart



Plot 5. Traffic Counts and Assigned Volumes



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Appendix B Transportation Demand Forecasting

Base Model Projections

The following tables show the land use and resulting trip demands derived from the 2005/2030 NWDP base models:

Land use – Although household and employment growth in NWDP area is projected to occur at a slower rate when compared with the city and other areas within the region, the area will still experience significant growth in both categories (i.e., 1050 additional households and an increase of 3370 new jobs). These land use assumptions were based on the adopted NWDP zoning and comprehensive plan changes. One possible result of these changes could be the constraint of any additional growth that might have otherwise occurred in the study area through 2030.

Table 1. Land Use Assumptions in the model

	2005		2030		2005-2030 growth	
	HH	EMP	HH	EMP	HH	EMP
NWDP	4,970	18,040	6,020	21,410	21%	19%
City	234,700	442,700	299,500	603,100	28%	36%
Region	766,800	1,032,000	1,134,100	1,691,900	48%	64%

District Daily Trip Demands and Mode Split – The NWDP area's existing auto mode split percentage is relatively high now and is predicted to remain so in the future. This is especially true when compared against the neighboring NPDP district. In addition, the most noticeable differences in non-motorized traffic modes between the two areas are the relatively low readings in the walk mode split, even though they are still a little higher than City averages. The NWDP walk mode split, as a percent of daily traffic, is predicted to increase from approximately 7 percent to 8 percent by 2030. The walk mode splits in the NPDP are predicted at 13 percent in 2005 and 20 percent in 2030. The NWDP walk figure represents a number slightly higher than City averages but less than what otherwise might be expected to reasonably occur in the future. Again, this would indicate that the model represents a reasonable worst case scenario in terms of studying future traffic volumes.

Table 2. District Daily Traffic

	auto		transit		bike		walk		Total
	trips	%	trips	%	trips	%	trips	%	trips
2005	180,300	86.0	11,500	5.5	2,100	1.0	15,800	7.5	209,700
2030	223,900	80.4	27,200	9.8	3,200	1.2	24,100	8.7	278,300
Growth%	24.2		136.9		51.0		52.2		32.7

Table 3. District PM Peak 2-hour Traffic

	Auto		Transit		Bike ¹		Walk ¹		Total
	trips	%	trips	%	trips	%	trips	%	trips
2005	15,240	74.6	1,540	7.6	420	2.1	3,160	15.5	20,360
2030	18,180	66.5	3,700	13.5	640	2.3	4,820	17.6	27,340
Growth%	19.3		140.3		52.4		52.5		34.3

¹ Bike and Walk trips are estimated at 20 percent of daily trips.

Network Screen-line Traffic Growth (PM peak 2-hours) – The first four screen-lines gate NWDP area streets (See Plot 6). The table below shows that the traffic running through the gate screen-lines will grow at a much faster pace than the growth rate of 19.3 percent of the district auto demands. This implies that through auto traffic will gain shares in the future on those streets. By comparison, the fifth screen-line is located inside the district, and the traffic growth rate on it is more consistent with NWDP traffic growth.

Table 4. PM Peak 2-Hour Screen-Line Traffic

	Line 1		Line 2		Line 3		Line 4		Line 5	
	WB	EB	EB	WB	SB	NB	EB	WB	WB	EB
2005	4350	4820	2500	4110	4850	2290	6620	5150	2190	2060
2030	5950	7180	4550	5400	6020	3010	8610	6970	2560	2640
Growth	37%	49%	82%	32%	24%	32%	30%	35%	17%	28%

Line 1 – Northwest of NW Nicolai St. from NW Front Ave. to NW Thurman Ave.

Line 2 – East of NW 16th Ave from NW Front to NW Johnson, no freeway

Line 3 – North of NW Glisan from NW 16th Ave to NW Westover

Line 4 – Freeway I-405 west of Freemont bridge interchange

Line 5 – west of NW 23rd Ave. from NW York St. to NW Pettygrove St.

Plot 6. Screen Lines



Daily traffic Origin-Destination patterns – The top five districts with the highest origin-destination traffic relations are listed in Table 5. There is no change between 2005 and 2030 in terms of the ranks of these traffic relations. The average trip distance for trips from, to or through the NWDP Remand area is 7.3 miles in 2005 PM peak 2-hours.

Table 5. PM Peak 2-hour Trip Distribution Pattern

Area	2005		2030	
	Trips	%	Trips	%
Beaverton/Hillsboro	1940	12.9	2590	14.4
NWDP Area	1440	9.6	1510	8.4
CBD	1370	9.1	1510	8.4
SW Portland	1280	8.5	1500	8.4
NE Portland	1170	7.8	1310	7.3
Total*		47.8		46.9

*Total includes remainder of trips distributed to other districts.

Main Access Routes -- During weekday PM peak 2-hours, the I-405 ramps at NW Vaughn St and NW 23rd Ave serve as major access routes to the NWDP area. This represents 28 percent of the total vehicle demands coming in and out of the district. Other than the freeway, local traffic is scattered among the streets connecting to the south, east and west and Screen-line 3 captures the most local traffic among the 3 boundary screen-lines. Local traffic here refers to traffic with at least one trip end within the district.

Table 6. PM 2-hour traffic on the top six main access routes

		District related volumes	% of the total district trips	% of the total link volumes
2005	I-405 E/ NW 23 rd	4330	28%	81%
	NW 18 th -19 th n/ Glisan	1510	10%	90%
	NW 23 rd n/ Glisan	1040	7%	73%
	NW Cornell w/ Love Joy	930	6%	41%
	NW Naito Pkwy e/ 14 th	880	6%	46%
2030	I-405 E/ NW 23 rd	4750	26%	76%
	NW 18 th -19 th n/ Glisan	1840	10%	86%
	NW 23 rd n/ Glisan	1140	6%	66%
	NW 16 th n/ Glisan	1080	6%	60%
	NW Naito Pkwy e/ 14 th	1010	5%	35%

Comprehensive Plan Changes North of Vaughn St - Planning and PBOT prepared a sensitivity analysis of the Comprehensive Plan changes adopted in the area North of Vaughn St. Planning conducted a business owner survey and land use analysis that led to the preparation of a development estimate for all properties in the Mixed Employment (ME) designated area. The analysis shows that the area could expect a total increase of 191 additional jobs. Some or all of those jobs are

already captured by the 2030 base model (See Table 7) and the only TAZs effected by the Comprehensive Plan changes are TAZ #728 and #1911. These 191 jobs also represent an insignificant increase when compared to the 2030 base employment figures for the study area (i.e., 21,410 total employment). As a result, PBOT has concluded that any increase in travel demand associated with this amount of additional employment would not significantly change the travel behaviors or impacts in the NWDP area beyond those already predicted in the 2030 base model. Therefore, a separate model and analysis for the area North of Vaughn St was deemed unnecessary and the model uses the same trip generation rates from the 2030 base model to project the additional vehicle trips from the NWDP, and also maintains the same mode split figures for each TAZ.

Trip Generation – In order to derive the PM peak 2-hour trip generation rates from the base models, a generic trip generation formula is first used to separate the residential and employment components of the traffic, and then the trip generation rates are obtained by dividing the commercial traffic with the total employment of the TAZ. On average, 0.5 vehicle trips are added into the PM2 demands by every new employee in the model.

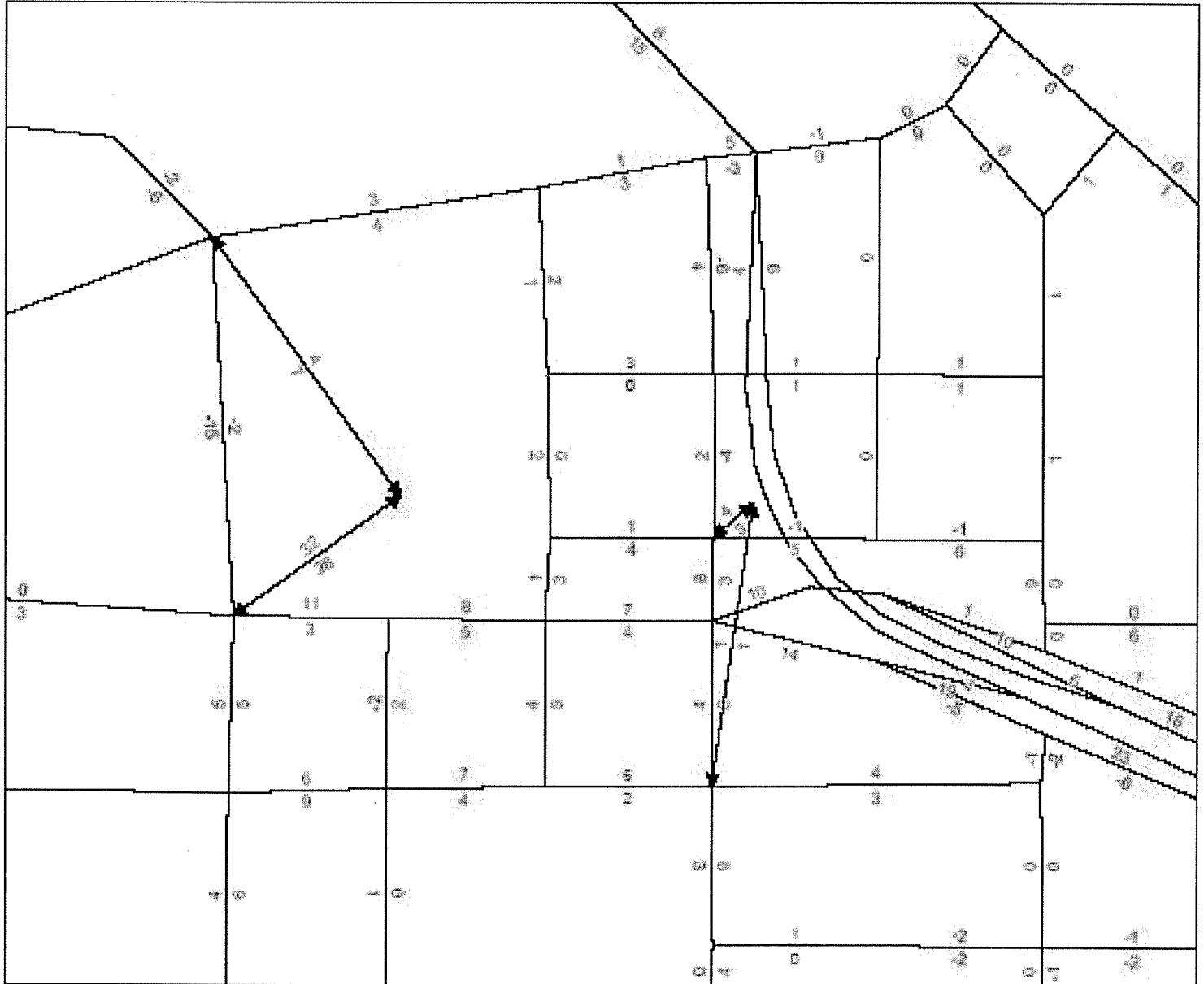
Table 7. NWDP & North of Vaughn projected PM2 total vehicle demand

	2005	2030 Base NWDP	2030 NWDP, plus N of Vaughn
Household	4720	5760	5760
Employment	17110	20400	20590
Total Travel Demand*	15200	19020	19100

*Total Travel Demand is a function derived of Household and Employment figures for the study area.

Plot 7 shows the differences between the rezoning scenario and the base model. It can be seen that there is no significant difference between the two assignments. The biggest change happens on I-405 east of the division point to US-30 with a total of 39 vehicles for 2 hours (23 eastbound and 16 westbound). With this amount of traffic change, no further traffic analysis, specifically for the Comprehensive Plan changes North of Vaughn St, is needed.

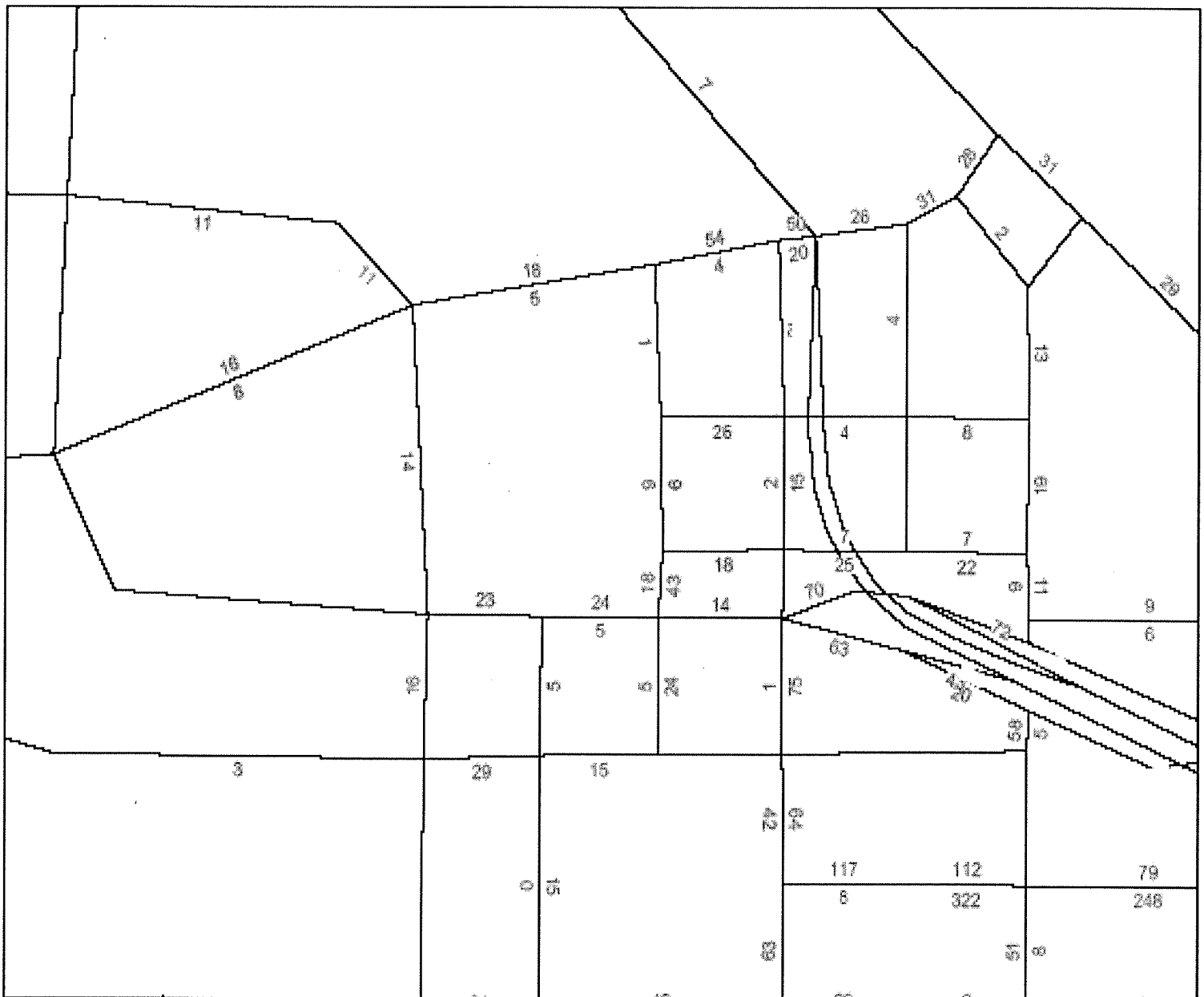
Plot 7. 2030 PM2 Volume Difference between Base and Rezoning Models



North Pearl District Plan Analysis - the NPDP's potential traffic impacts were also examined. PBOT set-up an alternative scenario which introduced recommendations from the NPDP into the base model. Those added elements included: a) an additional 2050 households in the North Pearl District in the planning year of 2030 (i.e., land use alternative 3); b) the NW Lovejoy / NW Overton couplet street network between 9th and 16th Aves; and c) a range of Transportation Demand Management (TDM) measures proposed in the plan.

Plot 8 shows the PM 2-hour Volume difference between the 2030 base model and the one with the additional NPDP changes. The plot shows a limited traffic increase resulting in approximately 20+ more vehicles on NW Vaughn St and 70+ more vehicles on the I-405 westbound off-ramp during the PM peak 2-hour period. Therefore, PBOT concludes that the North Pearl District Rezoning Plan will not significantly affect the NWDP traffic conditions at this level of planning analysis.

Plot 8. Volume Difference between NWDP and NPDP Incorporated Models



PM Peak 2-hour Traffic Conditions - A two-level analysis of the PM peak 2-hour traffic conditions was conducted:

1. The planning level of analysis focused on the traffic conditions at a link level using outputs from the Visum demand model software package
2. The operations level of analysis was performed at the intersection level using the Synchro modeling software package.

Planning Analysis

District PM Peak 2-hour Total Traffic - NWDP area vehicle demands are predicted to increase 20 percent by 2030. This is in the same range of traffic growth projected at the inner screen-line west of NW 23rd Ave running through NW York St and NW Pettygrove St. Compared with the other four screen-lines, traffic growth inside the NWDP area appears slower than traffic growth on the streets surrounding the district.

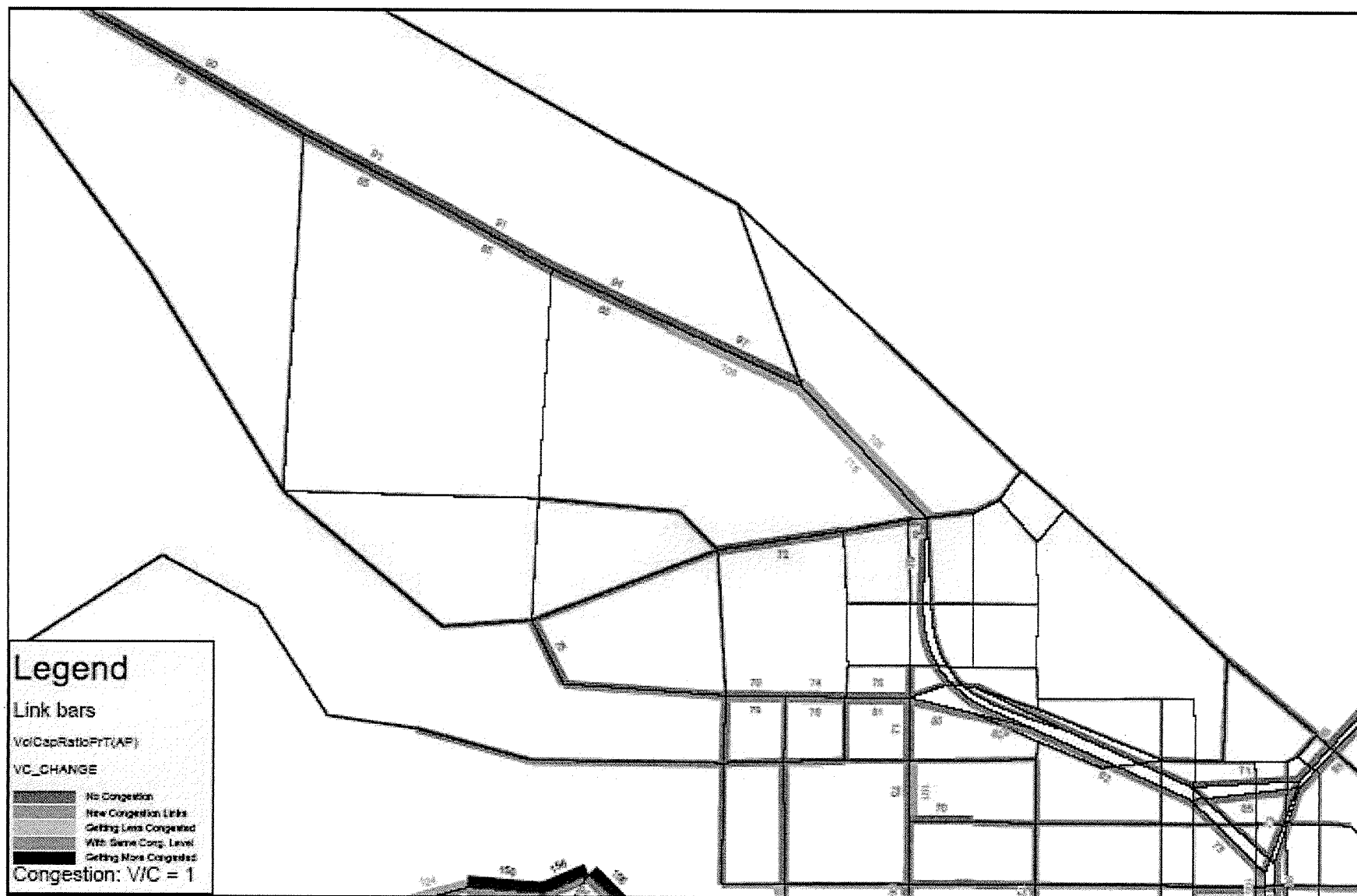
Table 8. PM2 total vehicle demand growth

	2005	2030	growth %
District Demands	15,400	18,400	20%
4-Screen-line Traffic total ¹	31,700	44,200	39%
Average Area Link Volumes ²	570	740	30%

¹The first four screen-lines, defined as before

Congestion - From the 2005 PM2 assignment (See Plot 9), there are 780 vol-miles (number of vehicles times distance traveled) on NWDP area links with a v/c ratio higher or equal 1, which equals approximately 3 percent of total vol-miles for the district links, all of them located in the southwest boundary of the district network. It is projected that this number would increase to 5,250 vol-miles, or approximately 17 percent of the total district vol-miles in 2030. More noticeable, the projected congested links show up inside the district area. The V/C readings on NW Yeon Ave west of NW Nicolai St, the only Major City Traffic (TSP Classification) street in the district, will reach 1.15. The northbound link on NW 23rd Ave south of NW Thurman St is also projected to become congested at link level in 2030. Even though the link capacity is only a generic coding for traffic assignment in the demand model, the conditions of $V/C > 1$ are a clear indication that the traffic congestion could be a problem in the future base model.

Plot 9. 2005 PM 2-hour Assign Volumes



183915

Table 9. PM2 traffic conditions on district streets

	2005	2030 base
Average Link Volumes	570	740
Total Veh-Miles	23,400	30,900
Total VHT ¹ (h)	1050	1480
Congested streets		
# of links	5	14
miles	0.6	2.2
Veh-miles	780	5250
% of total v-m	3.3%	17.0%
Max V/C	1.43	1.58
Average V/C	1.22	1.26
VHD ² (h)	48	260
% of total vhd	4.6%	17.5%

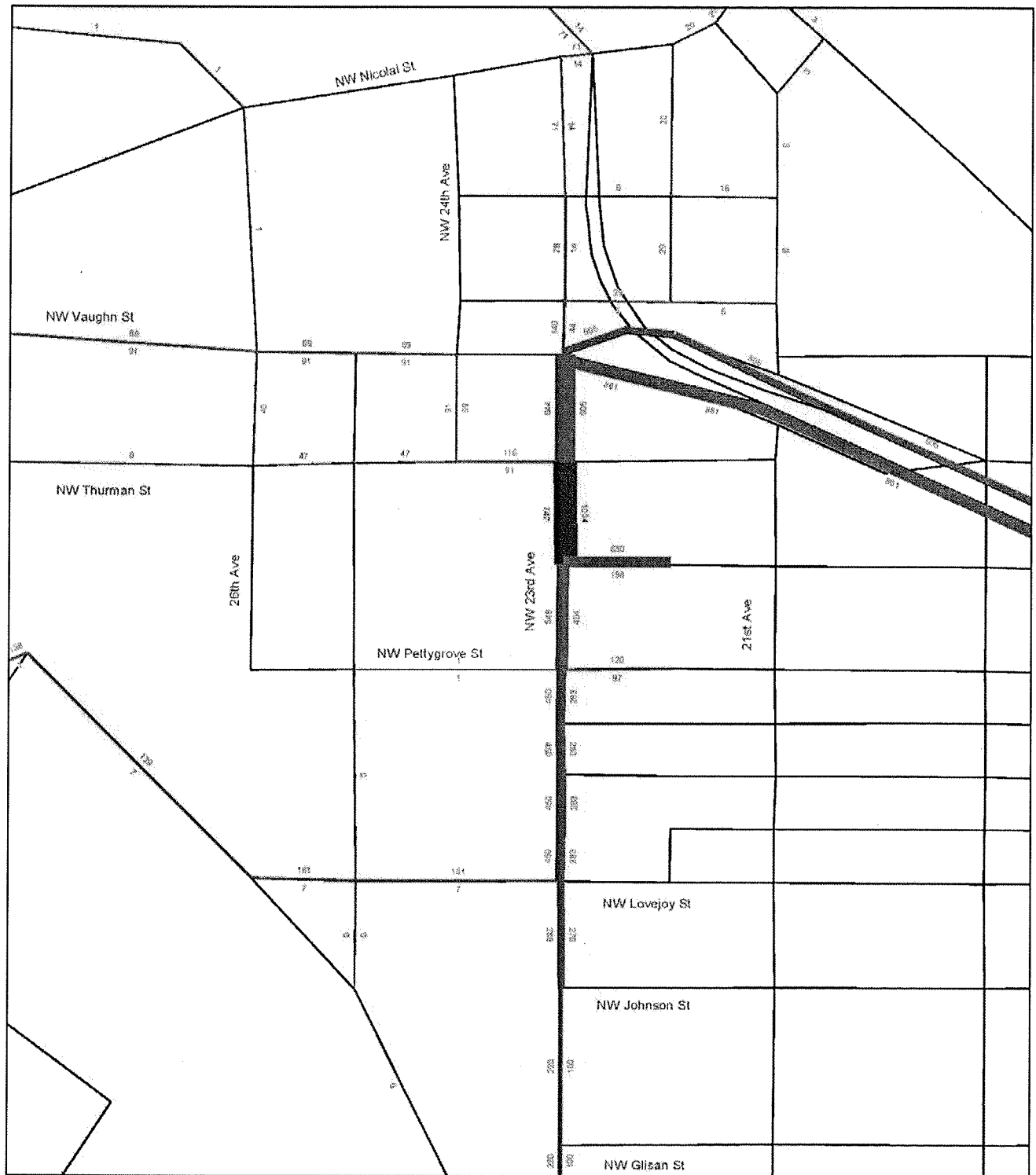
¹ VHT: Vehicle Hour Traveled = Volumes x Travel Time

² VHD: Vehicle Hour Delayed = Volumes x (Congestion Delay Time)

NW Vaughn St - The 2005 model indicates that NW Vaughn St has two main functions in the network. First, it functions as a Neighborhood Collector to distribute NWDP area traffic. Approximately 85 percent to 90 percent of the traffic on NW Vaughn St, west of NW 23rd Ave, originates or is destined primarily along NW Vaughn St (the area shown by the TAZs shown on Plot 1) or is distributed in the study area east of NW 29th Ave (See Plot 10). This means that only 10 to 15 percent of the total traffic in the NW Vaughn St corridor could be considered 'through' traffic (i.e., having neither an originations or destination in the corridor). NW Vaughn St is predicted to function roughly the same in 2030 model and the street function will remain consistent with its current TSP classification, Neighborhood Collector. Second, NW Vaughn St functions as the primary access route for connecting with I-405, which provides approximately 28 percent of the district's weekday PM peak 2-hour traffic demands. On the link west of NW 23rd Ave., approximately 80 percent of eastbound and 90 percent of westbound traffic are from and to the I-405 freeway, respectively. Therefore Vaughn has two functions in the street system – as a neighborhood collector and as the main access street to I-405.

By comparison, US-30 ramps in the area function in an almost entirely different role for the network (See Plot 11). The vast majority of traffic on US-30 ramps are through traffic with little relation with the district.

NW 23rd Ave - NW 23rd Ave is another important Neighborhood Collector for traffic circulation in the NWDP area. The select link analysis (See Plot 12) indicates that about 40 percent of the traffic on NW 23rd Ave reaches south as far as to NW Lovejoy St. The 2030 PM2 base model projects that the V/C readings on the northbound link of NW 23rd Ave south of NW Thurman St will reach 1.01. The capacity coded for the street link is 600 vehicles per hour. With active commercial and heavy auto parkings along both sides of NW 23rd Ave, the narrow 2-lane street could operate at a more congested level than the demand model indicated.

Plot 12. PM Peak 2-hour Traffic Volume Traces for NW 23rd Ave

Traffic Operation Analysis

All traffic operations analyses at the intersection level are based on current signal timing plans.

Transportation Planning Rule compliance for ODOT facilities - The TPR requires that PBOT and Planning provide evidence of no significant impact to ODOT facilities resulting from the NWDP. An operational analysis of intersection capacity on the 2030 base scenario is presented here to provide background information for this assessment.

Table 10 shows district traffic usage of the freeway ramps in the NWDP vicinity. I-405 ramps at NW Vaughn St, at NW Everett St, and US-30 ramps at NW Nicolai St are the main freeway ramps used by NWDP area traffic. More specifically, the traffic conditions on the I-405 ramps at NW Vaughn and NW Everett Sts are significantly effected by the traffic coming and leaving the district. While the district's traffic on US-30 SB ramp reach 340 during PM peak 2-hours, the traffic condition is more impacted by the through traffic here since the district traffic is only 8.4 percent of the total traffic on the link.

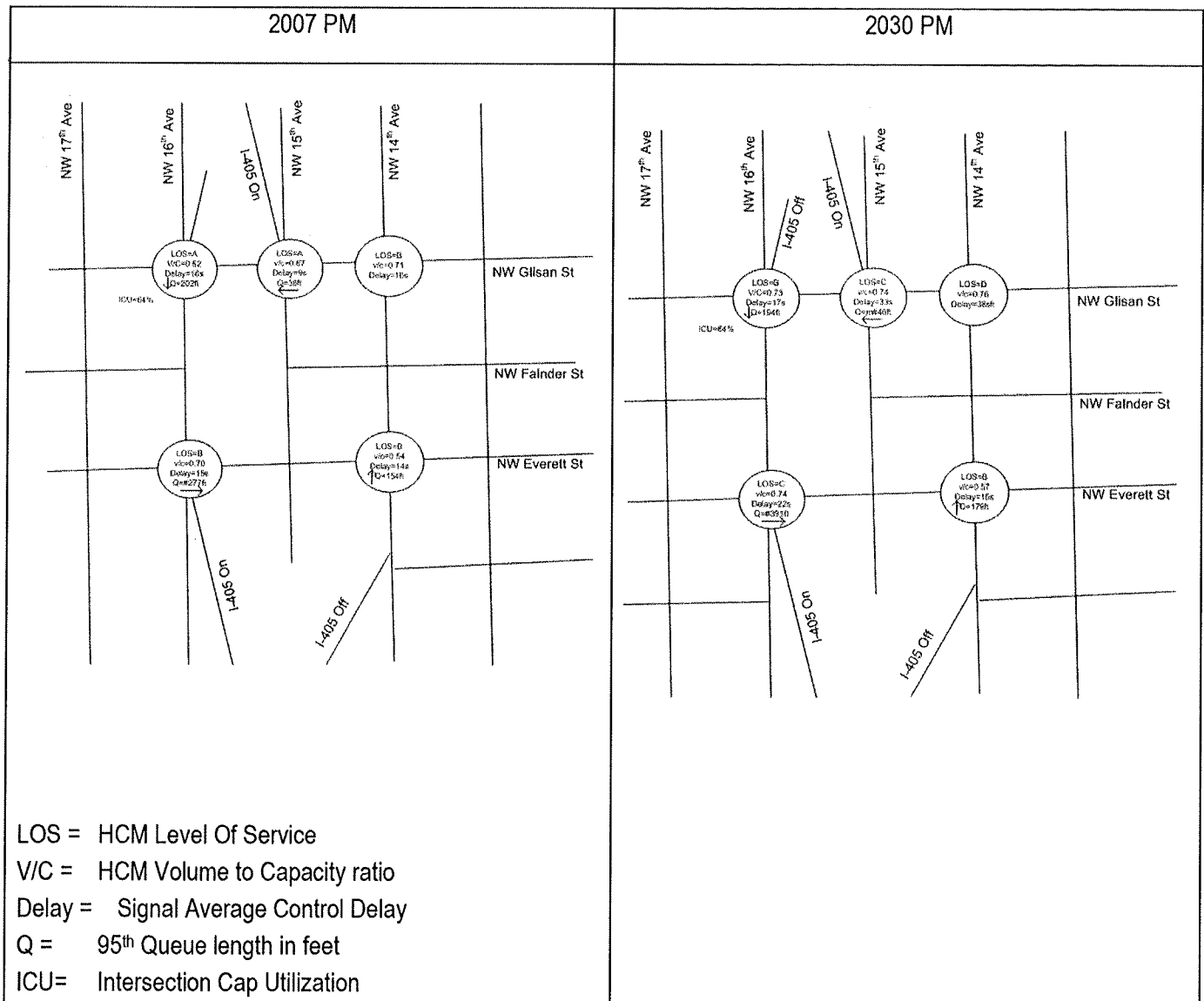
Table 10. 2005 PM Peak 2-Hour Freeway Ramp Usages of NWDP Remand Area traffic

	2005 PM2 conditions			Projected 2030 PM2 district Vol.
	District traffic	Total link volumes	%	
I-405 WB Exit @ Vaughn	1830	2400	76.3	1910
I-405 EB Entry @ Vaughn	2500	2950	84.7	2840
I-405 NB Exit @ Everett	710	2060	34.5	610
I-405 SB Entry @ Everett	680	2120	32.1	940
US30 NB Exit @ Nicolai	90	3170	2.8	260
US30 SB Entry @ Nicolai	340	4030	8.4	220
I-405 NB Entry @ Glisan	70	920	7.6	70
I_405 SB Exit @ Glisan	100	705	14.2	120
I-405 SN Exit @ Couch	100	1340	7.5	120

Plots below show the results from the Synchro model for the freeway ramps mentioned above. All analyses are based on current signal timing plans on these streets. The 2005 model is based on traffic turning movement counts and the 2030 volume inputs are derived from the sum of the count and the volume delta between 2030 and 2005 demand models.

I-405 ramps: NW Glisan and NW Everett Sts - The analysis (See Plot 13) shows that all ramp intersections will be operate at the LOS (Level of Service) D or better and the maximum V/C is 0.76 during weekday PM peak hour in 2030. This performance meets City and ODOT mobility standards for these facilities.

Plot 13. Traffic Operation Analysis for Southern NW District Freeway Interchanges

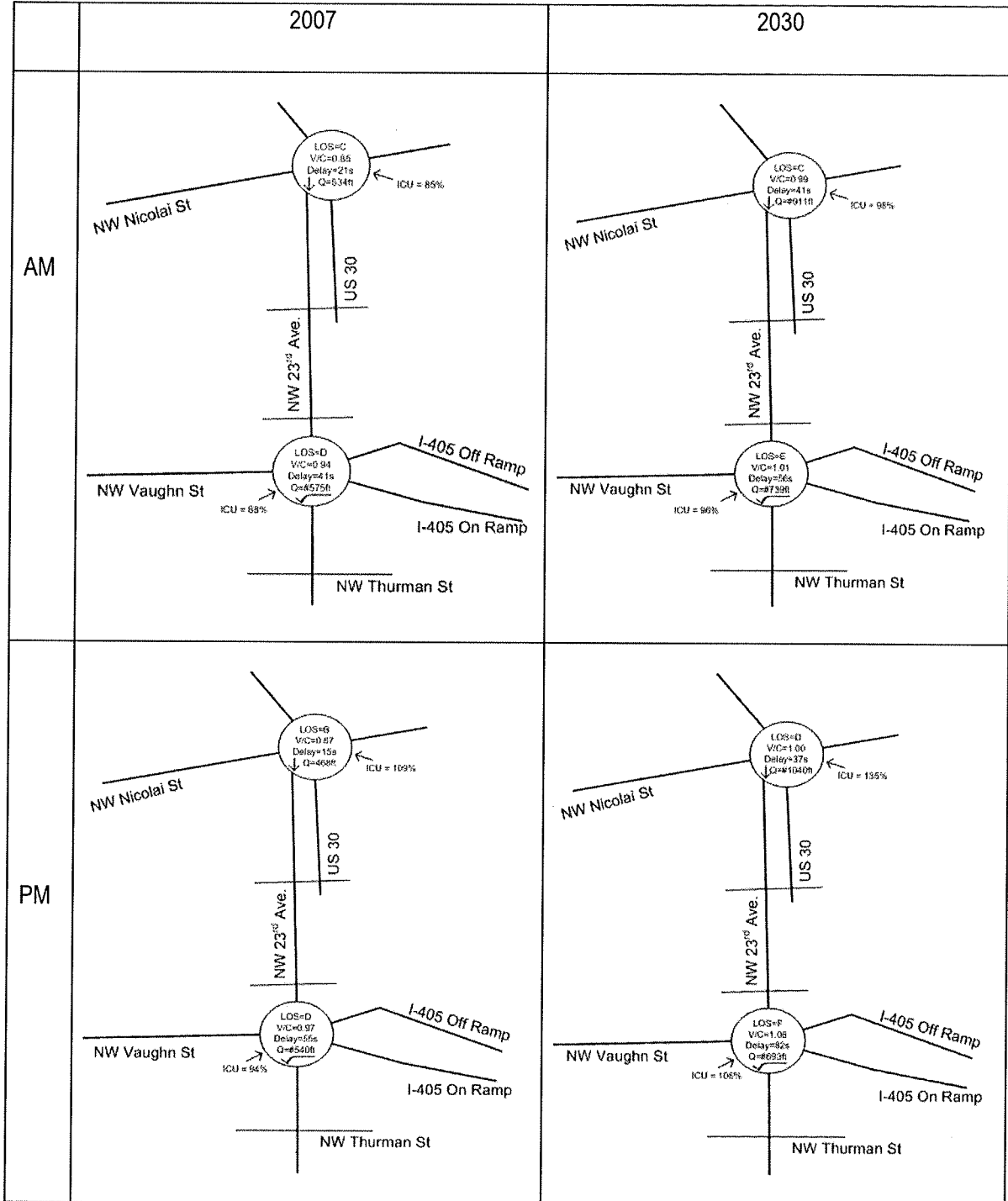


It is worth noting that the above 2030 PM LOS and V/C data are achieved with a slightly modified signal timing plan for the intersection of NW Glisan St at NW 15th Ave. The only modification to the timing plan is to change the offset time. With the current signal timing plan and the projected future traffic demands, the westbound traffic queue would be longer than the available storage length at the intersection. The modification effectively reduces the westbound queue at the intersection and results in significant improvements on the operation conditions of all intersections along NW Glisan St.

I-405 ramps: NW Vaughn and US-30 ramp at NW Nicolai St - AM peak hour traffic conditions were also analyzed for these two intersections / interchanges. This analysis was conducted in order to address concerns that traffic operations at the AM peak could be worse than the PM peak at these intersections. The AM 2-hour demand is a simple modeling exercise conducted by transposing the PM 2-hour vehicle demands on AM operating conditions. No further calibration is necessary to evaluate the AM 2-hour assignments. The analysis for existing conditions is based on current traffic turning movement counts, and the future condition is based on the sums of the counts and the projected traffic growths. This approach is the same as that used for the PM analysis. The two signals at the intersections are full actuated and uncoordinated signals.

The analysis shows that the two ramp intersections are currently operated at the LOS D or better with the maximum V/C of 0.97 during weekday peak hours, and their operation condition is projected to deteriorate to LOS F with a V/C readings of 1.06 in 2030 PM peak hour (See plots below). Although the projected operational conditions will be below both PBOT and ODOT mobility standards of LOS E or better and $V/C \leq 0.99$, respectively, for these facilities, ODOT has determined that there is no significant impact on the planned function and performance of the State facility, I-405. PBOT does however recommend re-striping the off-ramp to facilitate additional turning movements that will relieve the queueing pressure at the intersection and bring the facility to within city mobility standards for these facilities. Please see Exhibit B to this report for a description, drawing and cost estimate of this improvement.

Plot 14. Traffic Operation Analysis for Northern NW District Freeway Interchange



The operating conditions at the intersection of US-30 at NW Nicolai St in future peak hours are projected to be within PBOT's and ODOT's mobility standard excepting the V/C reading (1.0). It is worth noting that the traffic at this intersection will be mostly through traffic. Since the model projects the longest queue will be at the north leg (southbound approach) on NW Yeon St, it is determined that the queuing would not cause any problems for freeway traffic operations.

The potential increased traffic volumes for the facilities and intersections described above are all projected based on the 2030 model and includes the re-zonings and comprehensive plan changes contained within the NWDP Ordinance. Based on this analysis, PBOT does not expect that the NWDP would significantly further downgrade the operational conditions to these two intersections. This expectation assumes certain signal timing improvements as described in Exhibit B to this report.

Conclusion

The purpose of this transportation analysis is to determine whether the land uses allowed by the NWDP Ordinance would change the predominant type of traffic on NW Vaughn St in a manner inconsistent with its functional classification as a neighborhood collector; and to determine whether the NWDP Ordinance will reduce the performance standards of the NW Vaughn St/NW 23rd Ave intersection and the Interstate 405 (I-405) off-ramp below the minimum acceptable level identified in the City of Portland's Transportation System Plan.

First, PBOT's analysis of the existing conditions shows that approximately 85 percent to 90 percent of the traffic on NW Vaughn St, west of NW 23rd Ave, originates in the area along NW Vaughn St east of NW 29th Ave. NW Vaughn St is predicted to function roughly the same in 2030 and the street function will remain consistent with its current TSP classification, Neighborhood Collector. Therefore, the NWDP Ordinance will not change the predominant traffic type in a manner inconsistent with NW Vaughn St's functional classification.

Second, ODOT has determined that there is no significant impact on the planned function and performance of the State facility, I-405, and therefore Transportation Planning Rule OAR 660-012-0060, section -060 does not apply. ODOT does not have a position on potential significant affects to the planned capacity or function of City transportation facilities.

PBOT's analysis demonstrates that the NWDP Ordinance may result in traffic conditions that reduce performance of the NW 23rd Ave intersection below the minimum acceptable City levels for this type of facility. Therefore, as development occurs, mitigation is required to improve the operation of the intersection. With implementation of the remediation efforts described in Exhibit B to this report, the intersection will meet city operating standards for this type of facility.

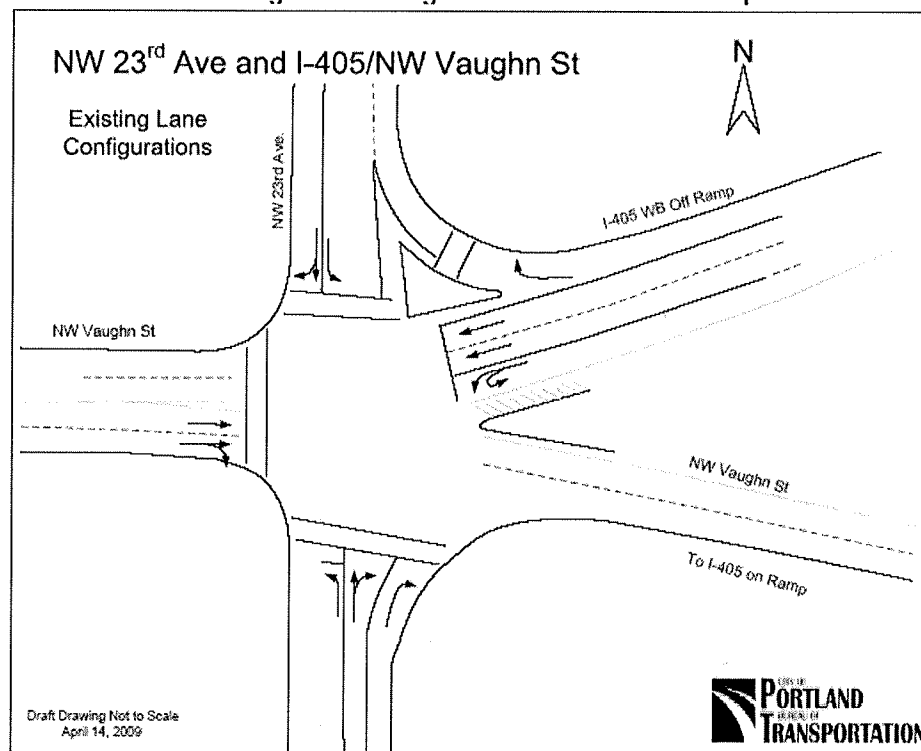
Appendix C

Proposed improvements to the I-405 interchange at NW Vaughn Street and NW 23rd Avenue

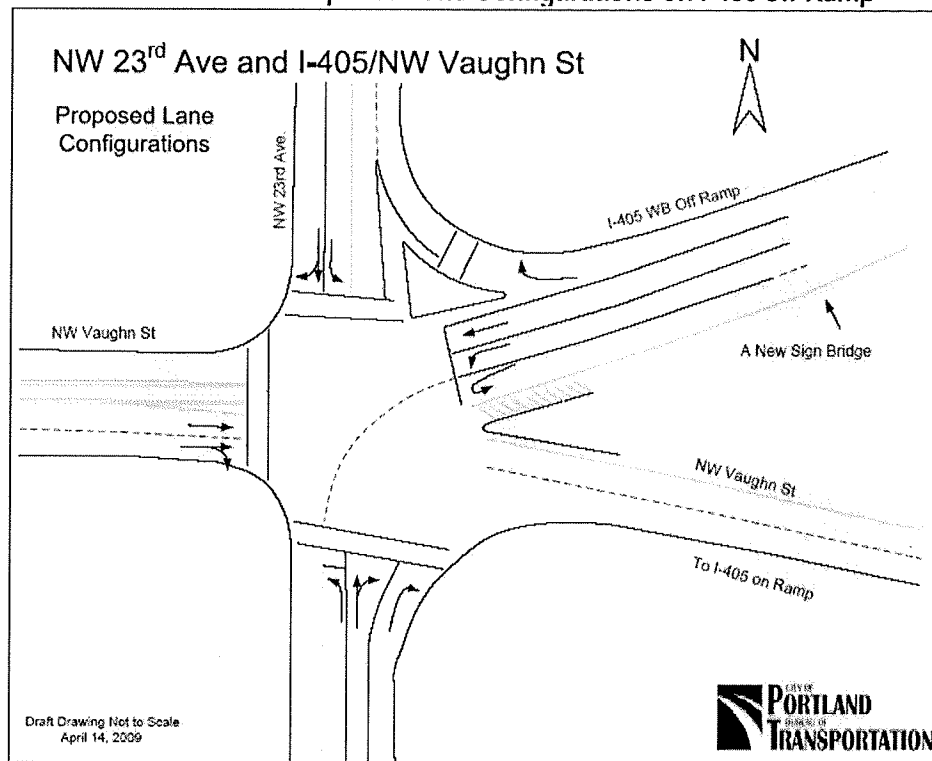
The Northwest District Plan (NWDP) transportation analysis has identified that future traffic operation conditions at the interchange of I-405 ramps/ NW Vaughn St and NW 23rd Ave will deteriorate below the city's acceptable mobility standard for this facility (i.e., whether the intersection is operating at less than LOS E). Further analysis indicates that this intersection's operational condition could be improved with a modest re-configuration of the I-405 off ramp and re-striping on NW Vaughn St.

Currently, the I-405 off ramp consists of one left-turn lane, two through-lanes and one channelized right-turn lane (See Plot 1). The preliminary analysis found that the ramp could be re-configured to include one u-turn lane, one left-turn lane and one through-lane while maintaining the channelized right-turn lane (See Plot 2). This reconfiguration would allow the intersection to operate at LOS E or better with a maximum of V/C at 0.97, meeting PBOT's mobility standards for the facility as well as maintaining the current level of service.

Plot 1. Existing Lane Configurations on I-405 off Ramp



Plot 2. Proposed Lane Configurations on I-405 off Ramp



Again, the re-configuration consists of changing one through lane into a left-turn lane and changing the currently combined left-/U-turn lane into a U-turn only lane. Consequently, other improvements associated with the lane re-configurations are required, which include but may not be limited to the following:

- New lane-use skip stripes
- Increased/decreased length of deceleration lanes
- Re-striping the westbound receiving lane on NW Vaughn St from two lanes to one lane
- New signal timing plan
- New signal heads
- New signal detectors
- New freeway overhead sign bridge (guide sign for bridge drivers) to indicate new lane-use
- Modification of the existing freeway overhead sign bridge to reflect lane-use changes
- New pavement markings
- Pedestrian improvements

Based on initial engineering estimates of the concept plan (i.e., without detailed engineering design parameters), today's cost of the above described improvements would be approximately \$199,000. The cost estimate covers construction, design, management, overhead and includes significant contingency.

Without a detailed traffic engineering study, it is impossible to set the precise parameters of the improvements such as the lengths of the lanes or the number of detectors. As such, the above drawing and cost estimate is provided only to illustrate the main mitigation concepts and the order of

magnitude costs associated with them. It is important to note that since ODOT has jurisdiction over the freeway I-405 Ramps, all proposed changes will require ODOT's review and approval. It is also worth noting that these improvements will be implemented as future real property development occurs. Should these developments and/or traffic impacts fail to materialize, these improvements may not be necessary or constructed.

In summary, the proposed mitigation measures described above will improve traffic operations at the interchange to meet PBOT's mobility standard for these facilities. Transportation System Plan Project (TSP) # 60027 – 23d/AVaughn, NW: Intersection Improvements (page 3-72 of the TSP) incorporates these improvements. Additional project details as outlined in this Exhibit B will be included as an appendix in the adopting ordinance.

For additional detail regarding the existing and future performance of the facility, see Table 1. PBOT's mobility standard is to operate the intersection at LOS E or better during peak 2-hour periods.

Table 1. Comparison of Traffic Operation conditions

Scenario	2007PM	2030PM	2030PM with Improvements
Total Volumes (vph)	3020	3370	3370
LOS*	D	F	E
Delay (s/veh)	54.9	81.8	58.3
Volume / Capacity	0.97	1.06	0.97

*Represents peak 1-hour Level of Service (LOS)

Timeline for Mitigation Project Improvements

As part of the analysis for the mitigation project, staff completed a trend line analysis to get a sense of when the Mitigation Project intersection improvements might be needed. The calculation is based on the straight line interpretation of each traffic movement at the intersection between 2007 and 2030 in the NW Remand model. No signal timing settings or lane layouts were modified in this exercise.

Through this exercise it was determined that the intersection would reach a V/C of 1.02 (LOS E) in 2015 and a V/C of 1.11 (LOS F) in 2029, both of which are above the city's level of service standard. Based on this exercise, the City traffic engineering staff recommends that the Mitigation Project improvements be made at the intersection between 2015 and 2020. Because this analysis is based on long range planning models and development assumptions which may not hold true, the Bureau of Planning and Sustainability and the Bureau of Transportation will conduct additional analysis in 2015 to establish the level of service at the intersection and determine when it would be appropriate to add the project to the city's Capital Improvement Program (CIP).

Table 2. Trend Line Analysis

	2007	2015	2020	2025	2028	2029	2030
Total Vol	3035	3155	3230	3310	3355	3370	3385
TCM	1310	1380	1425	1470	1495	1505	1513
MAX V/C	0.99	1.05	1.12	1.18	1.23	1.24	1.25
Int V/C	0.97	1.02	1.05	1.09	1.11	1.11	1.12
Int Delay	56.2	63.4	68.9	75.2	79.4	80.7	82
LOS	E	E	E	E	E	F	F

TCM = Total Critical Movements for the intersection

MAX V/C = biggest Volume/Capacity reading among all turn movements

int V/C = HCM intersection Volume / Capacity ratio

int delay = HCM average intersection control delay













LOS = HCM Level of Service

HCM = Highway Capacity Manual

HCM Signalized Intersection Capacity Analysis

2007PM

I-405 Ramp/Vaughn St @ NW 23rd Ave

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑			↑↑	↑↑	↑	↑	↑	↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95			1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.99			1.00	1.00	0.85	1.00	0.87	0.85	1.00	0.97
Flt Protected		1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		3482			1770	3539	1583	1770	1536	1504	1770	1788
Flt Permitted		1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		3482			1770	3539	1583	1770	1536	1504	1770	1788
Volume (vph)	0	690	55	170	265	605	170	145	45	645	160	70
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	726	58	185	279	637	179	153	47	679	168	74
RTOR Reduction (vph)	0	5	0	0	0	0	84	0	0	0	0	7
Lane Group Flow (vph)	0	779	0	0	464	637	95	153	386	340	168	83
Confl. Peds. (#/hr)	1		16		16		1	40				
Turn Type				Prot	Prot		Prot	Prot		Prot	Prot	
Protected Phases		2		1	1	6	6	3	8	8	7	4
Permitted Phases												
Actuated Green, G (s)		25.9			29.0	58.9	58.9	20.7	28.8	28.8	11.0	19.1
Effective Green, g (s)		25.9			29.0	58.9	58.9	20.7	28.8	28.8	11.0	19.1
Actuated g/C Ratio		0.23			0.26	0.53	0.53	0.19	0.26	0.26	0.10	0.17
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		815			464	1883	842	331	400	391	176	308
v/s Ratio Prot		c0.22			c0.26	0.18	0.06	0.09	c0.25	0.23	c0.09	0.05
v/s Ratio Perm												
v/c Ratio		0.96			1.00	0.34	0.11	0.46	0.96	0.87	0.95	0.27
Uniform Delay, d1		41.8			40.8	14.8	12.9	40.0	40.5	39.2	49.6	39.7
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		21.2			41.8	0.1	0.1	1.0	35.6	18.2	54.2	0.5
Delay (s)		63.0			82.6	14.9	13.0	41.1	76.1	57.3	103.8	40.2
Level of Service		E			F	B	B	D	E	E	F	D
Approach Delay (s)		63.0				39.2			62.7			81.6
Approach LOS		E				D			E			F
Intersection Summary												
HCM Average Control Delay		54.9										
HCM Volume to Capacity ratio		0.97										
Actuated Cycle Length (s)		110.7										
Intersection Capacity Utilization		93.9%										
Analysis Period (min)		15										
c Critical Lane Group												
<div> <div>HCM Average Control Delay</div> <div>54.9</div> <div>HCM Level of Service</div> <div>D</div> </div> <div> <div>HCM Volume to Capacity ratio</div> <div>0.97</div> <div>Sum of lost time (s)</div> <div>16.0</div> </div> <div> <div>Intersection Capacity Utilization</div> <div>93.9%</div> <div>ICU Level of Service</div> <div>F</div> </div> <div> <div>Analysis Period (min)</div> <div>15</div> </div>												

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NW Remand Plan, Ning Zhou

04/14/2009

City of Portland

HCM Signalized Intersection Capacity Analysis













2007PM

I-405 Ramp/Vaughn St @ NW 23rd Ave

Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	15
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	16
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	40
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM Signalized Intersection Capacity Analysis

2030PM w/ Improvement
I-405 Ramp/Vaughn @ NW 23rd Ave

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑		⇕	⇕	↑	↑	⇕	↑	↑	⇕	⇕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95		1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00
Frpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.99		1.00	1.00	1.00	0.85	1.00	0.87	0.85	1.00	0.98
Flt Protected		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		3487		1770	1770	1863	1583	1770	1534	1504	1770	1801
Flt Permitted		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		3487		1770	1770	1863	1583	1770	1534	1504	1770	1801
Volume (vph)	0	790	55	185	320	655	170	145	45	705	210	90
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	832	58	195	337	689	179	153	47	742	221	95
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	0	5
Lane Group Flow (vph)	0	886	0	195	337	689	179	153	418	371	221	106
Confl. Peds. (#/hr)	1		16		16		1	40				
Turn Type				Prot	Prot	custom		Prot		Prot	Prot	
Protected Phases		2		1	1	6 3 4 6!		3	8!	8	7	4
Permitted Phases												
Actuated Green, G (s)		31.9		23.0	23.0	58.9	119.9	14.9	33.0	33.0	16.0	34.1
Effective Green, g (s)		31.9		23.0	23.0	58.9	119.9	14.9	33.0	33.0	16.0	34.1
Actuated g/C Ratio		0.27		0.19	0.19	0.49	1.00	0.12	0.28	0.28	0.13	0.28
Clearance Time (s)		4.0		4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		928		340	340	915	1583	220	422	414	236	512
v/s Ratio Prot		c0.25		0.11	c0.19	0.37	c0.11	0.09	c0.27	0.25	c0.12	0.06
v/s Ratio Perm												
v/c Ratio		0.95		0.57	0.99	0.75	0.11	0.70	0.99	0.90	0.94	0.21
Uniform Delay, d1		43.3		44.0	48.3	24.6	0.0	50.3	43.3	41.8	51.4	32.6
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		19.2		2.3	46.3	3.5	0.0	9.2	41.2	21.2	41.0	0.2
Delay (s)		62.5		46.3	94.6	28.2	0.0	59.5	84.5	63.1	92.5	32.8
Level of Service		E		D	F	C	A	E	F	E	F	C
Approach Delay (s)		62.5				43.1			72.0			72.5
Approach LOS		E				D			E			E
Intersection Summary												
HCM Average Control Delay		58.3										
HCM Volume to Capacity ratio		0.97										
Actuated Cycle Length (s)		119.9										
Intersection Capacity Utilization		88.0%										
Analysis Period (min)		15										
! Phase conflict between lane groups.												
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis













2030PM w/ Improvement
I-405 Ramp/Vaughn @ NW 23rd Ave

Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	15
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	16
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	40
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM Signalized Intersection Capacity Analysis

2030 PM2

I-405 Ramp/Vaughn St @ NW 23rd Ave

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑			↵	↑↑	↗	↵	↑	↗	↵	↑↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95			1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00
Frpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.99			1.00	1.00	0.85	1.00	0.87	0.85	1.00	0.98
Flt Protected		1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		3487			1770	3539	1583	1770	1534	1504	1770	1801
Flt Permitted		1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		3487			1770	3539	1583	1770	1534	1504	1770	1801
Volume (vph)	0	790	55	185	320	655	170	145	45	705	210	90
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	832	58	195	337	689	179	153	47	742	221	95
RTOR Reduction (vph)	0	5	0	0	0	0	81	0	0	0	0	5
Lane Group Flow (vph)	0	886	0	0	532	689	98	153	418	371	221	106
Confl. Peds. (#/hr)	1		16		16		1	40				
Turn Type				Prot	Prot		Prot	Prot		Prot	Prot	
Protected Phases		2		1	1	6	6	3	8	8	7	4
Permitted Phases												
Actuated Green, G (s)		30.0			32.0	66.0	66.0	14.7	29.0	29.0	13.0	27.3
Effective Green, g (s)		30.0			32.0	66.0	66.0	14.7	29.0	29.0	13.0	27.3
Actuated g/C Ratio		0.25			0.27	0.55	0.55	0.12	0.24	0.24	0.11	0.23
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		872			472	1946	871	217	371	363	192	410
v/s Ratio Prot		c0.25			c0.30	0.19	0.06	0.09	c0.27	0.25	c0.12	0.06
v/s Ratio Perm												
v/c Ratio		1.02			1.13	0.35	0.11	0.71	1.13	1.02	1.15	0.26
Uniform Delay, d1		45.0			44.0	15.1	13.0	50.6	45.5	45.5	53.5	38.1
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		34.4			81.1	0.1	0.1	10.0	85.7	53.0	111.5	0.3
Delay (s)		79.4			125.1	15.2	13.0	60.5	131.2	98.5	165.0	38.4
Level of Service		E			F	B	B	E	F	F	F	D
Approach Delay (s)		79.4				56.7			106.8			122.7
Approach LOS		E				E			F			F
Intersection Summary												
HCM Average Control Delay		81.8			HCM Level of Service				F			
HCM Volume to Capacity ratio		1.06										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)				12.0			
Intersection Capacity Utilization		105.7%			ICU Level of Service				G			
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2030 PM2

I-405 Ramp/Vaughn St @ NW 23rd Ave

Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	15
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	16
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	40
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Project Estimate Report: Development Phase

for

Fremont Br – Vaughn St Ramp

4/8/09

Requested by: Ningsheng Zhou

Prepared by: Jennie Tower & Nelson Chi

Location: Fremont Br – Vaughn St Ramp from NW 21st PI to NW 23rd PI

Description: Traffic signal and lane alterations for Fremont Br–Vaughn St ramp at NW 23rd Ave

Current Cross-Section: From south to north: sharp left/soft left – thru – thru – right

Proposed Cross-Section: From south to north: sharp left – soft left – thru – right

Issues: (describe issues, or indicate "none identified")

- Water – None identified
- BES (storm, sanitary, water-quality facilities) – None identified
- Signals and Street Lighting – Alterations necessary
- Environmental and Zoning (OPDR; Army Corp of Engineers; Division of State Lands) – None identified
- Contaminated Media – None identified
- Right-of-Way Needs – None identified
- Railroads (BNSF; UPRR; PTTR) – None identified
- Parks (landscaping and irrigation) – None identified
- Other Jurisdictions (counties, schools, Port, ODOT, Tri-Met) – Will need ODOT approval

Cost Estimate:

(Estimates greater than \$10,000 round numbers to the nearest \$1,000; for less than \$10,000 round to the nearest \$100)

Construction	\$ 70,000
Project Management (5%)	\$ 3,500
Design Engineering (25%)	\$ 17,000
Construction Management (15%)	\$ 11,000
Right-of-Way (Cost + 20% Contingency)	-
Overhead (68.46%)	\$ 21,000
Estimate Contingency	\$ 77,000

Total Project Estimate: \$ 199,000

Estimating Assumptions:

(Written explanation of contingencies, variations from the base unit prices and why)

- Existing sign bridge will not need to be relocated.
- New sign bridge will need to be installed.

Review & Approval:

Reviewed by Engineer of Record

Date

Reviewed and Approved by Engineering Services Division Manager

Date

Attachments:

- Detailed estimate spreadsheet
- Site map

Exhibit C-1

Traffic Analysis for Title 4

Traffic Analysis for Title 4

Background

Title 4 of Metro's Urban Growth Management Functional Plan (UGMFP) "seeks to provide and protect a supply of sites for employment by limiting the types and scale of non-industrial uses in Regionally Significant Industrial Areas (RSIAs), Industrial and Employment Areas." 3.07.450.H. establishes the criteria by which Metro Council can amend the Employment and Industrial Areas Map for proposed Comprehensive and Zoning map amendment that exceed 20 acres for Industrial Areas.

The Comprehensive and Zoning Map amendments proposed to be re-adopted with the Northwest District Plan (NWDP) Remand Project beginning in June 2010, proposes to change the Title 4 designation of more than 20 acres from "Industrial Area" to "Employment Area." Therefore, the approval criteria listed in 3.07.450.H must be met.

The purpose of this Traffic Analysis is to address one of those criteria 3.07.450.H.2. The other criteria in 3.07.450.H are addressed in the Ordinance.

Criterion and Analysis

Criterion 3.07.450.H.2 requires that the map amendment: "Would not allow uses that would reduce off-peak performance on Major Roadway Routes and Roadway Connectors shown on Metro's 2004 Regional Freight System Map below standards in the Regional Transportation Plan ("RTP"), or exceed volume-to-capacity ratios on Table 7 of the 1999 Oregon Highway Plan ("OHP") for state highways, unless mitigating action is taken that will restore performance to RTP and OHP standards within two years after approval of uses."

In the Regional Transportation Plan (RTP), Interstate 405 is classified as a Main Freight Roadway and NW Nicolai Street is identified as a Freight Road Connector. A traffic analysis was conducted to evaluate the impact of projected development on the off-peak hour traffic operational conditions of those facilities. This document summarizes findings that address the requirements of Title 4.

According to Title 4 3.07.450 C-4, it is sufficient to satisfy the requirement if the changes proposed in the NWDP Remand Project meets either criterion in Table 1.

Table 1. Off-Peak Performance Standards

		Standards
Criteria 1	Metro RTP Standards ¹ in Level of Service (LOS)	E
Criteria 2	ODOT 1999 OHP ² in v/c	0.99

1. Metro's RTP Table 2.4, Regional Mobility Policy

2. ODOT's 1999 Oregon Highway Plan, Table 7.

Analysis of the following three intersections is summarized below:

- NW Nicolai Street at NW Wardway Street / NW 29th Avenue
- NW Nicolai Street at US 30
- NW Vaughn Street at NW 23rd Avenue / I-405 ramps

Findings

All three intersections currently operate at a LOS that exceeds the standards specified in Title 4.

The analysis finds that off-peak hour operations at all three intersection will continue to exceed the Title 4 standards in the 2030 plan year (See Table 2).

Table 2. Off-Peak Operational Conditions in LOS

	2010	2030
NW Nicolai St at NW Wardway St	C	C
NW Nicolai St at US 30	B	B
NW Vaughn St at NW 23 rd Ave	D	D

Methodology

No off-peak turning movement counts (TMCs) were collected when the initial NWDP Remand Project traffic analysis was performed. For this Title 4 analysis, fresh 2010 off-peak TMCs were collected¹ in order to evaluate current conditions. The City of Portland does not have an off-peak demand model to predict the future off-peak demands for the NWDP Remand traffic analysis. The future off-peak traffic demands were estimated from the projected future PM demands by the formula:

$$V_{2030\text{offpeak}} = V_{2010\text{off-peak}} + \Delta V_{\text{pm}2030\text{-pm}2007} \times (V_{\text{offpeak}} / V_{\text{pmpeak}})$$

Where Δ is the model projected PM traffic growth in turning movements from 2007 to 2030.

Synchro software was used in the operational analysis to derive the LOS and V/C data. All three signals were evaluated as the controller of Actuated & Uncoordinated, which are the specifications of current signal timing plans on the site. All other current signal settings are applied in the analysis. Intersection geometric configurations coded in the model match current street layouts.

The LOS measures were extracted from Synchro's HCM (Highway Capacity Manual) Signalized Intersection Capacity Analysis Reports.

Traffic Data

Table 3 lists the 2010 turning movement counts and projected 2030 traffic demands for the three intersections supporting the analysis.

Table 3. Off-Peak Hour Turning Movement Volumes

		eastbound			westbound			northbound			southbound			total
		L	T	R	L	T	R	L	T	R	L	T	R	
Nicolai / US30	2010	85	15	305	40	25	70	150	885	45	45	985	115	2765
	2030	85	15	345	70	25	70	560	1090	85	45	1270	115	3775
Nicolai / Wardway	2010	5	220	225	20	185	20	210	45	15	25	55	5	1030
	2030	10	345	335	20	310	20	255	45	15	25	55	5	1440
Vaughn / 23rd	2010	0	495	85	165/ 305	475	155	100	65	420	120	60	25	2470
	2030	0	555	85	180/ 360	510	340	100	65	455	155	75	25	2905



















¹ NW 29th Avenue at N/NW Nicolai Street is currently closed to through traffic due to construction. Because this is an important leg of the intersection, an effort was made to estimate the turning movement counts based on other data collected at the intersection. 24-hour link counts on all three other major approaching legs were collected and the current TMC was estimated from the time of day factor and two AM / PM TMCs collected in 2007. The time of the day factor is calculated at approach level, and the formula of (am+pm)/2 was used to distribute the turn movements.

Appendix A: Synchro Highway Capacity Manual Reports

HCM Signalized Intersection Capacity Analysis

2010 Off-Peak 4












NW Nicolai St @ Wardway & 29th Ave

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0	4.0			4.0		
Lane Util. Factor	1.00	1.00	1.00			1.00	1.00			1.00		
Frt	1.00	1.00	0.85			1.00	0.99			0.88		
Flt Protected	0.95	1.00	1.00			0.95	1.00			0.99		
Satd. Flow (prot)	1770	1863	1583			1770	1835			1634		
Flt Permitted	0.55	1.00	1.00			0.95	1.00			0.96		
Satd. Flow (perm)	1024	1863	1583			1770	1835			1580		
Volume (vph)	5	220	225	5	5	20	185	20	3	0	5	13
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	239	245	5	5	22	201	22	3	0	5	14
RTOR Reduction (vph)	0	0	0	0	0	0	3	0	0	12	0	0
Lane Group Flow (vph)	5	239	250	0	0	27	220	0	0	10	0	0
Turn Type	pm+pt		custom		Prot		Prot		Perm			
Protected Phases	1	3 6	6 7		5	5	2 3			4		
Permitted Phases	3 6								4			
Actuated Green, G (s)	35.9	34.3	36.6			2.0	32.5			8.5		
Effective Green, g (s)	36.1	33.3	38.4			1.0	31.5			8.7		
Actuated g/C Ratio	0.49	0.45	0.52			0.01	0.43			0.12		
Clearance Time (s)	5.2					3.0				4.2		
Vehicle Extension (s)	3.0					3.0				3.0		
Lane Grp Cap (vph)	531	844	827			24	786			187		
v/s Ratio Prot	c0.00	c0.13	c0.16			c0.02	0.12					
v/s Ratio Perm	0.00									0.01		
v/c Ratio	0.01	0.28	0.30			1.12	0.28			0.05		
Uniform Delay, d1	9.6	12.6	9.9			36.2	13.6			28.7		
Progression Factor	1.00	1.00	1.00			1.00	1.00			1.00		
Incremental Delay, d2	0.0	0.2	0.2			225.0	0.2			0.1		
Delay (s)	9.6	12.8	10.2			261.2	13.8			28.9		
Level of Service	A	B	B			F	B			C		
Approach Delay (s)		11.4					40.5			28.9		
Approach LOS		B					D			C		
Intersection Summary												
HCM Average Control Delay			24.8			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.44									
Actuated Cycle Length (s)			73.5			Sum of lost time (s)				16.0		
Intersection Capacity Utilization			54.2%			ICU Level of Service				A		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2010 Off-Peak 5


NW Nicolai St @ Wardway & 29th Ave

							
Movement	SBL2	SBL	SBT	SBR	NWL	NWR	NWR2
Lane Configurations							
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0	4.0
Lane Util. Factor			1.00		1.00	1.00	1.00
Frt			0.98		1.00	0.85	0.85
Flt Protected			0.96		0.95	1.00	1.00
Satd. Flow (prot)			1758		1770	1583	1583
Flt Permitted			0.74		0.95	1.00	1.00
Satd. Flow (perm)			1351		1770	1583	1583
Volume (vph)	25	55	1	10	210	45	15
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	60	1	11	228	49	16
RTOR Reduction (vph)	0	0	5	0	0	0	13
Lane Group Flow (vph)	0	0	94	0	228	49	3
Turn Type	Perm	Perm				Prot	Prot
Protected Phases			4		7	7	7
Permitted Phases	4	4					
Actuated Green, G (s)			8.5		13.3	13.3	13.3
Effective Green, g (s)			8.7		14.5	14.5	14.5
Actuated g/C Ratio			0.12		0.20	0.20	0.20
Clearance Time (s)			4.2		5.2	5.2	5.2
Vehicle Extension (s)			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			160		349	312	312
v/s Ratio Prot					c0.13	0.03	0.00
v/s Ratio Perm			c0.07				
v/c Ratio			0.59		0.65	0.16	0.01
Uniform Delay, d1			30.7		27.2	24.4	23.7
Progression Factor			1.00		1.00	1.00	1.00
Incremental Delay, d2			5.4		4.3	0.2	0.0
Delay (s)			36.1		31.5	24.7	23.7
Level of Service			D		C	C	C
Approach Delay (s)			36.1		30.0		
Approach LOS			D		C		
Intersection Summary							

HCM Signalized Intersection Capacity Analysis

2010 Off Peak 6













NW Nicolai St / US-30 & Yeon Ave

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗	↖	↗	↖	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		0.97	0.91		1.00	0.95	1.00
Frpb, ped/bikes		1.00	1.00		0.99		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes		0.99	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frt		1.00	0.95		0.93		1.00	0.99		1.00	1.00	0.85
Flt Protected		0.96	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1770		1682		3433	5042		1770	3539	1549
Flt Permitted		0.60	1.00		0.88		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		1102	1770		1495		3433	5042		1770	3539	1549
Volume (vph)	85	15	305	40	25	70	150	885	45	45	985	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	16	321	42	26	74	158	932	47	47	1037	121
RTOR Reduction (vph)	0	0	0	0	48	0	0	5	0	0	0	57
Lane Group Flow (vph)	0	105	321	0	94	0	158	974	0	47	1037	64
Confl. Peds. (#/hr)	4					4	8		4	4		8
Turn Type	Perm	custom		Perm			Prot			Prot	custom	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		5 6 8	4								6
Actuated Green, G (s)		12.2	81.2		12.2		14.4	40.8		11.9	39.4	40.8
Effective Green, g (s)		13.8	81.2		13.8		14.5	42.8		12.6	40.9	42.8
Actuated g/C Ratio		0.17	1.00		0.17		0.18	0.53		0.16	0.50	0.53
Clearance Time (s)		5.6			5.6		4.1	6.0		4.7	5.5	6.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		187	1770		254		613	2658		275	1783	816
v/s Ratio Prot							c0.05	0.19		0.03	c0.29	
v/s Ratio Perm		c0.10	c0.18		0.06							0.04
v/c Ratio		0.56	0.18		0.37		0.26	0.37		0.17	0.58	0.08
Uniform Delay, d1		30.9	0.0		29.8		28.7	11.3		29.8	14.1	9.5
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		3.8	0.0		0.9		1.0	0.4		1.3	1.4	0.2
Delay (s)		34.7	0.0		30.8		29.7	11.6		31.1	15.5	9.7
Level of Service		C	A		C		C	B		C	B	A
Approach Delay (s)		8.6			30.8			14.2			15.6	
Approach LOS		A			C			B			B	
Intersection Summary												
HCM Average Control Delay		14.7					HCM Level of Service			B		
HCM Volume to Capacity ratio		0.51										
Actuated Cycle Length (s)		81.2					Sum of lost time (s)			12.0		
Intersection Capacity Utilization		64.2%					ICU Level of Service			C		
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2010 Off Peak 7

I-405 Ramp/Vaughn St @ NW 23rd Ave

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑			↔	↑↑	↔	↔	↑	↔	↔	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95			1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			1.00	1.00	0.85	1.00	0.89	0.85	1.00	0.96
Flt Protected		1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		3430			1770	3539	1583	1770	1570	1504	1770	1746
Flt Permitted		1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		3430			1770	3539	1583	1770	1570	1504	1770	1746
Volume (vph)	0	495	85	165	305	475	155	100	65	420	120	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	521	89	174	321	500	163	105	68	442	126	63
RTOR Reduction (vph)	0	12	0	0	0	0	69	0	0	0	0	13
Lane Group Flow (vph)	0	598	0	0	495	500	94	105	276	234	126	76
Confl. Peds. (#/hr)	1		16		16		1	40				
Turn Type				Prot	Prot		Prot	Prot		Prot	Prot	
Protected Phases		2		1	1	6	6	3	8	8	7	4
Permitted Phases												
Actuated Green, G (s)		20.6			29.5	54.1	54.1	8.2	20.0	20.0	7.7	19.5
Effective Green, g (s)		20.6			29.5	54.1	54.1	8.2	20.0	20.0	7.7	19.5
Actuated g/C Ratio		0.22			0.31	0.58	0.58	0.09	0.21	0.21	0.08	0.21
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		753			557	2041	913	155	335	321	145	363
v/s Ratio Prot		c0.17			c0.28	0.14	0.06	0.06	c0.18	0.16	c0.07	0.04
v/s Ratio Perm												
v/c Ratio		0.79			0.89	0.24	0.10	0.68	0.82	0.73	0.87	0.21
Uniform Delay, d1		34.6			30.6	9.8	8.9	41.5	35.2	34.4	42.6	30.8
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		5.8			15.8	0.1	0.0	11.1	15.0	8.0	38.6	0.3
Delay (s)		40.4			46.4	9.8	9.0	52.7	50.3	42.4	81.2	31.0
Level of Service		D			D	A	A	D	D	D	F	C
Approach Delay (s)		40.4				25.4			47.7			60.4
Approach LOS		D				C			D			E
Intersection Summary												
HCM Average Control Delay		37.1										
HCM Volume to Capacity ratio		0.80										
Actuated Cycle Length (s)		93.8										
Intersection Capacity Utilization		80.0%										
Analysis Period (min)		15										
c Critical Lane Group												
HCM Level of Service D												
Sum of lost time (s) 12.0												
ICU Level of Service D												

HCM Signalized Intersection Capacity Analysis



















2010 Off Peak 8
I-405 Ramp/Vaughn St @ NW 23rd Ave

Movement	SBR
Lamp Configurations	
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	25
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	26
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	40
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM Signalized Intersection Capacity Analysis

2030 Off-Peak 9


NW Nicolai St @ Wardway & 29th Ave

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0	4.0			4.0		
Lane Util. Factor	1.00	1.00	1.00			1.00	1.00			1.00		
Frt	1.00	1.00	0.85			1.00	0.99			0.88		
Flt Protected	0.95	1.00	1.00			0.95	1.00			0.99		
Satd. Flow (prot)	1770	1863	1583			1770	1846			1634		
Flt Permitted	0.47	1.00	1.00			0.95	1.00			0.96		
Satd. Flow (perm)	866	1863	1583			1770	1846			1578		
Volume (vph)	10	345	335	5	5	20	310	20	3	0	5	13
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	375	364	5	5	22	337	22	3	0	5	14
RTOR Reduction (vph)	0	0	1	0	0	0	2	0	0	12	0	0
Lane Group Flow (vph)	11	375	368	0	0	27	357	0	0	10	0	0
Turn Type	pm+pt		custom		Prot		Prot		Perm			
Protected Phases	1	3 6	6 7		5	5	2 3			4		
Permitted Phases	3 6								4			
Actuated Green, G (s)	32.9	32.4	34.2			2.0	33.9			8.6		
Effective Green, g (s)	31.4	31.4	36.0			1.0	32.9			8.8		
Actuated g/C Ratio	0.43	0.43	0.49			0.01	0.45			0.12		
Clearance Time (s)	3.0					3.0				4.2		
Vehicle Extension (s)	3.0					3.0				3.0		
Lane Grp Cap (vph)	368	793	772			24	823			188		
v/s Ratio Prot		c0.20	0.23			c0.02	0.19					
v/s Ratio Perm	0.01									0.01		
v/c Ratio	0.03	0.47	0.48			1.12	0.43			0.05		
Uniform Delay, d1	12.3	15.2	12.6			36.4	14.0			28.8		
Progression Factor	1.00	1.00	1.00			1.00	1.00			1.00		
Incremental Delay, d2	0.0	0.4	0.5			225.0	0.4			0.1		
Delay (s)	12.4	15.7	13.1			261.4	14.4			28.9		
Level of Service	B	B	B			F	B			C		
Approach Delay (s)		14.4					31.7			28.9		
Approach LOS		B					C			C		
Intersection Summary												
HCM Average Control Delay			23.4			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			73.8			Sum of lost time (s)				16.0		
Intersection Capacity Utilization			56.7%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2030 Off-Peak 10


NW Nicolai St @ Wardway & 29th Ave

							
Movement	SBL2	SBL	SBT	SBR	NWL	NWR	NWR2
Lane Configurations			↔		↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0	4.0
Lane Util. Factor			1.00		1.00	1.00	1.00
Frt			0.98		1.00	0.85	0.85
Flt Protected			0.96		0.95	1.00	1.00
Satd. Flow (prot)			1758		1770	1583	1583
Flt Permitted			0.74		0.95	1.00	1.00
Satd. Flow (perm)			1351		1770	1583	1583
Volume (vph)	25	55	1	10	255	45	15
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	60	1	11	277	49	16
RTOR Reduction (vph)	0	0	5	0	0	0	12
Lane Group Flow (vph)	0	0	94	0	277	49	4
Turn Type	Perm	Perm			Prot	Prot	
Protected Phases			4		7	7	7
Permitted Phases	4	4					
Actuated Green, G (s)			8.6		15.4	15.4	15.4
Effective Green, g (s)			8.8		16.6	16.6	16.6
Actuated g/C Ratio			0.12		0.22	0.22	0.22
Clearance Time (s)			4.2		5.2	5.2	5.2
Vehicle Extension (s)			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			161		398	356	356
v/s Ratio Prot					c0.16	0.03	0.00
v/s Ratio Perm			c0.07				
v/c Ratio			0.58		0.70	0.14	0.01
Uniform Delay, d1			30.8		26.3	22.9	22.2
Progression Factor			1.00		1.00	1.00	1.00
Incremental Delay, d2			5.3		5.2	0.2	0.0
Delay (s)			36.0		31.5	23.1	22.2
Level of Service			D		C	C	C
Approach Delay (s)			36.0		29.9		
Approach LOS			D		C		
Intersection Summary							

HCM Signalized Intersection Capacity Analysis

2030 Off Peak 11













NW Nicolai St / US30 & Yeon Ave

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖		↖	↗		↖	↗	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		0.97	0.91		1.00	0.95	1.00
Frpb, ped/bikes		1.00	1.00		0.99		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frt		1.00	0.95		0.94		1.00	0.99		1.00	1.00	0.85
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1787	1770		1698		3433	5020		1770	3539	1548
Flt Permitted		0.56	1.00		0.78		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		1051	1770		1351		3433	5020		1770	3539	1548
Volume (vph)	85	15	345	70	25	70	560	1090	85	45	1270	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	16	363	74	26	74	589	1147	89	47	1337	121
RTOR Reduction (vph)	0	0	0	0	30	0	0	9	0	0	0	45
Lane Group Flow (vph)	0	105	363	0	144	0	589	1227	0	47	1337	76
Confl. Peds. (#/hr)	4					4	8		4	4		8
Turn Type	Perm	custom		Perm			Prot			Prot	custom	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		5 6 8	4								6
Actuated Green, G (s)		12.3	88.0		12.3		19.9	53.5		5.9	40.6	53.5
Effective Green, g (s)		13.9	88.0		13.9		20.0	55.5		6.6	42.1	55.5
Actuated g/C Ratio		0.16	1.00		0.16		0.23	0.63		0.08	0.48	0.63
Clearance Time (s)		5.6			5.6		4.1	6.0		4.7	5.5	6.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		166	1770		213		780	3166		133	1693	976
v/s Ratio Prot							c0.17	0.24		0.03	c0.38	
v/s Ratio Perm		0.10	0.21		c0.11							0.05
v/c Ratio		0.63	0.21		0.67		0.76	0.39		0.35	0.79	0.08
Uniform Delay, d1		34.7	0.0		34.9		31.7	7.9		38.7	19.2	6.3
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		7.6	0.1		8.2		6.7	0.4		7.2	3.8	0.2
Delay (s)		42.3	0.1		43.1		38.4	8.3		45.9	23.1	6.5
Level of Service		D	A		D		D	A		D	C	A
Approach Delay (s)		9.5			43.1			18.0			22.5	
Approach LOS		A			D			B			C	
Intersection Summary												
HCM Average Control Delay		19.8					HCM Level of Service			B		
HCM Volume to Capacity ratio		0.76										
Actuated Cycle Length (s)		88.0					Sum of lost time (s)		12.0			
Intersection Capacity Utilization		77.4%					ICU Level of Service		D			
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2030 Off Peak 12

I-405 Ramp/Vaughn St @ NW 23rd Ave

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑			↔	↑↑	↔	↔	↑	↔	↔	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95			1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			1.00	1.00	0.85	1.00	0.88	0.85	1.00	0.96
Flt Protected		1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		3437			1770	3539	1583	1770	1565	1504	1770	1760
Flt Permitted		1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		3437			1770	3539	1583	1770	1565	1504	1770	1760
Volume (vph)	0	555	85	180	360	510	340	100	65	455	155	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	584	89	189	379	537	358	105	68	479	163	79
RTOR Reduction (vph)	0	11	0	0	0	0	151	0	0	0	0	10
Lane Group Flow (vph)	0	662	0	0	568	537	207	105	296	251	163	95
Confl. Peds. (#/hr)	1		16		16		1	40				
Turn Type				Prot	Prot		Prot	Prot		Prot	Prot	
Protected Phases		2		1	1	6	6	3	8	8	7	4
Permitted Phases												
Actuated Green, G (s)		23.0			35.7	62.7	62.7	9.3	22.5	22.5	11.0	24.2
Effective Green, g (s)		23.0			35.7	62.7	62.7	9.3	22.5	22.5	11.0	24.2
Actuated g/C Ratio		0.21			0.33	0.58	0.58	0.09	0.21	0.21	0.10	0.22
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		731			584	2051	917	152	325	313	180	394
v/s Ratio Prot		c0.19			c0.32	0.15	0.13	0.06	c0.19	0.17	c0.09	0.05
v/s Ratio Perm												
v/c Ratio		0.91			0.97	0.26	0.23	0.69	0.91	0.80	0.91	0.24
Uniform Delay, d1		41.5			35.8	11.3	11.0	48.1	41.9	40.7	48.1	34.5
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		14.7			30.2	0.1	0.1	12.7	28.4	13.7	41.0	0.3
Delay (s)		56.3			66.0	11.3	11.1	60.8	70.2	54.5	89.1	34.8
Level of Service		E			E	B	B	E	E	D	F	C
Approach Delay (s)		56.3				32.5			62.6			67.8
Approach LOS		E				C			E			E
Intersection Summary												
HCM Average Control Delay		47.3			HCM Level of Service					D		
HCM Volume to Capacity ratio		0.93										
Actuated Cycle Length (s)		108.2			Sum of lost time (s)					16.0		
Intersection Capacity Utilization		88.9%			ICU Level of Service					E		
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2030 Off Peak 13

I-405 Ramp/Vaughn St @ NW 23rd Ave

Movement	SBR
Lan h Configurations	
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	25
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	26
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	40
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Appendix B: 2010 Off-peak Turning Movement Counts

City of Portland

Office of Transportation
1120 SW 5th Ave, Rm 800
Portland, OR 97204

Cldy 55f By: CDB/RC For: Zhou

NW NICOLAI ST @ NW YEON AVE/I405 RAMPS

File Name : 100413TOB

Site Code : 00000000

Start Date : 4/13/2010

Page No : 1

Groups Printed- VEHS PEDS

Start Time	NW YEON AVE Southbound					NW NICOLAI ST Westbound					NW YEON AVE/I405 RAMP Northbound					NW NICOLAI ST Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total			
11:00	8	216	17	0	241	14	7	8	0	29	46	201	12	0	259	16	7	68	0	91	0	620	620
11:15	9	230	21	0	260	17	3	9	0	29	40	225	18	0	283	7	10	68	0	85	0	657	657
11:30	5	239	35	0	279	24	12	8	0	44	39	182	15	0	236	19	9	72	1	100	1	659	660
11:45	9	264	20	0	293	17	12	6	0	35	31	250	14	0	295	15	3	76	0	94	0	717	717
Total	31	949	93	0	1073	72	34	31	0	137	156	858	59	0	1073	57	29	284	1	370	1	2653	2654
12:00	7	231	22	0	260	13	8	17	0	38	41	201	6	0	248	20	3	96	0	119	0	665	665
12:15	12	248	31	0	291	8	2	26	0	36	45	216	13	0	274	24	7	72	0	103	0	704	704
12:30	17	243	41	0	301	3	1	21	0	25	35	219	12	0	266	24	4	62	0	90	0	682	682
12:45	13	245	19	0	277	9	6	21	0	36	52	230	19	0	301	24	3	51	0	78	0	692	692
Total	49	967	113	0	1129	33	17	85	0	135	173	866	50	0	1089	92	17	281	0	390	0	2743	2743
Grand Total	80	1916	206	0	2202	105	51	116	0	272	329	1724	109	0	2162	149	46	565	1	760	1	5396	5397
Apprch %	3.6	87	9.4			38.6	18.8	42.6			15.2	79.7	5			19.6	6.1	74.3					
Total %	1.5	35.5	3.8		40.8	1.9	0.9	2.1		5	6.1	31.9	2		40.1	2.8	0.9	10.5		14.1	0	100	

NOTE: NW 29TH AVE CLOSED YEON TO NICOLAI

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City of Portland

Office of Transportation
1120 SW 5th Ave, Rm 800
Portland, OR 97204

Cldy 55f By: CDB/RC For: Zhou

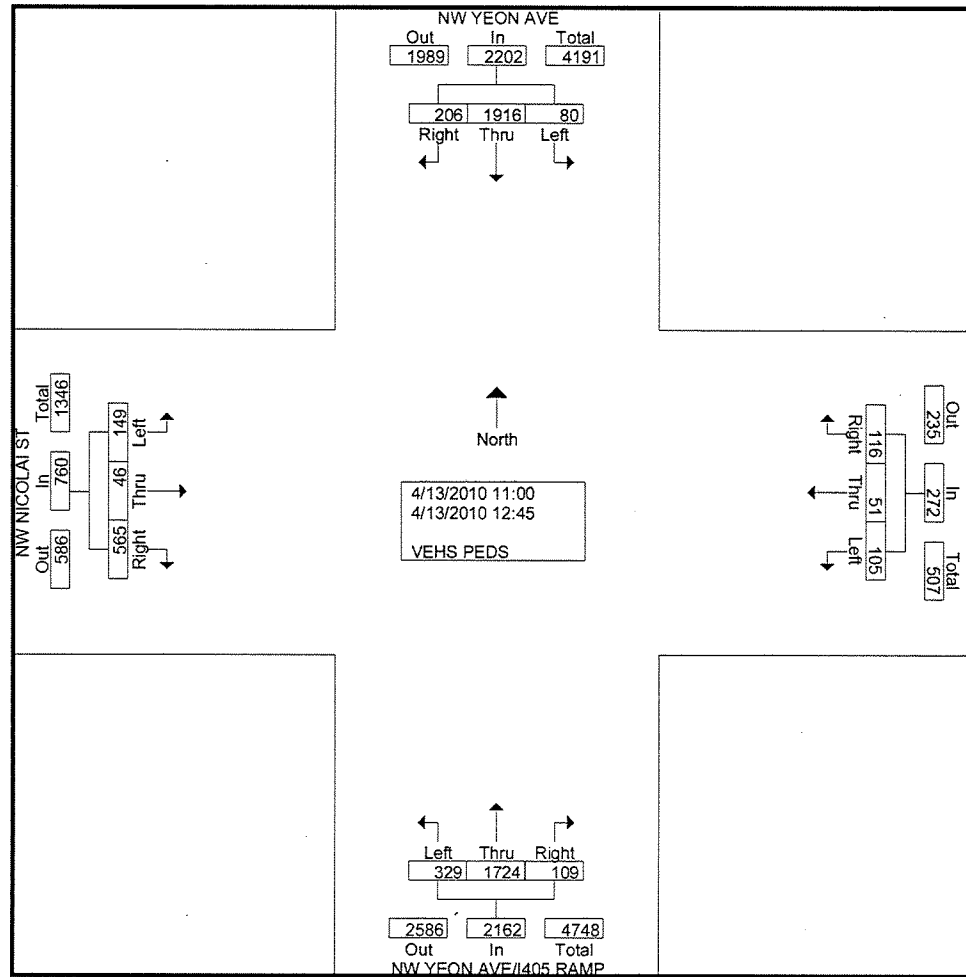
NW NICOLAI ST @ NW YEON AVE/I405 RAMPS

File Name : 100413TOB

Site Code : 00000000

Start Date : 4/13/2010

Page No : 2



183915
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Portland, OR 97204

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NW NICOLAI ST @ NW YEON AVE/I405 RAMPS

File Name : 100413TOB

Site Code : 00000000

Start Date : 4/13/2010

Page No : 3

	NW YEON AVE Southbound				NW NICOLAI ST Westbound				NW YEON AVE/I405 RAMP Northbound				NW NICOLAI ST Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 to 12:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:45																	
11:45	9	264	20	293	17	12	6	35	31	250	14	295	15	3	76	94	717
12:00	7	231	22	260	13	8	17	38	41	201	6	248	20	3	96	119	665
12:15	12	248	31	291	8	2	26	36	45	216	13	274	24	7	72	103	704
12:30	17	243	41	301	3	1	21	25	35	219	12	266	24	4	62	90	682
Total Volume	45	986	114	1145	41	23	70	134	152	886	45	1083	83	17	306	406	2768
% App. Total	3.9	86.1	10		30.6	17.2	52.2		14	81.8	4.2		20.4	4.2	75.4		
PHF	.662	.934	.695	.951	.603	.479	.673	.882	.844	.886	.804	.918	.865	.607	.797	.853	.965

183915

City of Portland

Office of Transportation
1120 SW 5th Ave, Rm 800
Portland, OR 97204

O'cast by: CDB For: Zhou

NW 23RD AVE/VAUGHN ST/I405 NB EX

File Name : 100407TOB

Site Code : 00000000

Start Date : 4/7/2010

Page No : 1

Groups Printed- VEHS PEDS

	NW 23RD AVE Southbound					I-405 NB EX Southwestbound					NW VAUGHN ST Westbound		NW 23RD AVE Northbound					NW VAUGHN ST Eastbound								
Start Time	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
10:00	23	6	7	0	36	43	87	118	28	0	276	0	0	8	10	88	0	106	0	107	12	4	123	0	541	541
10:15	34	17	5	1	56	41	77	120	39	0	277	0	0	24	15	130	0	169	0	96	10	0	106	1	608	609
10:30	28	15	6	1	49	51	77	106	36	0	270	0	0	20	13	95	0	128	0	112	21	1	134	1	581	582
10:45	37	13	11	0	61	48	68	132	35	0	283	0	0	22	22	89	0	133	0	128	18	7	153	0	630	630
Total	122	51	29	2	202	183	309	476	138	0	1106	0	0	74	60	402	0	536	0	443	61	12	516	2	2360	2362
11:00	24	15	10	4	49	44	88	116	31	0	279	0	0	23	14	102	0	139	0	135	21	3	159	4	626	630
11:15	26	19	2	2	47	39	51	126	47	0	263	0	0	22	17	111	0	150	0	131	17	5	153	2	613	615
11:30	32	14	6	2	52	39	71	120	38	0	268	0	0	31	12	93	0	136	1	115	28	14	158	2	614	616
11:45	38	11	7	0	56	44	96	114	38	0	292	0	0	25	20	114	0	159	0	113	17	0	130	0	637	637
Total	120	59	25	8	204	166	306	476	154	0	1102	0	0	101	63	420	0	584	1	494	83	22	600	8	2490	2498
Grand Total	242	110	54	10	406	349	615	952	292	0	2208	0	0	175	123	822	0	1120	1	937	144	34	1116	10	4850	4860
Apprch %	59.6	27.1	13.3			15.8	27.9	43.1	13.2	0		0		15.6	11	73.4	0		0.1	84	12.9	3				
Total %	5	2.3	1.1		8.4	7.2	12.7	19.6	6	0	45.5	0	0	3.6	2.5	16.9	0	23.1	0	19.3	3	0.7	23	0.2	99.8	

183915

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Office of Transportation
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Portland, OR 97204

O'cast by: CDB For: Zhou

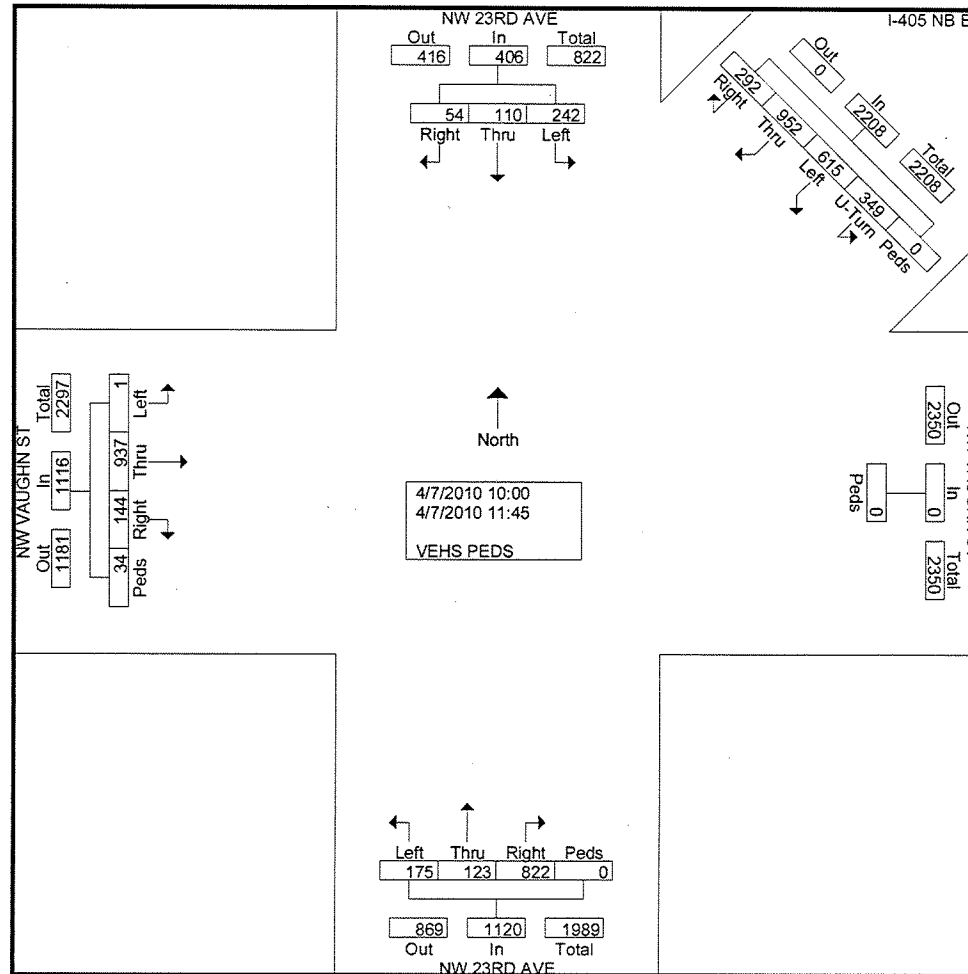
NW 23RD AVE/VAUGHN ST/I405 NB EX

File Name : 100407TOB

Site Code : 00000000

Start Date : 4/7/2010

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NW 23RD AVE/VAUGHN ST/I405 NB EX

File Name : 100407TOB

Site Code : 00000000

Start Date : 4/7/2010

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	NW 23RD AVE Southbound				I-405 NB EX Southwestbound						NW VAUGHN ST Westbound		NW 23RD AVE Northbound					NW VAUGHN ST Eastbound					
Start Time	Left	Thru	Right	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 10:00 to 11:45 - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 11:00																							
11:00	24	15	10	49	44	88	116	31	0	279	0	0	23	14	102	0	139	0	135	21	3	159	626
11:15	26	19	2	47	39	51	126	47	0	263	0	0	22	17	111	0	150	0	131	17	5	153	613
11:30	32	14	6	52	39	71	120	38	0	268	0	0	31	12	93	0	136	1	115	28	14	158	614
11:45	38	11	7	56	44	96	114	38	0	292	0	0	25	20	114	0	159	0	113	17	0	130	637
Total Volume	120	59	25	204	166	306	476	154	0	1102	0	0	101	63	420	0	584	1	494	83	22	600	2490
% App. Total	58.8	28.9	12.3		15.1	27.8	43.2	14	0		0		17.3	10.8	71.9	0		0.2	82.3	13.8	3.7		
PHF	.789	.776	.625	.911	.943	.797	.944	.819	.000	.943	.000	.000	.815	.788	.921	.000	.918	.250	.915	.741	.393	.943	.977

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Appendix C: 24-hour Counts for NW Nicolai St at NW Wardway St



Traffic Volume Report

LOCATION

Location: NW WARDWAY ST E of 29TH AVE / NICOLAI ST

Bound: N

Channels: 1

Date: From 4/12/2010 10:45:00 AM (MON) to 4/14/2010 12:30:00 PM (WED)

CountID: 10041221.VL1

NOTES

Excpt Type: Obstruction

Conditions:

Comment: **NW 29TH AVE CLOSED N/NICOLAI

Count Loc: NW WARDWAY S/NW NICOLAI ST

SUMMARY DATA

	AM	PM	Daily
Total Volume:	1520	2125	3645
Peak Hour Volume:	269	302	302
Peak Hour Start:	6:45	16:15	16:15
Peak Hour Factor:	0.862	0.878	

INTERVAL DATA

Hour	Min: 00-15	Min: 16-30	Min: 31-45	Min: 46-60	Total
0	4	8	5	4	21
1	2	1	6	4	13
2	5	5	7	3	20
3	4	6	2	3	15
4	6	4	10	15	35
5	16	20	27	38	101
6	40	40	51	68	199
7	55	68	78	65	266
8	52	50	62	56	220
9	54	56	55	38	203
10	55	50	48	52	205
11	45	59	58	60	222
12	58	67	73	69	267
13	84	59	68	61	272
14	67	61	64	60	252
15	61	72	80	64	277
16	68	66	66	86	286
17	84	66	64	59	273
18	46	46	38	40	170
19	41	24	16	26	107
20	19	14	17	23	73
21	16	14	14	18	62
22	15	11	15	12	53
23	10	8	8	7	33



Traffic Volume Report

LOCATION

Location: NW NICOLAI ST W of 29TH AVE / WARDWAY ST

Bound: E

Channels: 1

Date: From 4/12/2010 10:30:00 AM (MON) to 4/14/2010 12:30:00 PM (WED)

CountID: 10041222.VL1

NOTES

Excpt Type: Obstruction

Conditions:

Comment: **NW 29TH AVE CLOSED N/NICOLAI

Count Loc: NW NICOLAI ST W/NW WARD WAY

SUMMARY DATA

	AM	PM	Daily
Total Volume:	2745	3105	5850
Peak Hour Volume:	582	526	582
Peak Hour Start:	7:30	16:0	7:30
Peak Hour Factor:	0.887	0.854	

INTERVAL DATA

Hour	Min: 00-15	Min: 16-30	Min: 31-45	Min: 45-60	Total
0	9	9	11	10	39
1	9	5	6	7	27
2	7	6	13	10	36
3	9	23	5	9	46
4	11	12	14	16	53
5	19	32	43	47	141
6	39	58	74	108	279
7	84	109	164	152	509
8	122	144	118	101	485
9	107	83	87	94	371
10	86	67	100	79	332
11	96	102	120	109	427
12	119	98	108	123	448
13	101	107	97	111	416
14	111	85	97	87	380
15	98	99	125	89	411
16	147	120	154	105	526
17	147	96	79	67	389
18	57	54	45	45	201
19	33	38	30	17	118
20	21	25	20	15	81
21	20	8	12	12	52
22	15	14	10	12	51
23	7	11	4	10	32



Traffic Volume Report

LOCATION

Location: NW NICOLAI ST E of 29TH AVE / WARDWAY ST

Bound: W

Channels: 1

Date: From 4/12/2010 10:30:00 AM (MON) to 4/14/2010 12:15:00 PM (WED)

CountID: 10041227.VL1

NOTES

Excpt Type: Obstruction

Conditions:

Comment: **NW 29TH AVE CLOSED N/NICOLAI

Count Loc: NW NICOLAI ST E/NW WARD WAY

SUMMARY DATA

	AM	PM	Daily
Total Volume:	1506	1316	2822
Peak Hour Volume:	273	231	273
Peak Hour Start:	7:0	12:45	7:0
Peak Hour Factor:	0.822	0.902	

INTERVAL DATA

Hour	Min: 00-15	Min: 16-30	Min: 31-45	Min: 45-60	Total
0	7	7	3	8	25
1	6	7	12	3	28
2	9	6	4	4	23
3	10	1	7	7	25
4	5	14	12	12	43
5	10	15	21	36	82
6	33	35	60	67	195
7	56	83	56	78	273
8	53	62	54	47	216
9	50	53	52	54	209
10	44	51	47	50	192
11	56	41	57	41	195
12	67	52	41	62	222
13	43	62	64	51	220
14	50	49	52	47	198
15	40	36	54	40	170
16	45	32	38	32	147
17	52	37	34	21	144
18	19	17	9	11	56
19	8	8	11	6	33
20	5	7	12	10	34
21	10	9	9	7	35
22	8	8	8	8	32
23	9	4	7	5	25

Exhibit C-2: Supplement for Traffic Analysis for Title 4

April 19, 2010

Ning Zhou

Portland Bureau of Transportation (PBOT) finished the Transportation Planning Analysis two years ago in supporting the Northwest District Plan (NWDP) Remand Project by Portland Bureau of Planning and Sustainability (BPS).

This supplement provides the analysis needed to determine whether the changes proposed meet the requirements set by Metro's Urban Growth Management Function Plan (UGMFP), Title 4. I-405 is designated as a Main Freight Roadway and NW Nicolai St is designated as a Freight Road Connector in the RTP (Regional Transportation Plan). Therefore, an analysis to demonstrate their off-peak hour traffic operational conditions is warranted.

The standards set by the Title 4 Section 3.07.450.C.4 are listed in Table 1. This supplement provides data to show that standard in Criteria 2 is met. The main report (Exhibit C-1 Traffic Analysis for Title 4) contains the analysis showing that the standard in Criterion 1 is met.

Table 1. Off-Peak Performance Standards

		Standards
Criteria 1	Metro RTP Standards ¹ in LOS	E
Criteria 2	ODOT 1999 OHP ² in v/c	0.99

1. Metro's RTP Table 2.4, Regional Mobility Policy, LOS = Level of Service

2. ODOT's 1999 Oregon Highway Plan, Table 7.

Three intersections are analyzed in this supplement:

- NW Nicolai St at NW Wardway St / NW 29th Ave.
- NW Nicolai St at US 30
- NW Vaughn St at NW 23rd Ave / I-405 ramps

Findings

The analysis finds that volume-to-capacity ratios for all three intersections are projected increase slightly between 2010 and 2030, as indicated in Table 2. However, they all will continue to meet the standard in Criteria 2. Furthermore, they all will continue to have the same level of service, as shown in Table 3.

Table 2. Off-Peak Operational Conditions in volume-to-capacity ratios

	2010	2030
NW Nicolai St at NW Wardway St	0.44	0.56
NW Nicolai St at US 30	0.51	0.76
NW Vaughn St at NW 23 rd Ave	0.8	0.93

Table 3. Off-Peak Operational Conditions in LOS

	2010	2030
NW Nicolai St at NW Wardway St	C	C
NW Nicolai St at US 30	B	B
NW Vaughn St at NW 23 rd Ave	D	D

Methodology

No off-peak TMC (turning movement counts) were collected two years ago when the NW Remand traffic analysis were performed. For this Title-4 analysis, fresh 2010 off-peak TMCs are collected¹ for evaluating the current conditions. City doesn't have off-peak demand model to produce the future off-peak demands for NW Remand traffic analysis. The future off-peak traffic demands are estimated from the projected future PM demands by the formula:

$$V_{2030\text{offpeak}} = V_{2010\text{off-peak}} + \Delta V_{\text{pm}2030\text{-pm}2007} \times (V_{\text{offpeak}} / V_{\text{pmpeak}})$$

Where Δ is the model projected PM traffic growth in turning movements from 2007 to 2030.

Synchro software is used in the operational analysis to derive the LOS and V/C data. All three signals are evaluated as the controller of Actuated & Uncoordinated, which are the specifications of current signal timing plans on the site. All other current signal settings are applied in the analysis. Intersection geometric configurations coded in the model are all as same as current street layouts.

The LOS readings are extracted from Synchro's HCM (Highway Capacity Manual) Signalized Intersection Capacity Analysis Reports.

Traffic Data

Table 4 lists the 2010 TMCs and projected 2030 traffic demands for the three intersections supporting the analysis.

Table 4. Off-Peak Hour Turning Movement Volumes in the Analysis

		eastbound			westbound			northbound			southbound			total
		L	T	R	L	T	R	L	T	R	L	T	R	
Nicolai / US30	2010	85	15	305	40	25	70	150	885	45	45	985	115	2765
	2030	85	15	345	70	25	70	560	1090	85	45	1270	115	3775
Nicolai / Wardway	2010	5	220	225	20	185	20	210	45	15	25	55	5	1030
	2030	10	345	335	20	310	20	255	45	15	25	55	5	1440
Vaughn / 23 rd	2010	0	495	85	165/305	475	155	100	65	420	120	60	25	2470
	2030	0	555	85	180/360	510	340	100	65	455	155	75	25	2905



















¹ NW 29th Ave. n/ NW Nicolai St is closed to through traffic due to constructions currently, and it is a important leg of the intersection. Therefore, 24-hour link counts on all three other major approaching legs are collected and the existing TMC is estimated from the time of day factor and two AM / PM TMCs collected in 2007. The time of the day factor is calculated at approach level, and the formula of (am+pm)/2 is used to distribute the turn movements.

Appendix

- a. HCM (highway Capacity Manual) Reports from Synchro for the three intersections, 2010 and 2030
- b. 2010 off-peak TMCs on the two intersections
- c. 24-hour counts on legs of the intersection of Nicolai St at NW Wardway St.


HCM Signalized Intersection Capacity Analysis

2010 Off-Peak
NW Nicolai St @ Wardway & 29th Ave

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0	4.0			4.0		
Lane Util. Factor	1.00	1.00	1.00			1.00	1.00			1.00		
Frt	1.00	1.00	0.85			1.00	0.99			0.88		
Flt Protected	0.95	1.00	1.00			0.95	1.00			0.99		
Satd. Flow (prot)	1770	1863	1583			1770	1835			1634		
Flt Permitted	0.55	1.00	1.00			0.95	1.00			0.96		
Satd. Flow (perm)	1024	1863	1583			1770	1835			1580		
Volume (vph)	5	220	225	5	5	20	185	20	3	0	5	13
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	5	239	245	5	5	22	201	22	3	0	5	14
RTOR Reduction (vph)	0	0	0	0	0	0	3	0	0	12	0	0
Lane Group Flow (vph)	5	239	250	0	0	27	220	0	0	10	0	0
Turn Type	pm+pt		custom		Prot		Prot		Perm			
Protected Phases	1	3 6	6 7		5	5	2 3			4		
Permitted Phases	3 6								4			
Actuated Green, G (s)	35.9	34.3	36.6			2.0	32.5			8.5		
Effective Green, g (s)	36.1	33.3	38.4			1.0	31.5			8.7		
Actuated g/C Ratio	0.49	0.45	0.52			0.01	0.43			0.12		
Clearance Time (s)	5.2					3.0				4.2		
Vehicle Extension (s)	3.0					3.0				3.0		
Lane Grp Cap (vph)	531	844	827			24	786			187		
v/s Ratio Prot	c0.00	c0.13	c0.16			c0.02	0.12					
v/s Ratio Perm	0.00									0.01		
v/c Ratio	0.01	0.28	0.30			1.12	0.28			0.05		
Uniform Delay, d1	9.6	12.6	9.9			36.2	13.6			28.7		
Progression Factor	1.00	1.00	1.00			1.00	1.00			1.00		
Incremental Delay, d2	0.0	0.2	0.2			225.0	0.2			0.1		
Delay (s)	9.6	12.8	10.2			261.2	13.8			28.9		
Level of Service	A	B	B			F	B			C		
Approach Delay (s)		11.4					40.5			28.9		
Approach LOS		B					D			C		
Intersection Summary												
HCM Average Control Delay		24.8				HCM Level of Service				C		
HCM Volume to Capacity ratio		0.44										
Actuated Cycle Length (s)		73.5				Sum of lost time (s)				16.0		
Intersection Capacity Utilization		54.2%				ICU Level of Service				A		
Analysis Period (min)		15										
c Critical Lane Group												





















HCM Signalized Intersection Capacity Analysis

2010 Off-Peak
NW Nicolai St @ Wardway & 29th Ave

							
Movement	SBL2	SBL	SBT	SBR	NWL	NWR	NWR2
Lane Configurations			↕		↕	↕	↕
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0	4.0
Lane Util. Factor			1.00		1.00	1.00	1.00
Frt			0.98		1.00	0.85	0.85
Flt Protected			0.96		0.95	1.00	1.00
Satd. Flow (prot)			1758		1770	1583	1583
Flt Permitted			0.74		0.95	1.00	1.00
Satd. Flow (perm)			1351		1770	1583	1583
Volume (vph)	25	55	1	10	210	45	15
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	60	1	11	228	49	16
RTOR Reduction (vph)	0	0	5	0	0	0	13
Lane Group Flow (vph)	0	0	94	0	228	49	3
Turn Type	Perm	Perm			Prot	Prot	
Protected Phases			4		7	7	7
Permitted Phases	4	4					
Actuated Green, G (s)			8.5		13.3	13.3	13.3
Effective Green, g (s)			8.7		14.5	14.5	14.5
Actuated g/C Ratio			0.12		0.20	0.20	0.20
Clearance Time (s)			4.2		5.2	5.2	5.2
Vehicle Extension (s)			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			160		349	312	312
v/s Ratio Prot					0.13	0.03	0.00
v/s Ratio Perm			0.07				
v/c Ratio			0.59		0.65	0.16	0.01
Uniform Delay, d1			30.7		27.2	24.4	23.7
Progression Factor			1.00		1.00	1.00	1.00
Incremental Delay, d2			5.4		4.3	0.2	0.0
Delay (s)			36.1		31.5	24.7	23.7
Level of Service			D		C	C	C
Approach Delay (s)			36.1		30.0		
Approach LOS			D		C		
Intersection Summary							

HCM Signalized Intersection Capacity Analysis

2010 Off Peak
NW Nicolai St / US-30 & Yeon Ave













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		0.97	0.91		1.00	0.95	1.00
Frpb, ped/bikes		1.00	1.00		0.99		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes		0.99	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frt		1.00	0.95		0.93		1.00	0.99		1.00	1.00	0.85
Flt Protected		0.96	1.00		0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1777	1770		1682		3433	5042		1770	3539	1549
Flt Permitted		0.60	1.00		0.88		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		1102	1770		1495		3433	5042		1770	3539	1549
Volume (vph)	85	15	305	40	25	70	150	885	45	45	985	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	16	321	42	26	74	158	932	47	47	1037	121
RTOR Reduction (vph)	0	0	0	0	48	0	0	5	0	0	0	57
Lane Group Flow (vph)	0	105	321	0	94	0	158	974	0	47	1037	64
Confl. Peds. (#/hr)	4						4	8		4	4	8
Turn Type	Perm	custom		Perm			Prot			Prot	custom	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		5 6 8	4								6
Actuated Green, G (s)		12.2	81.2		12.2		14.4	40.8		11.9	39.4	40.8
Effective Green, g (s)		13.8	81.2		13.8		14.5	42.8		12.6	40.9	42.8
Actuated g/C Ratio		0.17	1.00		0.17		0.18	0.53		0.16	0.50	0.53
Clearance Time (s)		5.6			5.6		4.1	6.0		4.7	5.5	6.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		187	1770		254		613	2658		275	1783	816
v/s Ratio Prot							c0.05	0.19		0.03	c0.29	
v/s Ratio Perm		c0.10	c0.18		0.06							0.04
v/c Ratio		0.56	0.18		0.37		0.26	0.37		0.17	0.58	0.08
Uniform Delay, d1		30.9	0.0		29.8		28.7	11.3		29.8	14.1	9.5
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		3.8	0.0		0.9		1.0	0.4		1.3	1.4	0.2
Delay (s)		34.7	0.0		30.8		29.7	11.6		31.1	15.5	9.7
Level of Service		C	A		C		C	B		C	B	A
Approach Delay (s)		8.6			30.8			14.2			15.6	
Approach LOS		A			C			B			B	
Intersection Summary												
HCM Average Control Delay		14.7					HCM Level of Service			B		
HCM Volume to Capacity ratio		0.51										
Actuated Cycle Length (s)		81.2					Sum of lost time (s)		12.0			
Intersection Capacity Utilization		64.2%					ICU Level of Service		C			
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

2010 Off Peak

I-405 Ramp/Vaughn St @ NW 23rd Ave

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑			↑↑	↑↑	↑	↑	↑	↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95			1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			1.00	1.00	0.85	1.00	0.89	0.85	1.00	0.96
Flt Protected		1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		3430			1770	3539	1583	1770	1570	1504	1770	1746
Flt Permitted		1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		3430			1770	3539	1583	1770	1570	1504	1770	1746
Volume (vph)	0	495	85	165	305	475	155	100	65	420	120	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	521	89	174	321	500	163	105	68	442	126	63
RTOR Reduction (vph)	0	12	0	0	0	0	69	0	0	0	0	13
Lane Group Flow (vph)	0	598	0	0	495	500	94	105	276	234	126	76
Confl. Peds. (#/hr)	1		16		16		1	40				
Turn Type				Prot	Prot		Prot	Prot		Prot	Prot	
Protected Phases		2		1	1	6	6	3	8	8	7	4
Permitted Phases												
Actuated Green, G (s)		20.6			29.5	54.1	54.1	8.2	20.0	20.0	7.7	19.5
Effective Green, g (s)		20.6			29.5	54.1	54.1	8.2	20.0	20.0	7.7	19.5
Actuated g/C Ratio		0.22			0.31	0.58	0.58	0.09	0.21	0.21	0.08	0.21
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		753			557	2041	913	155	335	321	145	363
v/s Ratio Prot		c0.17			c0.28	0.14	0.06	0.06	c0.18	0.16	c0.07	0.04
v/s Ratio Perm												
v/c Ratio		0.79			0.89	0.24	0.10	0.68	0.82	0.73	0.87	0.21
Uniform Delay, d1		34.6			30.6	9.8	8.9	41.5	35.2	34.4	42.6	30.8
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		5.8			15.8	0.1	0.0	11.1	15.0	8.0	38.6	0.3
Delay (s)		40.4			46.4	9.8	9.0	52.7	50.3	42.4	81.2	31.0
Level of Service		D			D	A	A	D	D	D	F	C
Approach Delay (s)		40.4				25.4			47.7			60.4
Approach LOS		D				C			D			E
Intersection Summary												
HCM Average Control Delay		37.1			HCM Level of Service				D			
HCM Volume to Capacity ratio		0.80										
Actuated Cycle Length (s)		93.8			Sum of lost time (s)				12.0			
Intersection Capacity Utilization		80.0%			ICU Level of Service				D			
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis



















2010 Off Peak
I-405 Ramp/Vaughn St @ NW 23rd Ave

Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	25
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	26
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	40
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

HCM Signalized Intersection Capacity Analysis

2030 Off-Peak

NW Nicolai St @ Wardway & 29th Ave

												
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0			4.0	4.0			4.0		
Lane Util. Factor	1.00	1.00	1.00			1.00	1.00			1.00		
Frt	1.00	1.00	0.85			1.00	0.99			0.88		
Flt Protected	0.95	1.00	1.00			0.95	1.00			0.99		
Satd. Flow (prot)	1770	1863	1583			1770	1846			1634		
Flt Permitted	0.47	1.00	1.00			0.95	1.00			0.96		
Satd. Flow (perm)	866	1863	1583			1770	1846			1578		
Volume (vph)	10	345	335	5	5	20	310	20	3	0	5	13
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	375	364	5	5	22	337	22	3	0	5	14
RTOR Reduction (vph)	0	0	1	0	0	0	2	0	0	12	0	0
Lane Group Flow (vph)	11	375	368	0	0	27	357	0	0	10	0	0
Turn Type	pm+pt		custom			Prot	Prot			Perm		
Protected Phases	1	3 6	6 7			5	5	2 3			4	
Permitted Phases	3 6									4		
Actuated Green, G (s)	32.9	32.4	34.2			2.0	33.9			8.6		
Effective Green, g (s)	31.4	31.4	36.0			1.0	32.9			8.8		
Actuated g/C Ratio	0.43	0.43	0.49			0.01	0.45			0.12		
Clearance Time (s)	3.0					3.0				4.2		
Vehicle Extension (s)	3.0					3.0				3.0		
Lane Grp Cap (vph)	368	793	772			24	823			188		
v/s Ratio Prot		c0.20	0.23			c0.02	0.19					
v/s Ratio Perm	0.01									0.01		
v/c Ratio	0.03	0.47	0.48			1.12	0.43			0.05		
Uniform Delay, d1	12.3	15.2	12.6			36.4	14.0			28.8		
Progression Factor	1.00	1.00	1.00			1.00	1.00			1.00		
Incremental Delay, d2	0.0	0.4	0.5			225.0	0.4			0.1		
Delay (s)	12.4	15.7	13.1			261.4	14.4			28.9		
Level of Service	B	B	B			F	B			C		
Approach Delay (s)		14.4					31.7			28.9		
Approach LOS		B					C			C		
Intersection Summary												
HCM Average Control Delay			23.4			HCM Level of Service				C		
HCM Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			73.8			Sum of lost time (s)				16.0		
Intersection Capacity Utilization			56.7%			ICU Level of Service				B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2030 Off-Peak





















NW Nicolai St @ Wardway & 29th Ave



Movement	SBL2	SBL	SBT	SBR	NWL	NWR	NWR2
Lane Configurations			↔		↔	↔	↔
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0		4.0	4.0	4.0
Lane Util. Factor			1.00		1.00	1.00	1.00
Frt			0.98		1.00	0.85	0.85
Flt Protected			0.96		0.95	1.00	1.00
Satd. Flow (prot)			1758		1770	1583	1583
Flt Permitted			0.74		0.95	1.00	1.00
Satd. Flow (perm)			1351		1770	1583	1583
Volume (vph)	25	55	1	10	255	45	15
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	60	1	11	277	49	16
RTOR Reduction (vph)	0	0	5	0	0	0	12
Lane Group Flow (vph)	0	0	94	0	277	49	4
Turn Type	Perm	Perm			Prot	Prot	
Protected Phases			4		7	7	7
Permitted Phases	4	4					
Actuated Green, G (s)			8.6		15.4	15.4	15.4
Effective Green, g (s)			8.8		16.6	16.6	16.6
Actuated g/C Ratio			0.12		0.22	0.22	0.22
Clearance Time (s)			4.2		5.2	5.2	5.2
Vehicle Extension (s)			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)			161		398	356	356
v/s Ratio Prot					c0.16	0.03	0.00
v/s Ratio Perm			c0.07				
v/c Ratio			0.58		0.70	0.14	0.01
Uniform Delay, d1			30.8		26.3	22.9	22.2
Progression Factor			1.00		1.00	1.00	1.00
Incremental Delay, d2			5.3		5.2	0.2	0.0
Delay (s)			36.0		31.5	23.1	22.2
Level of Service			D		C	C	C
Approach Delay (s)			36.0		29.9		
Approach LOS			D		C		
Intersection Summary							

HCM Signalized Intersection Capacity Analysis

2030 Off Peak
NW Nicolai St / US30 & Yeon Ave













												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		1.00	1.00		1.00		0.97	0.91		1.00	0.95	1.00
Frpb, ped/bikes		1.00	1.00		0.99		1.00	1.00		1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Frt		1.00	0.95		0.94		1.00	0.99		1.00	1.00	0.85
Flt Protected		0.96	1.00		0.98		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		1787	1770		1698		3433	5020		1770	3539	1548
Flt Permitted		0.56	1.00		0.78		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		1051	1770		1351		3433	5020		1770	3539	1548
Volume (vph)	85	15	345	70	25	70	560	1090	85	45	1270	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	16	363	74	26	74	589	1147	89	47	1337	121
RTOR Reduction (vph)	0	0	0	0	30	0	0	9	0	0	0	45
Lane Group Flow (vph)	0	105	363	0	144	0	589	1227	0	47	1337	76
Confl. Peds. (#/hr)	4					4	8		4	4		8
Turn Type	Perm	custom		Perm			Prot			Prot	custom	
Protected Phases		8			4		1	6		5	2	
Permitted Phases	8		5 6 8	4								6
Actuated Green, G (s)		12.3	88.0		12.3		19.9	53.5		5.9	40.6	53.5
Effective Green, g (s)		13.9	88.0		13.9		20.0	55.5		6.6	42.1	55.5
Actuated g/C Ratio		0.16	1.00		0.16		0.23	0.63		0.08	0.48	0.63
Clearance Time (s)		5.6			5.6		4.1	6.0		4.7	5.5	6.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		166	1770		213		780	3166		133	1693	976
v/s Ratio Prot							c0.17	0.24		0.03	c0.38	
v/s Ratio Perm		0.10	0.21		c0.11							0.05
v/c Ratio		0.63	0.21		0.67		0.76	0.39		0.35	0.79	0.08
Uniform Delay, d1		34.7	0.0		34.9		31.7	7.9		38.7	19.2	6.3
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		7.6	0.1		8.2		6.7	0.4		7.2	3.8	0.2
Delay (s)		42.3	0.1		43.1		38.4	8.3		45.9	23.1	6.5
Level of Service		D	A		D		D	A		D	C	A
Approach Delay (s)		9.5			43.1			18.0			22.5	
Approach LOS		A			D			B			C	
Intersection Summary												
HCM Average Control Delay		19.8					HCM Level of Service			B		
HCM Volume to Capacity ratio		0.76										
Actuated Cycle Length (s)		88.0					Sum of lost time (s)			12.0		
Intersection Capacity Utilization		77.4%					ICU Level of Service			D		
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

2030 Off Peak

I-405 Ramp/Vaughn St @ NW 23rd Ave

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↑↑			↔	↑↑	↔	↔	↑	↔	↔	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		0.95			1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00
Frpb, ped/bikes		0.99			1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.98			1.00	1.00	0.85	1.00	0.88	0.85	1.00	0.96
Flt Protected		1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)		3437			1770	3539	1583	1770	1565	1504	1770	1760
Flt Permitted		1.00			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)		3437			1770	3539	1583	1770	1565	1504	1770	1760
Volume (vph)	0	555	85	180	360	510	340	100	65	455	155	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	584	89	189	379	537	358	105	68	479	163	79
RTOR Reduction (vph)	0	11	0	0	0	0	151	0	0	0	0	10
Lane Group Flow (vph)	0	662	0	0	568	537	207	105	296	251	163	95
Confl. Peds. (#/hr)	1		16		16		1	40				
Turn Type				Prot	Prot		Prot	Prot		Prot	Prot	
Protected Phases		2		1	1	6	6	3	8	8	7	4
Permitted Phases												
Actuated Green, G (s)		23.0			35.7	62.7	62.7	9.3	22.5	22.5	11.0	24.2
Effective Green, g (s)		23.0			35.7	62.7	62.7	9.3	22.5	22.5	11.0	24.2
Actuated g/C Ratio		0.21			0.33	0.58	0.58	0.09	0.21	0.21	0.10	0.22
Clearance Time (s)		4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		731			584	2051	917	152	325	313	180	394
v/s Ratio Prot		c0.19			c0.32	0.15	0.13	0.06	c0.19	0.17	c0.09	0.05
v/s Ratio Perm												
v/c Ratio		0.91			0.97	0.26	0.23	0.69	0.91	0.80	0.91	0.24
Uniform Delay, d1		41.5			35.8	11.3	11.0	48.1	41.9	40.7	48.1	34.5
Progression Factor		1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		14.7			30.2	0.1	0.1	12.7	28.4	13.7	41.0	0.3
Delay (s)		56.3			66.0	11.3	11.1	60.8	70.2	54.5	89.1	34.8
Level of Service		E			E	B	B	E	E	D	F	C
Approach Delay (s)		56.3				32.5			62.6			67.8
Approach LOS		E				C			E			E
Intersection Summary												
HCM Average Control Delay		47.3			HCM Level of Service				D			
HCM Volume to Capacity ratio		0.93										
Actuated Cycle Length (s)		108.2			Sum of lost time (s)				16.0			
Intersection Capacity Utilization		88.9%			ICU Level of Service				E			
Analysis Period (min)		15										

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis

2030 Off Peak
I-405 Ramp/Vaughn St @ NW 23rd Ave

Movement	SBR
Lane Configurations	
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Volume (vph)	25
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	26
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	40
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

City of Portland

Office of Transportation
1120 SW 5th Ave, Rm 800
Portland, OR 97204

Cldy 55f By: CDB/RC For: Zhou

NW NICOLAI ST @ NW YEON AVE/I405 RAMPS

File Name : 100413TOB

Site Code : 00000000

Start Date : 4/13/2010

Page No : 1

Groups Printed- VEHS PEDS

Start Time	NW YEON AVE Southbound					NW NICOLAI ST Westbound					NW YEON AVE/I405 RAMP Northbound					NW NICOLAI ST Eastbound					Exclu. Total	Inclu. Total	Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total			
11:00	8	216	17	0	241	14	7	8	0	29	46	201	12	0	259	16	7	68	0	91	0	620	620
11:15	9	230	21	0	260	17	3	9	0	29	40	225	18	0	283	7	10	68	0	85	0	657	657
11:30	5	239	35	0	279	24	12	8	0	44	39	182	15	0	236	19	9	72	1	100	1	659	660
11:45	9	264	20	0	293	17	12	6	0	35	31	250	14	0	295	15	3	76	0	94	0	717	717
Total	31	949	93	0	1073	72	34	31	0	137	156	858	59	0	1073	57	29	284	1	370	1	2653	2654
12:00	7	231	22	0	260	13	8	17	0	38	41	201	6	0	248	20	3	96	0	119	0	665	665
12:15	12	248	31	0	291	8	2	26	0	36	45	216	13	0	274	24	7	72	0	103	0	704	704
12:30	17	243	41	0	301	3	1	21	0	25	35	219	12	0	266	24	4	62	0	90	0	682	682
12:45	13	245	19	0	277	9	6	21	0	36	52	230	19	0	301	24	3	51	0	78	0	692	692
Total	49	967	113	0	1129	33	17	85	0	135	173	866	50	0	1089	92	17	281	0	390	0	2743	2743
Grand Total	80	1916	206	0	2202	105	51	116	0	272	329	1724	109	0	2162	149	46	565	1	760	1	5396	5397
Apprch %	3.6	87	9.4			38.6	18.8	42.6			15.2	79.7	5			19.6	6.1	74.3					
Total %	1.5	35.5	3.8		40.8	1.9	0.9	2.1		5	6.1	31.9	2		40.1	2.8	0.9	10.5		14.1	0	100	

NOTE: NW 29TH AVE CLOSED YEON TO NICOLAI

183915

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Portland, OR 97204

Cldy 55f By: CDB/RC For: Zhou

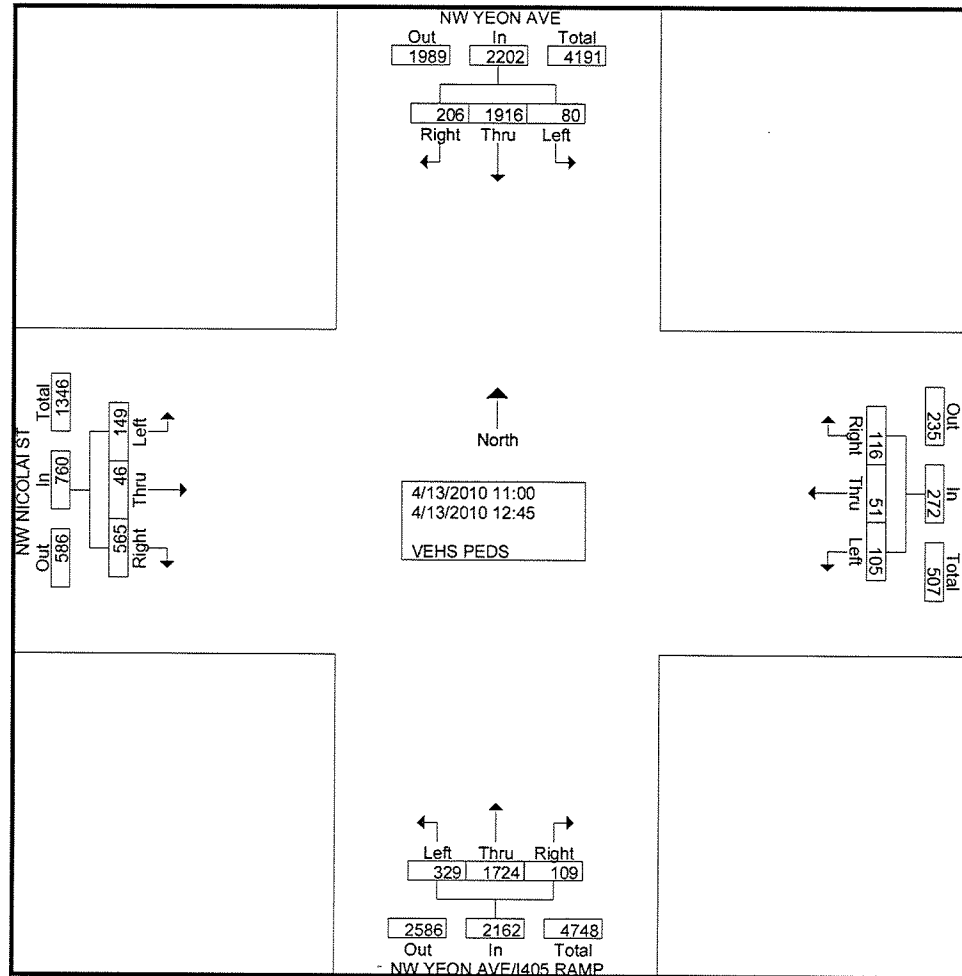
NW NICOLAI ST @ NW YEON AVE/I405 RAMPS

File Name : 100413TOB

Site Code : 00000000

Start Date : 4/13/2010

Page No : 2



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NW NICOLAI ST @ NW YEON AVE/I405 RAMPS

File Name : 100413TOB
Site Code : 00000000
Start Date : 4/13/2010
Page No : 3

	NW YEON AVE Southbound				NW NICOLAI ST Westbound				NW YEON AVE/I405 RAMP Northbound				NW NICOLAI ST Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 to 12:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:45																	
11:45	9	264	20	293	17	12	6	35	31	250	14	295	15	3	76	94	717
12:00	7	231	22	260	13	8	17	38	41	201	6	248	20	3	96	119	665
12:15	12	248	31	291	8	2	26	36	45	216	13	274	24	7	72	103	704
12:30	17	243	41	301	3	1	21	25	35	219	12	266	24	4	62	90	682
Total Volume	45	986	114	1145	41	23	70	134	152	886	45	1083	83	17	306	406	2768
% App. Total	3.9	86.1	10		30.6	17.2	52.2		14	81.8	4.2		20.4	4.2	75.4		
PHF	.662	.934	.695	.951	.603	.479	.673	.882	.844	.886	.804	.918	.865	.607	.797	.853	.965

183915

City of Portland

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O'cast by: CDB For: Zhou

NW 23RD AVE/VAUGHN ST/I405 NB EX

File Name : 100407TOB

Site Code : 00000000

Start Date : 4/7/2010

Page No : 1

Groups Printed- VEHS PEDS

	NW 23RD AVE Southbound					I-405 NB EX Southwestbound					NW VAUGHN ST Westbound		NW 23RD AVE Northbound					NW VAUGHN ST Eastbound								
Start Time	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
10:00	23	6	7	0	36	43	87	118	28	0	276	0	0	8	10	88	0	106	0	107	12	4	123	0	541	541
10:15	34	17	5	1	56	41	77	120	39	0	277	0	0	24	15	130	0	169	0	96	10	0	106	1	608	609
10:30	28	15	6	1	49	51	77	106	36	0	270	0	0	20	13	95	0	128	0	112	21	1	134	1	581	582
10:45	37	13	11	0	61	48	68	132	35	0	283	0	0	22	22	89	0	133	0	128	18	7	153	0	630	630
Total	122	51	29	2	202	183	309	476	138	0	1106	0	0	74	60	402	0	536	0	443	61	12	516	2	2360	2362
11:00	24	15	10	4	49	44	88	116	31	0	279	0	0	23	14	102	0	139	0	135	21	3	159	4	626	630
11:15	26	19	2	2	47	39	51	126	47	0	263	0	0	22	17	111	0	150	0	131	17	5	153	2	613	615
11:30	32	14	6	2	52	39	71	120	38	0	268	0	0	31	12	93	0	136	1	115	28	14	158	2	614	616
11:45	38	11	7	0	56	44	96	114	38	0	292	0	0	25	20	114	0	159	0	113	17	0	130	0	637	637
Total	120	59	25	8	204	166	306	476	154	0	1102	0	0	101	63	420	0	584	1	494	83	22	600	8	2490	2498
Grand Total	242	110	54	10	406	349	615	952	292	0	2208	0	0	175	123	822	0	1120	1	937	144	34	1116	10	4850	4860
Apprch %	59.6	27.1	13.3			15.8	27.9	43.1	13.2	0		0		15.6	11	73.4	0		0.1	84	12.9	3				
Total %	5	2.3	1.1		8.4	7.2	12.7	19.6	6	0	45.5	0	0	3.6	2.5	16.9	0	23.1	0	19.3	3	0.7	23	0.2	99.8	

183915

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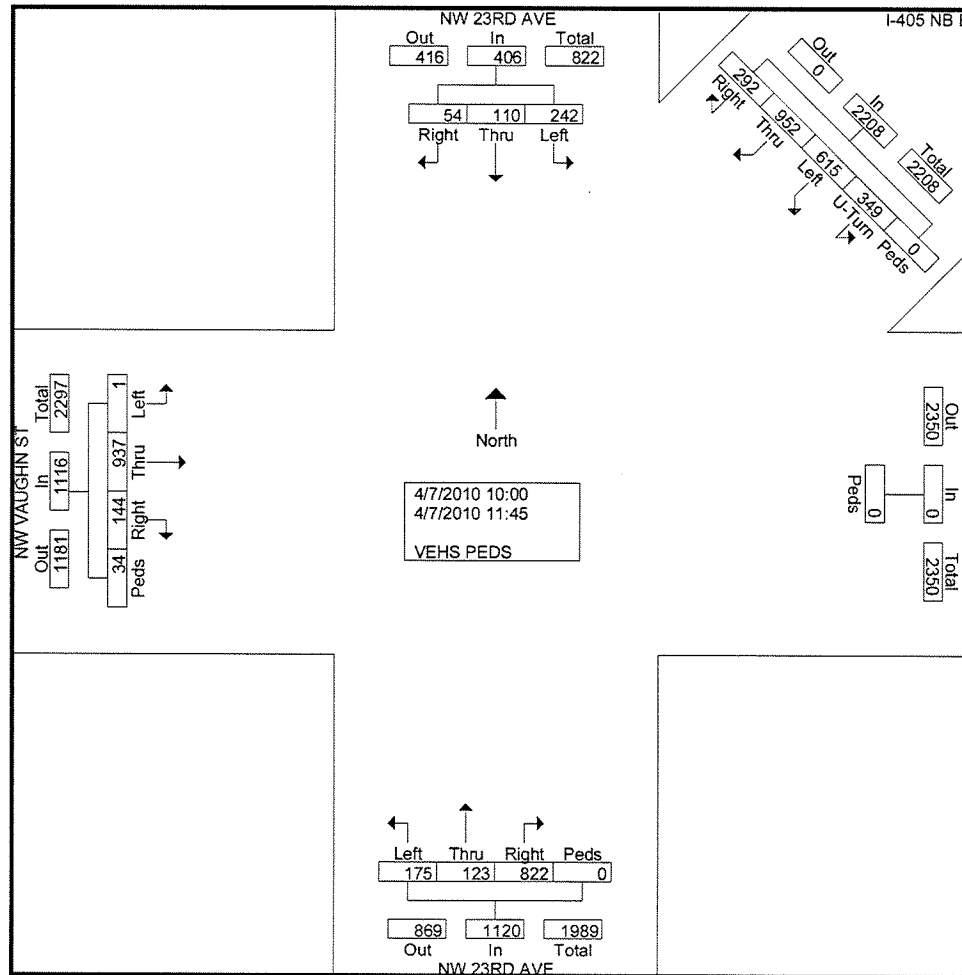
NW 23RD AVE/VAUGHN ST/I405 NB EX

File Name : 100407TOB

Site Code : 00000000

Start Date : 4/7/2010

Page No : 2



10395

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O'cast by: CDB For: Zhou

NW 23RD AVE/VAUGHN ST/I405 NB EX

File Name : 100407TOB

Site Code : 00000000

Start Date : 4/7/2010

Page No : 3

	NW 23RD AVE Southbound					I-405 NB EX Southwestbound					NW VAUGHN ST Westbound		NW 23RD AVE Northbound					NW VAUGHN ST Eastbound					
Start Time	Left	Thru	Right	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 10:00 to 11:45 - Peak 1 of 1																							
Peak Hour for Entire Intersection Begins at 11:00																							
11:00	24	15	10	49	44	88	116	31	0	279	0	0	23	14	102	0	139	0	135	21	3	159	626
11:15	26	19	2	47	39	51	126	47	0	263	0	0	22	17	111	0	150	0	131	17	5	153	613
11:30	32	14	6	52	39	71	120	38	0	268	0	0	31	12	93	0	136	1	115	28	14	158	614
11:45	38	11	7	56	44	96	114	38	0	292	0	0	25	20	114	0	159	0	113	17	0	130	637
Total Volume	120	59	25	204	166	306	476	154	0	1102	0	0	101	63	420	0	584	1	494	83	22	600	2490
% App. Total	58.8	28.9	12.3		15.1	27.8	43.2	14	0		0		17.3	10.8	71.9	0		0.2	82.3	13.8	3.7		
PHF	.789	.776	.625	.911	.943	.797	.944	.819	.000	.943	.000	.000	.815	.788	.921	.000	.918	.250	.915	.741	.393	.943	.977

183915



Traffic Volume Report

LOCATION

Location: NW WARDWAY ST E of 29TH AVE / NICOLAI ST

Bound: N

Channels: 1

Date: From 4/12/2010 10:45:00 AM (MON) to 4/14/2010 12:30:00 PM (WED)

CountID: 10041221.VL1

NOTES

Excp Type: Obstruction

Conditions:

Comment: **NW 29TH AVE CLOSED N/NICOLAI

Count Loc: NW WARD WAY S/NW NICOLAI ST

SUMMARY DATA

	AM	PM	Daily
Total Volume:	1520	2125	3645
Peak Hour Volume:	269	302	302
Peak Hour Start:	6:45	16:15	16:15
Peak Hour Factor:	0.862	0.878	

INTERVAL DATA

Hour	Min: 00-15	Min: 16-30	Min: 31-45	Min: 45-60	Total
0	4	8	5	4	21
1	2	1	6	4	13
2	5	5	7	3	20
3	4	6	2	3	15
4	6	4	10	15	35
5	16	20	27	38	101
6	40	40	51	68	199
7	55	68	78	65	266
8	52	50	62	56	220
9	54	56	55	38	203
10	55	50	48	52	205
11	45	59	58	60	222
12	58	67	73	69	267
13	84	59	68	61	272
14	67	61	64	60	252
15	61	72	80	64	277
16	68	66	66	86	286
17	84	66	64	59	273
18	46	46	38	40	170
19	41	24	16	26	107
20	19	14	17	23	73
21	16	14	14	18	62
22	15	11	15	12	53
23	10	8	8	7	33



Traffic Volume Report

LOCATION

Location: NW NICOLAI ST W of 29TH AVE / WARDWAY ST

Bound: E

Channels: 1

Date: From 4/12/2010 10:30:00 AM (MON) to 4/14/2010 12:30:00 PM (WED)

CountID: 10041222.VL1

NOTES

Excpt Type: Obstruction

Conditions:

Comment: **NW 29TH AVE CLOSED N/NICOLAI

Count Loc: NW NICOLAI ST W/NW WARD WAY

SUMMARY DATA

	AM	PM	Daily
Total Volume:	2745	3105	5850
Peak Hour Volume:	582	526	582
Peak Hour Start:	7:30	16:0	7:30
Peak Hour Factor:	0.887	0.854	

INTERVAL DATA

Hour	Min: 00-15	Min: 16-30	Min: 31-45	Min: 46-60	Total
0	9	9	11	10	39
1	9	5	6	7	27
2	7	6	13	10	36
3	9	23	5	9	46
4	11	12	14	16	53
5	19	32	43	47	141
6	39	58	74	108	279
7	84	109	164	152	509
8	122	144	118	101	485
9	107	83	87	94	371
10	86	67	100	79	332
11	96	102	120	109	427
12	119	98	108	123	448
13	101	107	97	111	416
14	111	85	97	87	380
15	98	99	125	89	411
16	147	120	154	105	526
17	147	96	79	67	389
18	57	54	45	45	201
19	33	38	30	17	118
20	21	25	20	15	81
21	20	8	12	12	52
22	15	14	10	12	51
23	7	11	4	10	32



Traffic Volume Report

LOCATION

Location: NW NICOLAI ST E of 29TH AVE / WARDWAY ST

Bound: W

Channels: 1

Date: From 4/12/2010 10:30:00 AM (MON) to 4/14/2010 12:15:00 PM (WED)

CountID: 10041227.VL1

NOTES

Excpt Type: Obstruction

Conditions:

Comment: **NW 29TH AVE CLOSED N/NICOLAI

Count Loc: NW NICOLAI ST E/NW WARD WAY

SUMMARY DATA

	AM	PM	Daily
Total Volume:	1506	1316	2822
Peak Hour Volume:	273	231	273
Peak Hour Start:	7:0	12:45	7:0
Peak Hour Factor:	0.822	0.902	

INTERVAL DATA

Hour	Min: 00-15	Min: 16-30	Min: 31-45	Min: 46-60	Total
0	7	7	3	8	25
1	6	7	12	3	28
2	9	6	4	4	23
3	10	1	7	7	25
4	5	14	12	12	43
5	10	15	21	36	82
6	33	35	60	67	195
7	56	83	56	78	273
8	53	62	54	47	216
9	50	53	52	54	209
10	44	51	47	50	192
11	56	41	57	41	195
12	67	52	41	62	222
13	43	62	64	51	220
14	50	49	52	47	198
15	40	36	54	40	170
16	45	32	38	32	147
17	52	37	34	21	144
18	19	17	9	11	56
19	8	8	11	6	33
20	5	7	12	10	34
21	10	9	9	7	35
22	8	8	8	8	32
23	9	4	7	5	25

EXHIBIT D**Email from Oregon Department of Transportation, dated April 28, 2010**

From: KEVLIN Ross P [mailto:Ross.P.KEVLIN@odot.state.or.us]
Sent: Wednesday, April 28, 2010 3:42 PM
To: Duke, Courtney; RAHMAN Lidwien
Subject: RE: NW Remand

Hi, Courtney --

Here's the e-mail Lidwien sent the city in February, '09 discussing ODOT's response to the remand:

This message is to convey ODOT 's position with regard to the City's efforts to respond to the remand of the North West District Plan (NWDP).

ODOT has received the requested documentation of the methodology and assumptions used for estimating a "reasonable worst case" of households and employment both before and after, i.e. without and with the NWDP Comprehensive Plan and Zoning amendments. While we do not recommend using a Metroscope derived "market factor" for estimating a reasonable worst case of population and employment in the future, we did not object to this method in the course of earlier communications regarding this and previous City legislative plan amendments, therefore we accept the methodology and associated documentation in this case.

Based on the numbers, the NWDP amendments constitute a net reduction in households and employment. hence, there is no significant impact on the planned function and performance of the State facility, I-405, and therefore Transportation Planning Rule OAR 660-012-0060, section -060 does not apply. ODOT does not have a position on potential significant affects to the planned capacity or function of City transportation facilities.

Because there is no significant impact on our facility as defined by the Rule, we are not commenting on the traffic analysis that was prepared by the City. We did note that there are some questions about the geometry assumed in the analysis, which may lead to a miscalculation of certain traffic movements.

We look forward to working with the City of Portland to further establish parameters, clarify expectations, and identify communication protocols for future City of Portland plan amendments.

Lidwien Rahman
Principal Planner
ODOT Region 1
123 NW Flanders Street
Portland, OR 97209-4012
phone (503) 731-8229

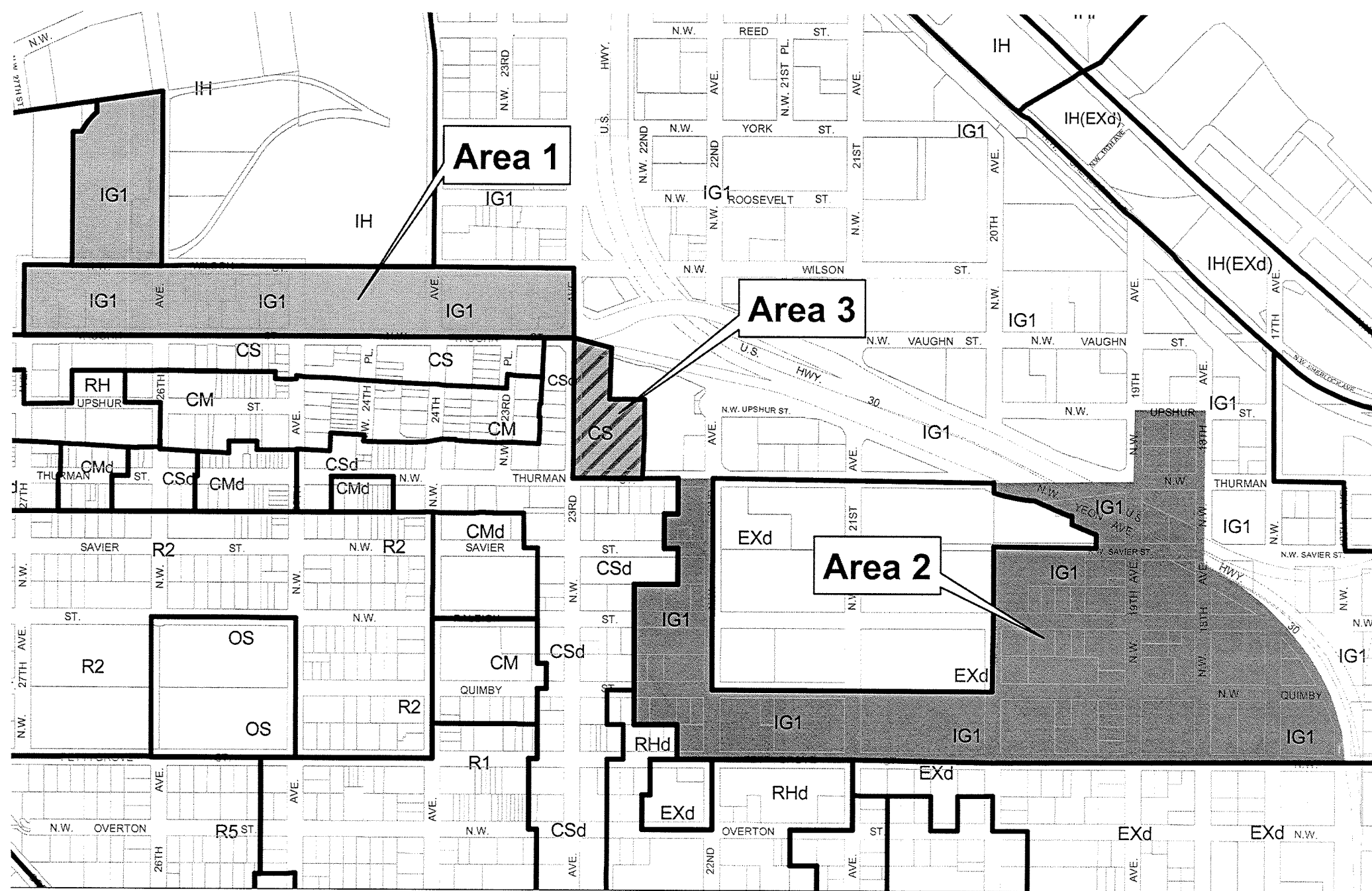


EXHIBIT E: Areas of Proposed Changes to Zoning and Comprehensive Plan Maps



0 200 400
Feet

All data compiled from source materials at different scales.
For more detail, please refer to the source materials or
City of Portland, Bureau of Planning & Sustainability.

May 21, 2010

183915

Exhibit F-1

ORDINANCE No. 183269

* Readopt affirmed and unchallenged portions of the *Northwest District Plan*; Repeal Ordinance 177920 (Ordinance)

The City of Portland ordains:

Section 1. The Council finds:

1. Portland's *Comprehensive Plan* was adopted on October 16, 1980, acknowledged for compliance with Statewide Planning Goals on May 3, 1981; and on January 25, 2000 an updated version of Portland's *Comprehensive Plan* was acknowledged for compliance with the Statewide Planning Goals at the conclusion of the City's first periodic review.
2. The *Northwest District Policy Plan*, adopted in 1975 and revised in 1977, was incorporated into Portland's *Comprehensive Plan* in 1980. The *Northwest District Plan* is intended to replace the *Northwest District Policy Plan*.
3. The *Central City Plan* was adopted as an element of Portland's *Comprehensive Plan* in 1988.
4. The *Guild's Lake Industrial Sanctuary Plan* was adopted as an element of Portland's *Comprehensive Plan* in 2000.
5. The Northwest Plan District was adopted a chapter of the City Planning and Zoning Code in 2001.
6. Oregon Revised Statutes (ORS) 197.628 requires cities and counties to review their comprehensive plans and land use regulations periodically and make changes necessary to keep plans and regulations up-to-date and in compliance with Statewide Planning Goals and State laws. Portland is also required to coordinate its review and update of the *Comprehensive Plan* and land use regulations with State plans and programs.
7. Portland *Comprehensive Plan* Goal 10, Plan Review and Administration, states that the *Comprehensive Plan* will undergo periodic review to ensure that it remains an up-to-date and workable framework for land use development.
8. Portland *Comprehensive Plan* Policy 10.2, Comprehensive Plan Map Review, establishes a community and neighborhood planning process for the review and update of the Portland Comprehensive Plan Map.
9. Portland *Comprehensive Plan* Goal 3, Neighborhoods, calls for preserving and reinforcing the stability, diversity, residential quality, and economic vitality of the City's neighborhoods, while allowing for increased density.

10. Portland *Comprehensive Plan* Policy 3.6, Neighborhood Plan, encourages the creation of neighborhood plans to address issues and opportunities at a scale which is more refined and more responsive to neighborhood needs than can be attained under the broad outlines of the City's *Comprehensive Plan*.
11. Neighborhood and district plans serve as components of the *Comprehensive Plan* and are intended to promote patterns of land use, urban design, infrastructure facilities and services that encourage and contribute to the economic, social, and physical health, welfare, and safety of the neighborhood and the city.
12. In November 1999, the Northwest District Association Board of Directors adopted the Northwest District Neighborhood Plan, intending it to serve as an update of the 1977 City-adopted *Northwest District Policy Plan*. In June 2000, City Council directed the Bureau of Planning to review the Northwest District Neighborhood Plan and take it through the formal City adoption process. The *Northwest District Plan* is the result of that process. The Northwest District Neighborhood Plan served as a major input in the crafting of the *Northwest District Plan*.
13. The Bureau of Planning developed the *Northwest District Plan* with participation from interested neighborhood and business associations, property owners, business persons and citizens and with cooperation from other bureaus and agencies.
14. Public involvement and outreach activities included regular consultation with Citizen and Technical Advisory Committees, neighborhood walks, urban design workshops and an open house. Staff also attended numerous neighborhood and business association meetings and convened special-purpose advisory groups to assist in crafting and evaluating plan proposals.
15. The *Northwest District Plan* includes an urban design concept and implementation action charts, which are adopted by resolution. The action charts represent a commitment from public and private groups to help implement the *Northwest District Plan*.
16. The *Northwest District Plan* provisions implement, or are consistent with, the Statewide Planning Goals, the Region 2040 Growth Concept, the Metro Urban Growth Management Functional Plan, the Portland *Comprehensive Plan*, the *Central City Plan*, and the *Guild's Lake Industrial Sanctuary Plan*, as described in the findings included in Exhibit C, which is made a part of this Ordinance by this reference.
17. The Notice of Proposed Action and two copies of the *Northwest District Plan* were mailed to the Oregon Department of Land Conservation and Development as required by ORS 197.610 on October 8, 2002.

18. A general notification of the November 26, 2002 Portland Planning Commission and November 21, 2002 Portland Design Commission public hearings on the Proposed *Northwest District Plan* was sent to 1,060 interested parties on October 18, 2002. Measure 56 notification of the November 26, 2002 Planning Commission and November 21, 2002 Design Commission public hearings on the Proposed *Northwest District Plan* was sent to all property owners potentially affected by proposed zoning map, zoning code, and design-related changes on October 18, 2002. .
19. On November 21 and December 5, 2002 and January 9 and 16, 2003, the Portland Design Commission held public hearings on the Proposed *Northwest District Plan*. The Design Commission recommended that City Council adopt the design-related provisions of the *Northwest District Plan* as amended.
20. On November 26, 2002, the Portland Planning Commission held a public hearing on the Proposed *Northwest District Plan*. The Planning Commission discussed the Plan on December 5, 2002, January 14, January 28, and April 8, 2003. On April 8, the Planning Commission recommended that City Council adopt the Recommended *Northwest District Plan*.
21. A general notification of the May 21, 2003 City Council public hearing on the Recommended *Northwest District Plan* was sent to individuals who testified at the Planning Commission and Design Commission hearings and other interested individuals on April 18, 2003. A Measure 56 notification of the May 21, 2003 City Council public hearing on the Recommended *Northwest District Plan* was sent to all property owners potentially affected by Planning Commission recommended zoning map and code amendments (where such recommended amendments differed from the October 2002 Proposed *Northwest District Plan*) on April 18, 2003.
22. The Portland City Council adopted the *Northwest District Plan* by Ordinance 177920 on September 24, 2003. This ordinance made the *Northwest District Plan* part of Portland's *Comprehensive Plan* through a new Policy 3.10. Ordinance 177920 also amended the zoning code by amending the Northwest Plan District, redesignated and rezoned additional industrial land to mixed use between NW Pettygrove and NW Vaughn, and amended the *Comprehensive Plan Map* designations (but not the zone map) for some industrial land north of NW Vaughn for future mixed-use.
23. On September 24, 2003 the Portland City Council enacted companion measures to Ordinance 177920. Ordinance 177921 amended the property tax exemption for new transit supportive residential and mixed use development within a portion of the Northwest Plan District, while Resolution 376171 adopted the *Northwest District Plan* urban design concept and action charts.

24. The Portland City Council adopted further companion measures on October 24, 2004. Ordinance 178020 amended the *Northwest District Plan* to allow commercial parking structures on six residential sites and amended the Northwest Plan District to regulate this allowed parking. Council also adopted Ordinance 177993 which established a new Northwest Transportation Fund designed to mitigate the traffic generating effects of Floor Area Ratio bonuses for development north of NW Pettygrove.
25. All four ordinances and the resolution were appealed to the Oregon Land Use Board of Appeals (LUBA). The petitioners' primary challenges were directed to Ordinance No. 177920 (adopting the Northwest District Plan) and Ordinance No. 178020 (adopting parking provisions). LUBA issued a decision denying all but one of the assignments of error in *NWDA v City of Portland*, 47 Or LUBA 533 (2004) (*NWDA I*). LUBA's decision was appealed to the Oregon Court of Appeals, which affirmed most of LUBA's decision but remanded so an additional assignment could be reconsidered in *NWDA v. City of Portland*, 198 Or App 286 (2005) (*NWDA II*). Upon reconsideration, LUBA remanded Ordinance No. 177920 for the reasons expressed in its original opinion and affirmed the remaining ordinances and resolution in *NWDA v. City of Portland*, 50 Or LUBA 310 (2005) (*NWDA III*).
26. LUBA remanded Ordinance 177920 because it found the City had not meet its evidentiary burden under Statewide Planning Goal 12, Transportation, and Oregon Administrative Rules 660-0012-0060, Transportation Planning, to show that *Comprehensive Plan Map* redesignations and rezones north of NW Pettygrove and *Comprehensive Plan Map* redesignations north of NW Vaughn would not have significant adverse traffic impacts on NW Vaughn Street or the NW Vaughn and 23rd intersection.
27. On March 31, 2009, LUBA upheld a City Council decision approving a proposed parking garage for one of the sites identified in the affirmed and acknowledged Ordinance 178020 in *NWDA v. City of Portland*, LUBA No. 2008-212 [3/31/2009 (*NWDA IV*)]. In a footnote, LUBA provided the following guidance to the City concerning readoption of the affirmed or unchallenged portions of the Northwest District Plan that were originally adopted by Ordinance No. 177920: "If it is possible to separate the part of the NDP that was affected by our remand in *NWDA III* from the part that was not, an ordinance that readopted the parts of the NDP that was unaffected by *NWDA III* would almost certainly be invulnerable in any appeal***." In its opinion, LUBA also stated that as a result of its 2005 decision remanding Ordinance No. 177920, any claim that some or all of the regulations adopted by that ordinance remain effective is "almost certainly wrong" and opined that these regulations "are no longer effective;"

28. On June 12, 2009, the Portland Bureau of Planning and Sustainability forwarded provided a "Notice of Proposed Amendment" to the Oregon Department of Land Conservation and Development. This notice stated the City's intent to readopt the portions of the Northwest District Plan adopted by Ordinance No. 177920 that were unchallenged or affirmed by LUBA in *NWDA III*. The notice was received by the Department on June 15, 2009. This notice anticipated a July 22, 2009 Portland City Council hearing, but the hearing was postponed to July 29, 2009, then to September 23, 2009, and again to October 21, 2009. The Portland Bureau of Planning and Sustainability provided supplemental notices to the Department on August 13, 2009 and September 18, 2009 describing the rescheduled hearing dates.
29. On July 8, 2009 the Oregon Court of Appeals affirmed LUBA's March 31, 2009 opinion. This appellant judgment was filed on September 9, 2009, and the City received the Notice of Appellant Judgment from the Oregon Board of Appeals on September 18, 2009. Because Ordinance No. 177920 did not contain a severability clause the entire ordinance became invalid and unenforceable.
30. On August 19, 2009 the Portland City Council, in anticipation of final appellant judgment, adopted Resolution No. 36724 that:
- Recognized that Ordinance No. 177920 was no longer effective or enforceable;
 - Recognized that all land use plans, maps, codes, guidelines, and regulations in effect on November 7, 2003, (the day before Ordinance No. 177920 became effective on November 8, 2003) are the effective and enforceable versions, unless amended or replaced by a final land use decision made after September 24, 2003; and
 - Directed City staff to correct the relevant land use plans, maps, codes, guidelines, and regulations to be consistent with Resolution No. 36724.
31. A general notification of the City Council public hearing on the remanded *Northwest District Plan* was mailed on August 7, 2009; and a more detailed follow-up notice was mailed to the same individuals, organizations and parties on October 7, 2009 stating the exact time and place of the October 21, 2009 hearing. Additional "Measure 56" notification of the October 21, 2009 City Council public hearing on the remanded *Northwest District Plan* was sent to potentially affected property owners on September 30, 2009. Potentially affected owners are all owners whose zones would change from the zones effective on November 7, 2003 to zones the same as those that became effective on November 8, 2003 but became ineffective upon remand.

32. On considering Ordinance No. 177920 on remand the City Council determines that is possible to separate the parts of the Northwest District Plan identified as deficient in *NWDA III* from the parts that were not. Separation is possible because the remand was based on a single assignment of error limited to modeled traffic generation from *Comprehensive Plan Map* redesignations from Industrial to Employment and corresponding rezones (IG1 to EXd) north of NW Pettygrove and from *Comprehensive Plan Map* redesignations from Industrial to Employment north of NW Vaughn.
33. This ordinance is limited in scope and readopts only those portions of the Northwest District Plan that were either unchallenged or affirmed by LUBA in its review of Ordinance No. 177920 in its decisions in *NWDA I* and *NWDA III*. Council consideration of the transportation issues that were the basis for LUBA's remand in *NWDA I* and *III* will be the subject of a subsequent public hearing for which public notice will be provided and public testimony will be accepted.
34. The Vision Statement, Policies, Objectives, Master Street Plan, design review provisions and zoning measures of the readopted *Northwest District Plan* will serve as an official guide to public and private decision-making and investment in the plan area.
35. It is in the public interest that the recommendations contained in the *Northwest District Plan* be readopted to direct change in the study area. These recommendations are consistent with Statewide Planning Goals, Metro's Functional Plan and the City's Comprehensive Plan for the reasons stated in the findings in Exhibit A.

NOW, THEREFORE, the Council directs:

- a. The commentary in Exhibits A, B and D and the Findings in Exhibit C, are adopted as further findings and as legislative intent, and are made a part of this Ordinance by this reference.
- b. Exhibit A, the *Planning Commission Recommended Northwest District Plan*, dated April 2003, as amended in Exhibit D, *Council Amendments to the Recommended Northwest District Plan*, dated September 2003, is adopted as the *Northwest District Plan*. By this reference, Exhibits A and D are made a part of this Ordinance.
- c. The Portland *Comprehensive Plan* is amended by adopting the Vision, Policies, Objectives and Master Street Plan of the *Northwest District Plan* and a new Policy 3.10, as shown in Exhibit A, and as amended by Exhibit D.
- d. The Portland *Comprehensive Plan* is amended by repealing the 1975 *Northwest District Policy Plan* and the 1977 amendments to the *Northwest District Policy Plan*. All references to the *Northwest District Policy Plan* in the *Comprehensive Plan* are replaced by references to the *Northwest District Plan*. The *Northwest District Plan* supersedes the *Northwest District Policy Plan*.

- e. The *Portland Comprehensive Plan Map* and the *Zoning Map of the City of Portland* are amended as shown in Exhibit A, and as amended by Exhibit D, except as provided in directives below.
- f. The *Central City Plan* is amended as shown in Exhibit A, and as amended by Exhibit D.
- g. The *Central City Fundamental Design Guidelines* are amended as shown in Exhibit A and as amended by Exhibit D.
- h. The *Goose Hollow Design Guidelines* are amended as shown in Exhibit A and as amended by Exhibit D.
- i. The Guild's Lake Industrial Sanctuary Plan is amended as shown in Exhibit A and as amended by Exhibit D.
- j. The *Community Design Guidelines* are amended as shown in Exhibit A. The Desired Characteristics and Traditions statements included in Exhibit A and as amended in Exhibit D shall be used by design review bodies as extensions of Community Design Guideline P1, "Plan Area Character," for the portion of the *Northwest District Plan* area that is outside the *Central City Plan* area.
- k. Title 33, Planning and Zoning, of the *Municipal Code of the City of Portland, Oregon*, is amended as shown in Exhibit A and as amended by Exhibit D, except:
 - Section 33.562.130, Commercial Parking in Multi-Dwelling Zones, is not adopted.
 - Section 33.562.290, Use of Accessory Parking for Commercial Parking, is not adopted.
 - Section 33.562.300, Northwest Master Plan, as enacted by Ordinance 175877, as effective on September 21, 2001, is not deleted from the *Municipal Code of the City of Portland, Oregon*. Paragraph B of Section 33.562.300 provides that the regulations of the section apply to sites zoned EX within "Subdistrict B". For the purpose of Section 33.562.300, "Subdistrict B" shall mean those parts of the Northwest Plan District both North of NW Pettygrove and east of NW 23rd Avenue, not the referenced Map 562-1. Section 33.562.300 is included in Exhibit E. By this reference Exhibit is made a part of this Ordinance.
 - Map 562-3; is not adopted
 - Section 33.815.308, Commercial Parking in Multi-Dwelling Zones in the Northwest Plan District; is not adopted.
 - Chapter 33.910, Definitions, any definitions related to codes not adopted by this ordinance are not adopted; and
 - All references to the chapters, sections, maps and definitions not adopted by this ordinance in the Table of Contents and Chapter Headings are not adopted.

- l. The *Portland Comprehensive Plan Map* and the *Zoning Map of the City of Portland* are amended as shown in Exhibit A of Ordinance 177920, and as amended by Exhibit D of Ordinance 177920 except:
 - EXd zones and corresponding *Comprehensive Plan Map* designations depicted east of NW 23rd Avenue, North of NW Pettygrove Street, and South of NW Vaughn Street, which are not also depicted on the December 21, 2001 versions of Zone Maps 2827, 2828, 2927 are not adopted. The December 21, 2001 versions of Zone Maps 2827, 2828, 2927 are included in Exhibit F. By this reference, Exhibit F is made a part of this Ordinance.
 - The Mixed Employment “(ME)” *Comprehensive Plan Map* designations on sites zoned IG1 and IH north of NW Vaughn are not adopted.
- m. Ordinance 177920 is repealed.
- n. No part of this Ordinance repeals or supersedes Ordinance 178020, or any final land use decision that became effective after November 8, 2003.
- o. If any section, subsection, sentence, clause, phrase, diagram or drawing contained in this ordinance, or the plan, map or code it adopts or amends, is held to be deficient, invalid or unconstitutional, that shall not affect the validity of the remaining portions. The Council declares that it would have adopted the plan, map, or code and each section, subsection, sentence, clause, phrase, diagram and drawing thereof, regardless of the fact that any one or more sections, subsections, sentences, clauses, phrases, diagrams or drawings contained in this Ordinance, may be found to be deficient, invalid or unconstitutional.

Section 2. The Council declares that an emergency exists because it is imperative to provide immediate certainty about which Northwest District Plan provisions first adopted by Ordinance 177920 continue to apply to applications for new development, and which provisions no longer apply. Therefore, this ordinance shall be in full force and effect from and after its passage by the Council.

Passed by the Council: October 21, 2009

Mayor Adams

Prepared by: Al Burns

Date Prepared: October 7, 2009

LaVonne Griffin-Valade
Auditor of the City of Portland
By

Deputy

Exhibit F-2

Northwest District Plan

Exhibit C: Findings

September 2003



CITY OF PORTLAND, OREGON
BUREAU OF
Planning

Acknowledgements***Portland City Council***

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Jim Francesconi, Commissioner
Dan Saltzman, Commissioner
Erik Sten, Commissioner

Portland Planning Commission

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Introduction

The *Northwest District Plan* is the product of several years of effort by residents, business and property owners, city staff, and other interested stakeholders to guide growth in this inner urban district. City Council's adoption of this plan updates the *Portland Comprehensive Plan* for this part of Portland and sets in motion a coordinated set of programs, projects, and regulations intended to guide public and private decision-making and investment in the Northwest District over the next 20 years. The findings in this document show how the *Northwest District Plan* complies with the State Land Use Planning Goals, the *Metro Urban Growth Management Functional Plan*, and the *Portland Comprehensive Plan*.

Relationship to Statewide Land Use Planning

Comprehensive land use planning in Oregon was mandated by the 1973 Legislature with the adoption of Senate Bill 100 (ORS Chapter 197). Under this Act, the State Land Conservation and Development Commission (LCDCC) was created and directed to adopt statewide planning Goals and Guidelines. These Goals and Guidelines were adopted by LCDCC in December 1974 and became effective January 1, 1975. Under state law, comprehensive plans must comply with the statewide planning goals. Portland's *Comprehensive Plan* meets this requirement. The *Northwest District Plan* revises Portland's *Comprehensive Plan* through the addition of its policies and objective into the *Comprehensive Plan*. Policy 3.10 is added to Goal 3, Neighborhoods, to incorporate the policies and objectives of the *Northwest District Plan* into Portland's *Comprehensive Plan*.

How This Document is Structured

This document is organized into six sections: this introduction, Statewide Planning Goals Findings, *Metro Urban Growth Management Functional Plan* Findings, *Portland Comprehensive Plan* Findings, *Central City Plan* Findings, and *Guild's Lake Industrial Sanctuary Plan* Findings. Within these sections, the individual findings general consist of two parts: 1) a brief explanation of the criteria (goal, policy, objective, further statement, etc.) against which the *Northwest District Plan* is judged for consistency; and 2) statements that support a conclusion of consistency. If a finding against a given measure (goal, title, policy, objective, further statement, etc.) is not included in this document, it is because it has been determined to not be relevant to the *Northwest District Plan*.

Statewide Planning Goals Findings

State planning statutes require cities to adopt and amend comprehensive plans and land use regulations in compliance with the state land use goals.

1. **Goal 1, Citizen Involvement**, requires provision of opportunities for citizens to be involved in all phases of the planning process. The *Northwest District Plan* process has included numerous opportunities for public involvement. Portland *Comprehensive Plan* findings on Goal 9, Citizen Involvement, and its related policies and objectives also support this goal. The amendments are supportive of this goal in the following ways:
 - a. In November 1999, the Northwest District Association board adopted the Northwest District Neighborhood Plan after a decade of community-driven planning that included numerous public meetings and workshops. In June 2000, City Council directed the Bureau of Planning to review the Northwest District Neighborhood Plan and take it through the adoption process. The Northwest District Neighborhood Plan has served as a major input in the crafting of the *Northwest District Plan*.
 - b. The Northwest Planning Citizen Advisory Committee (CAC) met regularly throughout the planning process, advising staff and providing written and oral input. The CAC included community residents, business people, and property owners from the Northwest District, Northwest Industrial, Pearl District, Hillside, Goose Hollow and Linnton neighborhoods.
 - c. The Northwest Planning Technical Advisory Committee (TAC) met throughout the planning process, advising staff and providing written and oral input. The TAC included representatives of state, regional, county, and city agencies, as well as private sector utilities.
 - d. The Northwest District Committee (NWDC) advised planning staff on the relationship between plan proposals and the 1999 NWDA board-adopted Northwest District Neighborhood Plan and provided input on draft plan proposals. The NWDC included representatives from the Northwest District Association and Nob Hill Business Association.
 - e. The Vaughn Corridor Focus Group (VCFG) advised staff on amendments affecting land uses in the NW Vaughn Street corridor area and included property owners and their representatives, community stakeholders, and technical advisors from public agencies.
 - f. A parking issues working group advised staff on parking-related plan proposals and included representatives from the Northwest District Association and Nob Hill Business Association and representatives from the Portland Office of Transportation's *On-Street Parking Plan* Citizen Advisory Committee.
 - g. An affordable housing group, consisting of housing advocates, community members, and public agency representatives, advised staff on housing-related plan proposals.
 - h. A development community group, that included private sector real estate developers, advised staff on the zoning code amendment proposals.
 - i. Throughout the planning process, staff sought input from affected neighborhood and business associations by attending meetings, making presentations, and exchanging ideas. These groups included the Northwest District (NWDA), Northwest Industrial (NINA), Pearl District (PDNA),

Hillside (HNA), and Goose Hollow-Foothills League (GHFL) Neighborhood Associations and the Nob Hill Business Association (NHBA).

- j. Staff met individually with district property owners and business people whenever asked.
- k. Staff held a Northwest Transition Area Urban Design Concept Workshop on March 22, 2001 to begin the formal planning process. Input from this workshop was used craft and refine broad plan concepts that were used as the basis for many plan proposals.
- l. Staff held four neighborhood walks during the summer of 2001 as an initial outreach strategy and way to gather information about the desired future for the Northwest District. Information gathered from the walks was presented at a public meeting on October 10, 2001, where additional public input was sought.
- m. Staff held a Northwest District Vision and Urban Design Concept Workshop on November 15, 2001. Small groups discussed and provided verbal and graphical input on the draft vision statement and urban design concepts which serve as a broad framework for the plan and support its policies and implementation measures.
- n. Between the start of this project and publication of the *Proposed Northwest District Plan*, staff met regularly with the following committees, groups, and organizations: Northwest Planning Citizen Advisory Committee (CAC), Northwest Planning Technical Advisory Committee (TAC), Northwest Planning District Committee (NWDC), Northwest District Association (NWDA), Nob Hill Business Association (NHBA), Northwest Industrial Neighborhood Association (NINA), Goose Hollow Foothills League (GHFL), and Pearl District Neighborhood Association (PDNA).
- o. Staff attended and worked with project staff and advisory committees of related on-going City-sponsored projects, including the Burnside Corridor Transportation and Urban Design Project and the Northwest On-Street Parking Plan Project, both of which were led by the Portland Office of Transportation.
- p. The Bureau of Planning's web site was regularly updated to include notices of upcoming *Northwest District Plan* events and included electronic versions of project documents, notices and plan drafts.
- q. The public was notified of *Northwest District Plan* public events through a variety of means including notices and articles in the *Oregonian*, the *Portland Tribune*, the *Daily Journal of Commerce* and the *Northwest Examiner* newspapers. Staff also posted fliers and notices of events in prominent locations within the Northwest District such as community bulletin boards, cafes and stores. Staff also canvassed individual residents and businesses in the district.
- r. Notice of Proposed Amendment was sent to the State Department of Land Conservation and Development (DLCD) and Metro on October 8, 2002.
- s. Measure 56 notification of the November 26, 2002 Portland Planning Commission public hearing on the *Proposed Northwest District Plan* was sent to all property owners potentially affected by proposed zoning map and code changes on October 18, 2002.

- t. A general notification of the November 26, 2002 Portland Planning Commission public hearing on the Proposed *Northwest District Plan* was sent to 1,060 interested parties, including those on the project mailing list, on October 18, 2002.
- u. The Discussion Draft *Northwest Area Plan* was made available to the public on June 20, 2002. The plan's name was changed to *Northwest District Plan* subsequent to the release of the Discussion Draft.
- v. A public open house was held on June 20, 2002 to provide the public a chance to review and comment on the Discussion Draft *Northwest Area Plan*. Community members could discuss plan proposals with planning staff, and offer suggestions for changes in person, through prepared response forms, or in any manner of their choosing prior to the end of the 53-day public comment period on the Discussion Draft plan on August 12, 2002.
- w. The Proposed *Northwest District Plan*, planning staff's proposal to the Portland Planning Commission, was made available to the public on October 28, 2002. Many of the changes evident in the Proposed Draft resulted directly from public comments on the previous Discussion Draft.
- x. Planning staff briefed the Portland Historic Landmarks Commission on the proposed plan on November 4, 2002. The Landmarks Commission provided comments and suggestions for changes to the Portland Planning Commission.
- y. Planning staff briefed the Design Commission on the plan on November 7, 2002. The Design Commission held a public hearing and accepted public testimony on the urban design-related portions of the plan on November 21, 2002. The Commission continued the hearing and deliberated on the plan during subsequent meetings on December 5, 2002, January 9, 2003, and January 16, 2003. The Commission's recommendations on the urban design related plan components were forwarded to the Portland Planning Commission and the Portland City Council.
- z. On November 26, 2002, the Portland Planning Commission held a public hearing on the Proposed *Northwest District Plan*. The Planning Commission deliberated on the plan at subsequent work sessions on December 10, 2002, and January 14, January 28 and April 8, 2003. On April 8, 2003 the Planning Commission recommended that City Council adopt the Recommended *Northwest District Plan*.
- aa. A general notification of the May 21, 2003 City Council public hearing on the Recommended *Northwest District Plan* was sent to individuals who testified at the Planning Commission and Design Commission hearings, to those requesting such notification and to other interested parties on April 18, 2003.
- bb. Measure 56 notification of the May 21, 2003 City Council public hearing on the Recommended *Northwest District Plan* was sent to all property owners potentially affected by Planning Commission recommended zoning map and code amendments (where such recommended amendments differed from the October 2002 Proposed *Northwest District Plan*) on April 18, 2003.
- cc. The Bureau of Planning staffed an open house on the *Recommended Northwest District Plan* on May 19, 2003 in conjunction with the Northwest District Association's annual meeting.

- dd. Portland City Council held a public hearing and accepted testimony on the plan on May 21, 2003. City Council also held meetings and accepted testimony on selected elements of the plan on June 11, June 19, July 10, August 27, August 28, and September 17, 2003.
 - ee. Objective H of Policy 1, Land Use, calls for promoting neighborhood and citizen participation early in the land use review and development process. The following actions implement this objective. Action LU8 seeks greater neighborhood participation in the City's pre-application conference for land use reviews. Action LU9 calls for increasing neighborhood and citizen participation in the land use and development processes. Ensure timely notification about proposed development projects. Action LU10 calls for working with adjacent neighborhoods to develop uses that support the needs of both neighborhoods. Action QL17 of Policy 10, Quality of Life, calls for ensuring that district residents and businesses participate in plans to mitigate negative impacts from improvements to major entertainment facilities such as PGE Park.
2. **Goal 2, Land Use Planning**, requires the development of a process and policy framework which acts as a basis for all land use decisions and assures that decisions and actions are based on an understanding of the facts relevant to the decision. The amendments are supportive of this goal because they provide area-specific policies, objectives and implementing actions to guide land use activity within the framework of the City's adopted *Comprehensive Plan*. Portland *Comprehensive Plan* findings on Goal 1, Metropolitan Coordination, and its related policies and objectives also support this goal.
 3. **Goals 3 and 4, Agricultural Lands and Forest Lands**, requires the preservation and maintenance of the state's agricultural and forest lands, generally located outside of urban areas. The amendments are supportive of this goal because they support additional housing and commercial opportunities and the efficient use of land within an urbanized area, thereby reducing development pressure on agricultural and forest lands.
 4. **Goal 5, Open Space, Scenic and Historic Areas, and Natural Resources**, requires the conservation of open space and the protection of natural and scenic resources. The *Northwest District Plan* celebrates the neighborhood's rich historic heritage—including its historic core in the Alphabet Historic District—its scenic areas and its location between the major natural resources of the Willamette River and Forest Park. The plan supports the district's open spaces, scenic and historic areas, and natural resources through the following provisions.
 - a. Policy 11, Environment, calls for protecting and enhancing the natural resources of the district.
 - (1) Objective A calls for developing and operating public facilities and infrastructure to be sustainable and to address multiple objectives, including public health and safety, natural resource protection and recreation.
 - (2) Objective B promotes measures that encourage landscaping with native species.
 - (3) Objective C promotes the use of innovative measures that improve air and water quality and energy efficiency.
 - (4) Objective D promotes improved environmental connections between open spaces and the Willamette River.

- (5) Objective E encourages recycling and the reduction of solid waste generation and litter in the district.
 - (6) Action E6 calls for environmentally connecting existing and future parks, open spaces and the Willamette River through the use of main and green streets.
 - (7) Actions E10 and E17 calls for restoration activities and invasive species removal in area parks and open and open spaces.
 - (8) Action E12 encourages minimal use of chemicals in park maintenance.
 - (9) Actions E13 and E14 calls for outreach and education activities involving natural areas and urban forestry.
- b. Policy 8, Historic Preservation, calls for identifying, preserving, and protecting historic resources and supporting development that enhances the historic qualities of the district.
- (1) Objective A calls for restoration and renovation that maintains the historic character of the original structure.
 - (2) Objective B encourages adaptive reuse of historic resources.
 - (3) Objective C promotes awareness of the district's history and historic resources, including buildings, streetscapes, stairways, trees, parks, bridges and natural areas.
 - (4) Objective D encourages listings of individual and multiple properties in the National Register, as well as the development of additional historic districts in the study area.
 - (5) The plan's Historic Preservation implementation actions include projects and programs designed to implement the plan's historic preservation policy and objectives.
- c. Objective F of Policy 5, Housing encourages renovation and rehabilitation of existing housing as an alternative to clearance and redevelopment.
- d. Policy 10, Quality of Life, calls for strengthening the sense of community and ensuring that cultural, educational and recreational resources continue to be a vital part of public life.
- (1) Objective A calls for the protection of Forest Park as a natural and recreational resource.
 - (2) Objective B calls for maintaining and expanding the district's parks, open spaces and recreational facilities.
 - (3) Objective C calls for the creation of new parks, plazas and community facilities.
 - (4) Objective D calls for improved access to parks, natural areas and the Willamette River.
 - (5) The Quality of Life implementation action items contain projects and programs designed to implement the Quality of Life policy and objectives. Key action items include QL1, QL5, QL6, and QL12 which describe desired new open space and park facilities.

- (6) QL7 calls for consideration of adding to the *Scenic Resources Protection Plan* views of the wooded west-side slopes from the east.
- e. Policy 16, Willamette Heights Subarea, calls for protecting the residential character and environmental resources of the subarea.
 - (1) Objective A supports infill development that mitigates for potential impacts on environmentally sensitive areas.
 - (2) Objective B calls for preserving the subarea's historically significant housing.
 - (3) Objective D encourages the formal designation of the subarea's historic resources, including the Thurman Street Bridge.
 - (4) Objective F calls for protecting and enhancing Forest Park as a natural and recreational resource.
 - (5) Action WH 2 calls for consideration of the nomination of subarea properties for the National Register of Historic Places.
 - (6) Action WH9 calls for acquiring or otherwise protecting undeveloped natural areas in and adjacent to the subarea.
- f. Policy 13, Transition Subarea, calls for integrating the subarea into the urban fabric of the area to the south and west.
 - (1) Objective G calls for improved connections to the Willamette River.
 - (2) Objective I calls for the creation of new plazas, parks and open spaces.
 - (3) Objective J calls for preserving the historic industrial character of parts of NW Upshur Street.
 - (4) Objective L calls for reinforcing the role of St. Patrick's Church as a district landmark.
 - (5) Action TS7 calls for developing standards that would preserve NW Upshur Street's characteristic loading docks and canopies.
- g. Overall, the plan's Comprehensive Plan Map, Zoning Map and Zoning Code text amendments have been designed to minimize the potential for increased redevelopment pressure in the Alphabet Historic District and other established areas with designated and potential historic resources, instead focussing new development potential primarily in the underutilized Transition Subarea and parts of the Eastern Edge and Central City.
- h. The *Northwest District Plan* extends design review to all properties in the *Northwest District Plan*. The *Northwest District Plan* includes revisions to the *Community Design* Guidelines that will help ensure the preservation the district's unique urban character and sense of place and identity. New "Desired Characteristics and Traditions" statements have been developed to assist in the application of Community Design Guideline P1, Plan Area Character.

- i. The Plan's site-specific off-street parking provisions are designed to minimize the potential for negative impacts from parking structures on historic landmarks and contributing structures in the Alphabet Historic District.
 - j. The *Northwest District Plan* extends the application of the Design 'd' Overlay Zone to all properties within the expanded Northwest Plan District. The Design Overlay Zone promotes the conservation, enhancement and continued vitality of areas with special scenic, architectural and cultural value, such as the Northwest District. Most new development in the zone will be required to go through design review, historic design review or comply with the Community Design Standards.
 - k. The *Northwest District Plan* includes revisions to the *Community Design* Guidelines that will help ensure the preservation the district's unique urban character and sense of place and identity. New "Desired Characteristics and Traditions" statements have been developed to assist in the application of Community Design Guideline P1, Plan Area Character.
 - l. The *Northwest District Plan* appendices include a neighborhood history to help the public to understand the district's history and protect its heritage.
 - m. The Open Space *Comprehensive Plan* designation and zone is placed on several properties covering over three acres owned by the City of Portland, thus ensuring their long-term preservation as open space resources.
 - n. The plan's Urban Design Concept, policies, objectives, and action charts call for the creation of new parks and open spaces to meet the needs of the area's growing population.
 - o. State Land Use findings for Goal 6 Air, Water, and Land Resource Quality and Goal 8 Recreational needs also support this goal. Portland *Comprehensive Plan* findings on Goal 2, Urban Development, Goal 8, Environment, and Goal 12, Urban Design and their related policies and objectives also support this goal.
- 14. Goal 6, Air, Water and Land Resource Quality**, requires the maintenance and improvement of the quality of air, water and land resources. The amendments are consistent with this goal because they provide specific objectives and implementing actions to preserve the quality of these resources. The following provisions in the *Northwest District Plan* address the quality of the district's air, water, and land resources.
- a. Policy 11, Environment, calls for protecting and enhancing the environmental and natural resources of the district. The following objectives and action items implement the Environment policy.
 - (1) Objective A calls for developing and operating public facilities and infrastructure to be sustainable and to address multiple objectives, including public health and safety, natural resource protection and recreation.
 - (2) Objective B promotes measures that protect and enhance trees as a vital part of the urban landscape.
 - (3) Objective C promotes the use of innovative measures that improve air and water quality and energy efficiency.

- (4) Objective E encourages recycling and the reduction of solid waste generation and litter in the district.
 - (5) Actions E1, E2, E3, E7, E8, and E9 address stormwater management as a means for protecting water and land resource quality.
 - (6) Actions E5, E14, E15, and E18 address ways to include and protect trees in the district, since trees are known to improve the quality of air, land and water resources.
 - (7) Action E6 calls for environmentally connecting existing and future parks, open spaces and the Willamette River through the use of main and green streets.
 - (8) Action E9 calls for implementing incentive programs for the use of green building, eco-roof, and other low-impact techniques, such as on-site stormwater management, landscaping with native vegetation and porous pavements, in public and private development and redevelopment projects.
 - (9) Action E10 calls for supporting natural area restoration efforts, including, but not limited to, revegetation, day-lighting “buried” stream channels, restoring wildlife habitat and wetlands, and restoring Lower Macleay stream.
 - (10) Actions E11, E12, and E13 encourage stewardship of natural areas and minimal use of chemicals to maintain and enhance natural systems.
 - (11) Action E15 calls for working cooperatively to resolve and mitigate air quality pollution concerns through business assistance and other programs.
 - (12) Action E16 calls for working with the appropriate agencies to ensure compliance with environmental laws and regulations.
- b. Policy 1, Land Use, calls for participating in the growth of the metropolitan region in a manner that protects and enhances the quality of life in the Northwest District. The following objectives help maintain natural resources by accommodating growth and development in already urbanized areas and by protecting and conserving rural area natural resources:
- (1) Objective A supports land use strategies and developments that increase the amount of housing in the district.
 - (2) Objective B supports land use strategies and developments that enhance employment opportunities in the district.
 - (3) Objective C calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line in order to make efficient use of existing infrastructure.
- c. The plan retains lower intensity residential zoning in certain environmentally sensitive areas of the Willamette Heights where the Comprehensive Plan Map designation allows higher residential densities. Prior to rezoning in conformance with the Comprehensive Plan Map designation applicants would need to provide evidence of adequate public services and demonstrate that

sanitary and storm waste disposal systems will be acceptable to the Bureau of Environmental Services.

- d. Policy 3, Transportation, calls for providing a variety of transportation systems in part to reduce reliance on the automobile. The following objectives encourage the use of alternative modes, such as walking and transit. More compact mixed-use development with a balanced transportation system should reduce vehicle miles traveled in the study area and positively impact air quality.

- (1) Objective A calls for increasing the availability of, and incentives to use, alternatives to the automobile.
- (2) Objective B calls for maintaining, reinforcing, and re-establishing the historic street grid, for example, by re-establishing streets or pedestrian connections through existing superblocks.
- (3) Objective C calls for providing safe and convenient access to public transit.
- (4) Objective D calls for improving the frequency of service and route coverage of public transportation services.
- (5) Objective E calls for promoting increased use of public transit by residents, employees and visitors.
- (6) Objective F calls for maintaining, improving, and expanding pedestrian and bicycle connections within the district and to other parts of the city and minimize conflicts between motorized and non-motorized transportation.
- (7) Objective G calls for enhancing main streets and the Portland Streetcar line as key pedestrian places.
- (8) Objective H calls for supporting bicycle use in the district by providing convenient facilities, such as parking and other support services.

- e. State Land Use findings for Goal 5, Open Space, Scenic and Historic Areas, and Natural Resources and Goal 8 Recreational Needs also support this goal. Portland *Comprehensive Plan* findings on Goal 8, Environment and Goal 11, Public Facilities and their related policies and objectives also support this goal.

15. Goal 7, Areas Subject to Natural Disasters and Hazards, requires the protection of life and property from natural disasters and hazards. The amendments are consistent with this goal because they propose objectives and actions intended to prevent natural disasters.

- a. Policy 11, Environment, calls for protecting and enhancing the natural resources of the district. This policy contains the following objectives and action items:
 - (1) Objective A calls for developing and operating public facilities and infrastructure to address multiple objectives, including public health and safety and natural resource protection.
 - (2) Actions E1, E2, E3, E7, E8, and E9 address stormwater management, as stormwater is a contributing factor in some types of natural disasters and hazards.

- (3) Actions E5, E14, E15, and E18 address ways to include and protect trees in the district, since trees provide a number of benefits, including the potential of lessening natural hazards in some cases.
 - (4) Action E10 calls for supporting natural area restoration efforts, including, but not limited to, revegetation, day-lighting “buried” stream channels, restoring wildlife habitat and wetlands, and restoring Lower Macleay stream.
 - b. The plan retains lower intensity residential zoning in certain environmentally sensitive areas of the Willamette Heights where the Comprehensive Plan Map designation allows higher residential densities. Prior to rezoning in conformance with the Comprehensive Plan Map designation, applicants would need to provide evidence of adequate public services, including water supply, transportation facilities, waste disposal and police and fire protection.
 - c. The plan provides for the transition of an inner-city industrial area—the Transition Subarea—adjacent to densely populated areas in the Northwest District and the Central City. Over time, it is expected that some industrial uses, including some that involve hazardous substances, will be replaced by commercial and residential uses, making the nearby population safer in the event of a natural disaster such as a major seismic event.
- 16. Goal 8, Recreational Needs,** requires satisfaction of the recreational needs of both citizens and visitors to the state. The amendments are consistent with this goal because they propose policies, objectives, and actions, identified below, to provide for the current and future recreational needs of citizens and visitors to the state.
- a. Policy 10, Quality of Life, calls for strengthening the sense of community and ensuring that cultural, educational and recreational resources continue to be a vital part of public life.
 - (1) Objective A calls for enhancing and protecting Forest Park as a natural resource area providing passive recreation activities.
 - (2) Objective B calls for maintaining, enhancing, and expanding current parks, open spaces, and recreational facilities.
 - (3) Objective C calls for creating new parks, plazas, and community facilities in areas where significant growth is anticipated and where opportunities arise for new open space development.
 - (4) Objective D calls for improving public access to nearby parks, natural areas, and the Willamette River.
 - (5) Actions QL1, QL3, QL4, QL5, QL6, QL12, QL13, and QL15 address the creation of and accessibility to parks, open spaces, urban plazas, and community gardens.
 - b. Objective C of Policy 2, Institutions calls for maintaining and augmenting facilities and programs that provide educational, recreational and cultural resources and opportunities.
 - c. Objective G of Policy 1, Land Use, promotes development that includes useable public outdoor spaces such as plazas, play areas, gardens, and pocket parks.

- (1) Land use action LU1 considers developing a program with tax incentives for developers who dedicate land for a public open space.
- (2) Land use action LU2 encourages the City to create a program that requires developers of new housing or commercial projects to either include public open space within their project or make a contribution to a new park land acquisition fund.
- d. The Open Space *Comprehensive Plan* designation and zone is placed on several properties owned by the City of Portland, thus ensuring their long-term preservation as open space resources.
- e. Objective I of Policy 13, Transition Subarea, calls for creating plazas, parks, community facilities, and open spaces to meet the needs of the subarea's residents and employees.
 - (1) Action TS4 calls for locating, acquiring, and building a neighborhood park or other public open space in the subarea.
 - (2) Action TS5 calls for locating, acquiring, and building a community center in the subarea.
- f. Objective F of Policy 16, Willamette Heights Subarea, calls for protecting and enhancing Forest Park as a regionally significant natural and recreational resource.
 - (1) Actions WH3 and WH5 address access and pedestrian connections to Forest Park.
 - (2) Action WH9 calls for acquiring or otherwise preserving significant undeveloped natural areas, including those adjacent to the Willamette Heights Subarea, as additions to Forest Park.
- g. State Land Use findings for Goal 5, Open Space, Scenic and Historic Areas, and Natural Resources and Goal 6 Air, Water and Land Resource Quality also support this goal. Portland *Comprehensive Plan* findings on Goal 8, Environment and Goal 11, Public Facilities and their related policies and objectives also support this goal.
- 17. Goal 9, Economic Development**, requires provision of adequate opportunities for a variety of economic activities vital to public health, welfare, and prosperity. The amendments are consistent with this goal, as shown in the provisions listed below. Portland *Comprehensive Plan* findings on Goal 5, Economic Development, and its related policies and objectives also support this goal.
 - a. Policy 6, Business and Economic Development, calls for fostering a healthy and prosperous business community that serves the needs of the district, as well as retaining and expanding the diverse mix of businesses and jobs.
 - (1) Objective A promotes the formation of new and the growth of established businesses.
 - (2) Objective C supports the growth of neighborhood-serving retail businesses while responding to the regional nature of the Northwest retail and service market.
 - (3) Objective D supports the provision of living wage jobs and attaining the city's economic and employment goals.

- (4) Objective F encourages live/work spaces and home occupations.
 - (5) Objective H recognizes the important role that large employers play in providing employment opportunities.
 - (6) Objective I calls for building on the unique identity and economic strength of the district's main streets.
 - (7) Key action items include ED1 which calls for investigating the formation of an economic improvement district, ED6 which calls for incentives and technical assistance for job and firm retention, and ED7 which encourages industrial firms needing to expand or move to relocate within the City of Portland.
- b. Objective B of Policy 1, Land Use, supports land use strategies and developments that enhance employment opportunities.
 - c. Policy 2, Institutions, recognizes the importance of institutions to the economy and to public health, welfare, and prosperity.
 - (1) Objective B calls for accommodating the establishment, retention, and growth of institutions that serve district residents and employees.
 - (2) Objective J calls for utilizing the resources of institutions to encourage partnerships among non-profit, private housing developers, and social service providers.
 - (3) Action IN9 calls for institutions to conduct outreach activities in the community that promote institutional employment opportunities for local residents.
 - c. Policy 13, Transition Subarea, encourages a mix of housing, commercial, institutional, open space, and light industrial uses.
 - (1) Objective C encourages the retention of existing and the creation of new jobs in the subarea.
 - (2) Objective D calls for protecting existing industrial firms in the subarea from being forced to relocate out of the area.
 - (3) Objective K calls for protecting the Guild's Lake Industrial Sanctuary by locating activities and uses that are compatible with industry at the northern edge of the subarea.
 - (4) Actions TS3, TS10, and TS11 propose strategies for retaining existing industrial firms and attracting companies that provide living-wage jobs.
 - d. Policy 14, Eastern Edge Subarea, calls for fostering the development of the Eastern Edge as a transition between the more urban Central City and the Northwest District.
 - (1) Objective B encourages the location of businesses that serve local needs along NW 18th and NW 19th Streets.

- (2) Objective C calls for fostering the establishment and growth of firms that provide living-wage jobs in this subarea.
 - (3) Objective E calls for protecting existing industrial firms in the subarea from being forced to relocate out of the area.
 - (4) Actions EE3 and EE4 encourage existing companies to remain and companies that provide living-wage jobs to locate in the subarea.
- e. Policy 4, Parking and its related Objectives calls for providing and managing parking resources to serve the community. This includes area businesses that are dependant on customers that rely on autos to get to the district and require auto parking. Northwest plan district provisions provide for more efficient use of existing parking through “shared use” of accessory parking under certain conditions and also provide for the addition of a limited amount of structured commercial parking in close proximity to the 21st and 23rd avenue commercial corridors.
 - f. The plan supports increased employment potential by applying the Central Employment (EX) Comprehensive Plan Designation and zone to formerly IG1-designated areas within the Transition Subarea. The EX zone allows a broad array of industrial and commercial uses and will facilitate the continuation and expansion of many existing employers, while encouraging new firms to locate in the area and develop at urban intensities.
 - g. The plan supports the continuation of employment and industrial uses on properties zoned Central Employment (EX) north of the I-405 by including a provision in the Northwest Plan District to restrict residential development to 20% of the total floor area.
 - h. The plan supports more intensive commercial development along West Burnside Street by extending Central Commercial (CX) zoning and extending the Central City Plan District west to NW 24th Avenue.
 - i. The plan supports denser employment densities on the north side of NW Vaughn Street by redesignating a limited area to Mixed Employment (ME) on the Comprehensive Plan Map. This area is also intended to serve as a transition from the heavily industrialized Guild’s Lake Industrial Sanctuary to the north to the mixed use and residential areas to the south, thereby reducing the likelihood of land use conflicts that can negatively impact residents and restrict the ability of industrial firms to operate efficiently.
- 18. Goal 10, Housing,** requires provision for the housing needs of citizens of the state. The amendments are consistent with this goal because the plan contains policies and implementing actions specifically providing for the housing needs of the district and the region, including increasing housing supply, diversity and affordability. In addition, Portland *Comprehensive Plan* findings on Goal 4, Housing, and its related policies and objectives support this goal. The plan contains the following policies and implementing actions.
- a. Policy 5, Housing, calls for retaining the district’s existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size.
- (1) Objective A calls for increasing the number of rental and for-sale housing units in the district.

- (2) Objective B calls for increasing the supply of affordable housing and housing for those with special needs.
 - (3) Objective C calls for retaining the supply of existing affordable rental housing in the district.
 - (4) Objective D encourages housing that accommodates a variety of living situations and a diverse population.
 - (5) Objective E encourages mixed-use projects to include housing in commercial and some employment zones
 - (6) Objective F encourages renovation and rehabilitation of existing housing as an alternative to clearance.
 - (7) Objective G encourages upkeep of residential properties
 - (8) Objective H encourages new opportunities for home ownership through new development rather than conversion of rental stock.
 - (9) Objective I encourages housing attractive to families with children.
 - (10) Action H22 makes the Northwest Plan District eligible for transit-oriented development tax abatements for mixed-use and affordable housing projects.
- b. Objective A of Policy 1, Land Use supports land use strategies and developments that increase the amount of housing.
 - c. Objective G of Policy 1, Land Use calls for developments to include usable public outdoor spaces such as plazas, play areas and gardens, thus supporting the provision of amenities that make residential developments more appealing and livable.
 - d. Objective A of Policy 15, Willamette Heights Subarea calls for supporting infill development in an area predominantly designated residential.
 - e. The plan recognizes the more residential character of the Thurman main street by implementing a zoning pattern that encourages residential development in between commercial nodes at street intersections. The plan changes the zoning of selected properties along NW Upshur and NW Thurman streets from commercial to residential or mixed residential-commercial designations to encourage residential uses.
 - f. Objective E of Policy 14, Eastern Edge Subarea, calls for protecting existing housing from conversion to other uses.
 - g. Objective B of Policy 13, Transition Subarea, calls for promoting the subarea as a prime location for increasing the supply of affordable housing. This policy is implemented by redesignating properties to a zone that allows household living by right, as well including zoning and bonus provisions in the Northwest Plan District to encourage the construction of market-rate and affordable housing.

- h. The plan amends Policy 15, Goose Hollow, of the Central City Plan by adding a provision to Further Statement A to encourage the retention of existing housing.
 - i. The Northwest Plan District regulations contain provisions that provide incentives for residential and affordable residential development through height and FAR bonuses and restrictions on certain nonresidential uses in employment zones.
 - j. The amendments increase the housing potential in the study area. The amendments change more than four acres of land from a nonresidential to a residential *Comprehensive Plan* designation. More than six acres of residentially designated land is changed to nonresidential designations, of which over half is owned by the City of Portland and is changed to the Open Space designation. Over 53 acres of land is removed from Industrial Sanctuary designation, where residential land uses are severely restricted, and given commercial or employment designations, which allow, and, in the context of the plan's policies and plan district provisions, actually encourage residential development in targeted areas.
 - k. The plan supports more intensive development along West Burnside Street by extending Central Commercial (CX) zoning and extending the Central City Plan District west to NW 24th Avenue. Housing development is especially encouraged on a portion of this area by the application of the Bonus Height Option for Housing only and the Residential Bonus Target Area as shown on maps 510-3 and 510-4. Infill development at this gateway location will benefit the immediate area located at the intersection of the Burnside and 23rd main streets.
- 19. Goal 11, Public Facilities and Services**, requires planning and development of timely, orderly and efficient public service facilities that serve as a framework for urban and rural development. For the most part, the portion of Northwest Portland included in the *Northwest District Plan* already contains sufficient public facilities and services to allow for significant changes and additions in population and economic expansion. The amendments address the few gaps and, therefore, are consistent with this goal. In addition, Portland *Comprehensive Plan* findings on Goals 11 A through I, Public Facilities, and related policies and objectives support this goal.
- a. Objectives C and D of Policy 1, Land Use call for concentrating development along the district's main streets and the street car line, supporting efficient use of existing and planned infrastructure and improvements.
 - b. Objective A of Policy 11, Environment, calls for developing and operating public facilities and infrastructure to be sustainable and to address multiple objectives, including public health and safety, natural resource protection and recreation. The policy contains five action items that implement this objective.
 - c. Objective E of Policy 11, Environment, encourages recycling and reduction of solid waste and litter.
 - d. Objective B of Policy 3, Transportation, calls for re-establishing the historic street grid, which will provide additional connectivity to support new development in the area. Findings for Goal 12, Transportation also demonstrate the plan's consistency with Goal 11.
 - e. Policy 9, Public Safety, calls for increasing public safety by promoting measures that foster personal security. Objectives C, D, and E call for increased security through community policing and increased police visibility.

- f. Objective C of Policy 16, Willamette Heights, calls for ensuring that emergency response vehicles have fast and clear routes into and out of this area. This is implemented by action item WH4 to structurally improve and preserve the Thurman Street Bridge as a safe access route.
 - g. Both Action EE1 in Policy 14, Eastern Edge and Action T13 in Policy 3, Transportation, address pedestrian and bicycle access across the I-405 freeway:
 - h. Action ED8 of Policy 6, Business and Economic Development, encourages businesses to light their ground floor windows during evening hours.
 - i. Policy 13, Transition Subarea, contains three objectives that support this goal. Objective E calls for re-establishing key transportation system connections through the subarea. Objective F calls for implementing multi-modal transportation improvements that address circulation and safety needs. Objective I calls for creating plazas, parks, community facilities, and open spaces to meet the needs of the subarea's residents and employees. Seven action items implement these objectives.
 - j. The plan's zoning map and code amendments facilitate medium- to high-density development in a long-established urbanized area adjacent to the Central City that is well-served by public services and facilities.
- 20. Goal 12, Transportation,** requires provision of a safe, convenient and economic transportation system. The amendments are consistent with this goal, as shown in the provisions listed below. Findings for Portland *Comprehensive Plan* Goal 6, Transportation also support this goal
- a. Policy 3, Transportation, calls for providing a variety of transportation options for the movement of people and goods to improve opportunities for work, trade, and social contact and to reduce reliance on the automobile. The policy contains 23 objectives and 47 action items to implement the policy.
 - (1) Objective A calls for increasing the availability of, and incentives to use alternatives to the automobile.
 - (2) Objective B calls for maintaining, and re-establishing the historic street grid, for example, by re-establishing streets or pedestrian connections through existing superblocks.
 - (3) Objectives C, D and E call for providing safe and convenient access to and improved frequency of service and route coverage of public transportation services and promotes their use.
 - (4) Objective F calls for maintaining, improving, and expanding pedestrian and bicycle connections and minimizing conflicts between motorized and non-motorized transportation.
 - (5) Objective G calls for enhancing main streets and the Portland Streetcar line as key pedestrian places.
 - (6) Objective H calls for supporting bicycle use in the district by providing convenient facilities, such as parking and other support services.

- (7) Objective I calls for preserving the local circulation function of streets that are classified as Local Service Traffic Streets in the Transportation Element of the *Comprehensive Plan* and encourage through-traffic to use streets that are consistent with their traffic classifications.
- (8) Objectives J, K and L call for avoiding street improvements in residential and commercial areas that are designed to accommodate increased vehicular traffic, discouraging through-commuter and truck traffic in residential zones, and for the use of traffic calming measures to ensure the appropriate functioning of streets, while discouraging street closures.
- b. Objective E of Policy 16, Willamette Heights Subarea, calls for maintaining or improving public transit service to Willamette Heights. Action WH3 of this policy calls for improving pedestrian connections through Willamette Heights to Forest Park.
- c. Policy 15, Thurman-Vaughn Subarea, contains two actions that support this goal. Action TV1 calls for encouraging PDOT to improve NW Vaughn and NW Thurman Streets and NW 26th Avenue as pedestrian ways. Action TV3 calls for widening sidewalks along NW Vaughn Street, where possible.
- d. Policy 13, Transition Subarea, contains four objectives that support this goal. Objective E calls for re-establishing key transportation system connections through the subarea. Objective F calls for implementing multi-modal transportation improvements that address circulation and safety needs. Objective G calls for improving connections through the subarea and to the Willamette River. Objective H calls for supporting additional transit services and facilities to meet the growing needs of the subarea. Three action items implement these objectives.
- e. The amendments include a Master Street Plan that identifies the existing and preferred future street layout for the study area. The Master Street Plan will be incorporated into the Transportation System Plan and, as it is implemented, will provide increased connectivity by establishing new street connections and extending the historic street grid.
- f. The *Northwest District Plan* zoning map and code amendments support urban-level, transit-supportive density within the plan area including along main streets and the Portland Streetcar line. This helps to reduce long-term regional pressures for conversion of rural lands to urban uses and makes efficient use of public services and infrastructure, including transit.
- g. Transportation system modeling taking into account *Northwest District Plan* zoning, as well as updated employment and housing assumptions in areas adjacent to the study area, projects increased traffic flows and congestion in certain parts of the transportation system in the year 2020. It also projects an improved “mode split” for non-automobile modes. *Northwest District Plan* traffic mitigation provisions include the following actions:
- Retaining IG1 zone in northern portion of Transition Subarea
 - Limiting commercial uses and encouraging housing in Transition Subarea
 - Limiting retail uses in Transition Subarea
 - Eliminating minimum parking space requirements
 - Limiting access to parking along NW Vaughn
 - Increasing connectivity through NW Master Street Plan
 - Surface parking restrictions
 - Support for Transportation Demand Management (TDM) measures, including formation of a TMA, transit subsidies, extending fareless square, and promoting carsharing

- Support for increased transit service including improved headways and expanded service
- Proposals for Transportation System Management (TSM) improvements, e.g. traffic control measures
- Planning and support for pedestrian and bicycle system improvements
- Implementing a NW Transportation Fund to help fund transportation system improvements in the Transition Subarea and Guild's Lake Industrial Sanctuary Subdistrict B areas

21. Goal 13, Energy Conservation, requires development of a land use pattern that maximizes the conservation of energy based on sound economic principles. The amendments are consistent with this goal because they encourage the continuation of a compact development pattern in this dense urban district. Portland *Comprehensive Plan* findings on Goal 7, Energy, and its related policies and objectives also support this goal. The following policies and implementation measures support this goal.

- a. Policy 1, Land Use, includes two objectives that support this goal. Objective 3 calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line in order to make efficient use of existing infrastructure. Objective E calls for limiting large-scale auto-dependent retail throughout the district. Two non-regulatory action items implement these objectives.
- b. The plan supports the conservation of energy with *Comprehensive Plan* map designations throughout the plan area that encourage an urban level of development and a mix of uses. This supports reduced need for travel and the efficient provision of public facilities.
- c. Policy 3, Transportation, calls for providing a full range of transportation options and reducing reliance on the automobile. The objectives below support pedestrian, bicycle and public transit modes, all of which are generally more energy efficient than single-occupancy autos as a transportation mode.
 - (1) Objective A calls for increasing the availability of, and incentives to use, alternatives to the automobiles.
 - (2) Objectives C, D, and E call for improved public transit systems.
 - (3) Objectives F, G and H call for improved bicycle and pedestrian connections and facilities.
- d. Objective A of Policy 4, Parking calls for reducing the demand for automobile parking.
- e. Policies 13, 14, and 15, Transition, Eastern Edge, and Thurman-Vaughn Subareas respectively, all contain objectives and action items identifying transportation improvements to increase the transportation mode split and land use proposals to encourage increased residential, commercial, and employment uses within walking or biking distance from each other.
- f. Policy 6, Business and Economic Development Action, contains two actions that support this goal. ED5 calls for actively seeking businesses that address local needs, offer a variety of goods and services for shoppers with diverse incomes, and provide employment opportunities for local residents. Action ED9 of Policy 6, Business and Economic Development, calls for reinforcing main streets, the Portland streetcar line, and the development bonus target area as the focus for

retail and service uses by limiting retail sales and service uses in other areas. To do this, the plan expands the Northwest Plan District and proposes to limit the amount retail sales and service uses in the Central Employment zone. This provision will encourage a more pedestrian-oriented environment and reduce the amount of energy used for automobile travel.

- g. Policy 2, Institutions, contains two objectives that encourage energy conservation. Objective H encourages institutions along main streets and the Portland Streetcar line to orient active uses to these street frontages. Objective I encourages institutions to locate parking within structures. Both of these provisions will encourage a more pedestrian-oriented environment.
22. **Goal 14, Urbanization**, requires provision of an orderly and efficient transition of rural lands to urban use. The amendments are consistent with this goal. The *Northwest District Plan* encourages additional housing and mixed-use development in the Transition Subarea, along main streets and the Portland Streetcar line. This helps to reduce long-term regional pressures for conversion of rural lands to urban uses. *Northwest District Plan* zoning map and code amendments support urban-level, transit-supportive density within the plan area including along main streets and the Portland Streetcar line. This helps to reduce long-term regional pressures for conversion of rural lands to urban uses and makes efficient use of public services and infrastructure. Portland *Comprehensive Plan* findings on Goal 2, Urban Development, and its related policies and objectives also support this goal.
23. **Goal 15, Willamette River Greenway**, requires the protection, conservation, enhancement, and maintenance of the natural, scenic, historic, agricultural, economic, and recreational qualities of land along the Willamette River. The *Northwest District Plan* does not immediately abut the Willamette River, but a number of the plan's actions pertain to the river as a destination. The following action items support this goal.
- a. Objective D of Policy 10, Quality of Life, calls for improving public access to nearby parks, natural areas, and the Willamette River. Objective D of Policy 11, Environment, calls for improving environmental connections between existing and future parks, open spaces, and the Willamette River. Action E6 calls for connecting existing and future parks, open spaces and the Willamette River through the use of main and green streets that blend and transition the vegetation and natural features of the different places.
 - b. Objective G of Policy 13, Transition Subarea, calls for improving connections through the subarea and to the Willamette River.
24. **Goals 16, 17, 18, and 19, Estuarine Resources, Coastal Shorelines, Beaches and Dunes, and Ocean Resources**, respectively, are not relevant to the amendments because none of these resources are present within the city limits.

Metro Urban Growth Management Functional Plan Findings

On April 10, 2003 Metro Council adopted a Compliance Order that declares that Portland is in full compliance with the Urban Growth Management Functional Plan.

- 25. Title 1, Requirements for Housing and Employment Accommodation,** requires that each jurisdiction contribute its fair share to increasing the development capacity of land within the Urban Growth Boundary. This requirement is to be generally implemented through citywide analysis based on calculated capacities from land use designations. The City of Portland completed its *Urban Growth Management Functional Plan Compliance Report* in 1999. The amendments are not inconsistent with this title as shown in the findings below. In addition, Portland *Comprehensive Plan* findings on Goals 4 and 5, Housing and Economic Development, and State Goals 9 and 10, Economic Development and Housing also support this goal.
- a. Policy 1, Land Use, calls for participating in the growth of the metropolitan region in a manner that protects and enhances the quality of life in the Northwest District. Objective 1 calls for supporting land use strategies and developments that increase the amount of housing in the district. Objective B calls for supporting land use strategies and developments that enhance employment opportunities in the district.
 - b. Objective A of Policy 5, Housing, calls for increasing the number of housing units in the district, including rental and ownership opportunities for current and future district residents.
 - c. Object E of Policy 6, Business and Economic Development encourages new commercial development and job creation to locate along main streets, the streetcar line and near I-405.
 - d. The plan changes *Comprehensive Plan* map designations on sites within the Transition Subarea from Industrial Sanctuary to Central Employment (EX). This change will encourage a more urban level of development. Residential, commercial, employment, and mixed-use developments are all allowed in this zone. The EX designation allows both higher residential and higher employment densities than the IS designation.
 - e. The plan changes *Comprehensive Plan* map designations on sites along West Burnside Street from General Commercial (CG) to Central Commercial (CX). This change will encourage a more urban level of commercial development. Residential, commercial and mixed-use developments are all allowed in this zone. The CX designation is one of the cities most intense and is expected to facilitate denser employment and residential densities than the CG designation.
 - f. The amendments increase the housing potential in the study area. The amendments change more than four acres of land from a nonresidential to a residential *Comprehensive Plan* designation. More than six acres of residentially designated land is changed to nonresidential designations, of which over half is owned by the City of Portland and is changed to the Open Space designation. Over 53 acres of land is removed from Industrial Sanctuary designation, where residential land uses are severely restricted, and given commercial or employment designations, which allow, and, in the context of the plan's policies and plan district provisions, actually encourage residential development in targeted areas.
- 26. Title 2, Regional Parking Policy,** regulates the amount of parking permitted by use for jurisdictions in the region. This Metro Title is generally implemented in Portland through citywide planning processes. On April 10, 2003 Metro Council adopted a Compliance Order that declares that Portland

is in full compliance with the Urban Growth Management Functional Plan. The amendments are consistent with this title for the following reasons.

- a. Action TP10 calls for eliminating minimum parking requirements in the Northwest Plan District. This action is implemented through such a provision in the expanded Northwest Plan District.
 - b. The plan identified a significant disparity between the supply and the demand for parking in the district. New Northwest Plan District provisions provide for more efficient use of existing parking through "shared use" of accessory parking under certain conditions and also provide for the addition of a limited amount of structured commercial parking in close proximity to the 21st and 23rd avenue commercial corridors. The additional commercial parking allowed under the new regulation is capped at 800 spaces total, but fewer spaces are expected to be developed.
 - c. Many of the policies and implementing measures of the plan are intended to enhance opportunities for alternative transportation modes such as public transit, bicycling and walking, thereby reducing the demand for automobile parking.
- 27. Title 3, Water Quality and Flood Management Conservation,** calls for the protection of the beneficial uses and functional values of resources within Metro-defined Water Quality and Flood Management Areas by limiting or mitigating the impact of development in these areas. This Metro Title is generally implemented in Portland through citywide planning processes. On April 10, 2003 Metro Council adopted a Compliance Order that declares that Portland is in full compliance with the Urban Growth Management Functional Plan. The amendments are consistent with this title for the reasons below. Findings for State Goals 5 and 6, Open Space, Scenic and Historic and Natural Resources and Air, Water and Land Resource Quality also support this goal.
- a. Policy 11, Environment, calls for protecting and enhancing the natural resources of the district. Objective A calls for developing and operating public facilities and infrastructure to be sustainable and to address multiple objectives, including public health and safety, natural resource protection and recreation. Objective C calls for promoting the use of innovative measures that improve air and water quality and energy efficiency. Eight action items implement this policy.
- 28. Title 4, Retail in Employment and Industrial Areas,** calls for limiting incompatible uses in employment and industrial areas including restrictions on commercial retail development outside Centers. This Metro Title is generally implemented in Portland through citywide planning processes. On April 10, 2003 Metro Council adopted a Compliance Order that declares that Portland is in full compliance with the Urban Growth Management Functional Plan. The amendments are consistent with this title for the following reasons.
- a. Land Use Objective E calls for limiting large-scale auto-dependant retail throughout the district.
 - b. Within the Northwest Plan District, retail sales and service uses are limited in the Central Employment (EX) zone to 20,000 square feet per use. Retail sales and service uses on certain EX-zoned sites, identified on Map 562-2, are limited to 3,000 square feet.
 - c. Within a portion of the Northwest Plan District adjacent to the Guild's Lake Industrial Sanctuary, shown on Map 562-2, residential uses are limited in the EX zone to 20 percent of the net building area.

- d. The plan revises the *Guild's Lake Industrial Sanctuary Plan* District by adding a new Subdistrict B which serves as a transition between the Industrial Sanctuary lands north of NW Vaughn Street and the residential and mixed-use areas to the south. In Subdistrict B, retail sales and service uses are limited in an EG zone to 10,000 square feet. Other incompatible uses are prohibited in subdistrict B, including: residential, quick vehicle service, commercial outdoor recreation and major event entertainment.
 - e. Current provisions limiting retail sales and service uses within industrial zones are retained for properties retaining the General Industrial 1 (IG1) zone. When these properties are rezoned to either an EG zone or the EX zone (as per the *Northwest District Plan Comprehensive Plan* Map amendments) the new restrictions described above would apply.
- 29. Title 6, Central City, Regional Centers, Town Centers and Station Communities** calls for enhancing the Centers designated on 2040 Growth Concept Map by encouraging development in these Centers. The majority of the study area lies outside these centers, with the exception of areas along West Burnside Street that are within the Central City. The amendments are consistent with this title for the reasons below.
- a. Policy 1, Land Use, calls for participating in the growth of the metropolitan region in a manner that protects and enhances the quality of life in the Northwest District.
 - (1) Objective A supports land use strategies and developments that increase the amount of housing in the district.
 - (2) Objective B supports land use strategies and developments that enhance employment opportunities in the district.
 - (3) Objectives C and D call for concentrating a mix of higher intensity residential, commercial and retail development along main streets and the Portland Streetcar line.
 - b. The plan supports increased employment and housing potential by applying the Central Employment (EX) Comprehensive Plan Designation and zone to formerly IG1-designated areas within the Transition Subarea. The EX zone allows a broad array of industrial, commercial and residential uses at urban intensities.
 - c. The plan supports more intensive development along West Burnside Street by extending Central Commercial (CX) zoning and extending the Central City Plan District west to NW 24th Avenue. Housing development is encouraged on a portion of this area by the application of the Bonus Height Option for Housing only and the Residential Bonus Target Area as shown on maps 510-3 and 510-4. Infill development at this gateway location will benefit the immediate area located at the intersection of the Burnside and 23rd main streets.
 - d. *Northwest District Plan* zoning map and code amendments support urban-level, transit-supportive density within the plan area including along main streets and the Portland Streetcar line. This helps to reduce long-term regional pressures for conversion of rural lands to urban uses and makes efficient use of public services and infrastructure, including transit.
- 31. Title 7, Affordable Housing**, recommends that local jurisdictions implement tools to facilitate development of affordable housing. This Metro Title is generally implemented in Portland through citywide planning processes. On April 10, 2003 Metro Council adopted a Compliance Order that

declares that Portland is in full compliance with the Urban Growth Management Functional Plan. The amendments are consistent with this title for the following reasons.

- a. Policy 5, Housing, calls for retaining the district's existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size. The following two objectives specifically address tools to facilitate development of affordable housing. In addition, ten action items implement the policy and objectives. Objective B calls for increasing the supply of housing that is affordable, accessible to a full range of incomes, and provides for special needs housing. Objective C calls for retaining the existing supply of rental housing units affordable to the district's low- and very low-income households.
 - b. Transition Subarea Objective B calls for promoting the subarea as a prime location for increasing the supply of affordable housing. This policy is implemented by redesignating properties to a zone that allows household living by right (EX), as well including provisions in the Northwest Plan District to encourage the construction of affordable housing.
 - c. The expanded Northwest Plan District includes a floor area and building height bonus for the provision of affordable housing. Up to an additional floor area of 1:1 and 120 feet of building height may be earned on sites shown on map 562-6 when at least 50 percent of the building is in residential use and certain criteria for affordability are met.
 - d. The Northwest Plan District eliminates minimum parking requirements, in part to provide one avenue to reduce the cost of developing affordable housing.
 - e. The *Northwest District Plan*, under a separate Ordinance, will amend Section 3.103.020 of the *City Code* to allow certain developments within a portion of the Northwest District to be eligible for property tax abatements. These provisions are designed to encourage housing and mixed-use projects that are affordable to a broad range of the public and that take advantage of close proximity to transit services.
32. **Title 8, Compliance Procedures**, outlines compliance procedures for amendments to comprehensive plans and implementing ordinances. The City submitted a Compliance Report in February 1999, an updated report in June 1999, and a final compliance Report update in December 1999. This Metro Title is generally implemented in Portland through citywide planning processes. On April 10, 2003 Metro Council adopted a Compliance Order that declares that Portland is in full compliance with the Urban Growth Management Functional Plan.

Portland Comprehensive Plan Goals Findings

33. The City's *Comprehensive Plan* was adopted by the Portland City Council on October 16, 1980, and was acknowledged as being in conformance with the statewide planning goals by the Land Conservation and Development Commission on May 1, 1981. On May 26, 1995 and again on January 25, 2000, the LCDC completed its review of the City's final local periodic review order and periodic review work program, and reaffirmed the plan's compliance with the statewide planning goals.
34. The ordinance adopting the *Northwest District Plan* amends Goal 3, Neighborhoods, of the *Comprehensive Plan* by adding Policy 3.10: "Promote the livability, historic character, and economic vitality of a diverse, mixed-use, urban neighborhood by including the *Northwest District Plan* as part of this *Comprehensive Plan*." In addition, the ordinance amends the following chapters in Title 33, Zoning Code: Chapter 33.562, Northwest Plan District; Chapter 33.531, *Guild's Lake Industrial Sanctuary Plan* District; Chapter 33.510, Central City Plan District; Chapter 33.825, Design Review; and Chapter 33.120, Multi-Dwelling Zones. The amendments do not change any other land use regulation. Therefore, the following *Comprehensive Plan* goals, policies and objectives apply to the amendments and the amendments satisfy the applicable goals, policies and objectives for the reasons stated below.
35. During the course of public hearings, the Bureau of Planning, the Planning Commission, and the City Council provided all interested parties opportunities to identify, either orally or in writing, any other *Comprehensive Plan* goal, policy or objective that might apply to the amendments. No additional provisions were identified.
36. **Goal 1, Metropolitan Coordination**, calls for the *Comprehensive Plan* to be coordinated with federal and state law and to support regional goals, objectives and plans. The *Northwest District Planning* process has included participation of representatives from city, regional, and state agencies, ensuring consistency with applicable local, regional, and state plans.
37. **Policy 1.1, Urban Growth Boundary**, calls for support of the concept of an Urban Growth Boundary for the Portland metropolitan area. The amendments support this policy because they encourage the continuation of a compact development pattern in this dense urban district. *Northwest District Plan* Comprehensive Plan Map amendments and zoning map and code amendments provide for additional development capacity in an inner-urban area within the Urban Growth Boundary and will help relieve pressure to convert rural land to urban uses. Action item H9 of Policy 5, Housing, calls for supporting City actions that will accommodate growth and reduce the need for the expansion of the Urban Growth Boundary (UGB).
38. **Policy 1.4, Intergovernmental Coordination**, calls for continuous participation in intergovernmental affairs with public agencies to coordinate metropolitan planning and project development and maximize the efficient use of public funds. The amendments support this policy because the *Northwest District Planning* process included continuous participation of representatives from public agencies, ensuring coordination of metropolitan planning and project development and the efficient use of public funds. State Goal 1, Citizen Involvement findings also support this policy.
39. **Policy 1.5, Compliance with Future Metro Planning Efforts**, calls for the review and update of Portland's *Comprehensive Plan* to comply with the Regional Framework Plan adopted by Metro. The amendments support this policy because there is nothing in the *Northwest District Plan* to preclude the City of Portland from updating the *Comprehensive Plan* to comply with the Regional

Framework Plan and because the *Northwest District Plan* process included representation from Metro.

- 40. Goal 2, Urban Development**, calls for maintenance of Portland's role as the major regional employment and population center by expanding opportunities for housing and jobs, while retaining the character of established residential neighborhoods and business centers. The amendments support this goal and its policies because the following plan policies, objectives, and actions expand opportunities for housing and jobs in the Northwest District, which already is the one of the densest parts in the city of Portland and contains a high level of regional employment. In addition, Portland *Comprehensive Plan* findings on Goals 4 and 5, Housing and Economic Development, State Goals 9 and 10, Economic Development and Housing, and Metro UGMFP Title 1, Requirements for Housing and Employment Accommodation also support this goal.
- a. Policy 1, Land Use, calls for participating in the growth of the metropolitan region in a manner that protects and enhances the quality of life in the Northwest District. The following objectives implement this policy.
 - (1) Objective A calls for supporting land use strategies and developments that increase the amount of housing in the district.
 - (2) Objective B calls for supporting land use strategies and developments that enhance employment opportunities in the district.
 - (3) Objective C calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line.
 - (4) Objective D calls for reinforcing main streets and the Portland Streetcar line as the focus for retail activity in the district.
 - (5) Objective E calls for limiting large-scale auto-dependent retail throughout the district.
 - (6) Objective F supports small-scale developments that are oriented to pedestrian use.
 - b. Objective A of Policy 5, Housing, calls for increasing the number of housing units in the district, including rental and ownership opportunities for current and future district residents.
 - c. Policy 6, Business and Economic Development, calls for fostering a healthy and prosperous business community that serves the needs of the district, as well as retaining and expanding the diverse mix of businesses and jobs. The following objectives implement this policy. Objective C calls for supporting the establishment and growth of retail businesses that provide goods and services needed by district residents and employees while responding to the regional nature of the Northwest retail and service market. Objective D calls for supporting businesses that provide living wage jobs and assist the city in attaining its economic and employment goals. Objective H calls for recognizing the important role that large employers play in providing employment opportunities to residents of both the district and the greater Portland region. Objective I calls for building on the unique identity and economic strength provided by the district's main streets.
 - d. Policy 2, Institutions, recognizes the importance of institutions to the economy and to public health, welfare, and prosperity. The following objectives support this policy. Objective G

promotes institutional development that has an urban character, harmonizes with the district's design context, and preserves the district's street grid. Objective H encourages institutions along main streets and the Portland Streetcar line to orient active uses to these street frontages.

- e. Policy 7, Urban Design, calls for respecting the urban design principles and architectural qualities that define the district's human-scaled, pedestrian-oriented character. The following objectives implement this policy. Objective A calls for integrating new development with the existing urban fabric by acknowledging the scale, proportions, orientation, quality of construction and other architectural and site design elements of the building's immediate area. Objective B promotes a high level of design quality in mixed-use areas, including main streets, the Portland Streetcar line, and other areas where more intensive development is anticipated. Objective C calls for preserving and enhancing the distinct character of different parts of the Northwest District. Objective D calls for fostering a continuous frontage of buildings and active uses along main streets and the Portland Streetcar line.
- f. Policy 13, Transition Subarea, calls for integrating the subarea into the pedestrian-oriented, architecturally diverse urban fabric to the south and west.
- g. Objective A of Policy 14, Eastern Edge Subarea, supports the established mixed-use urban character of this subarea.
- h. Policy 15, Thurman-Vaughn Subarea, calls for enhancing this mixed-use subarea by emphasizing housing along NW Upshur and NW Thurman Streets and commercial uses on the south side of NW Vaughn Street and in nodes at intersections along NW Thurman Street. Objective C, which encourages development on the south side of NW Vaughn Street that includes a continuous frontage of commercial buildings, unifies the streetscape, and supports both the mixed-use area to the south and the industrial sanctuary to the north, implements this policy.
- i. Policy 16, Willamette Heights Subarea, calls for maintaining and protecting the residential character and environmental resources of the Willamette Heights Subarea.
- j. The plan changes *Comprehensive Plan* map designations on sites within the Transition Subarea from Industrial Sanctuary to Central Employment (EX). This change will encourage a more urban level of development. Residential, commercial, employment, and mixed-use developments are all allowed in this zone. The EX designation allows both higher residential and higher employment densities than the IS designation.
- k. The plan changes *Comprehensive Plan* map designations on sites along West Burnside Street from General Commercial (CG) to Central Commercial (CX). This change will encourage a more urban level of commercial and mixed-use development. Residential, commercial and mixed-use developments are all allowed in this zone. The CX designation is one of the cities most intense and is expected to facilitate denser employment and residential densities than the CG designation.
- l. The amendments increase the housing potential in the study area. The amendments change more than four acres of land from a nonresidential to a residential *Comprehensive Plan* designation. More than six acres of residentially designated land is changed to nonresidential designations, of which over half is owned by the City of Portland and is changed to the Open Space designation. Over 53 acres of land is removed from Industrial Sanctuary designation,

- where residential land uses are severely restricted, and given commercial or employment designations, which allow, and, in the context of the plan's policies and plan district provisions, actually encourage residential development in targeted areas.
- m. *Northwest District Plan* zoning map and code amendments support urban-level, transit-supportive density within the plan area including along main streets and the Portland Streetcar line. This helps to reduce long-term regional pressures for conversion of rural lands to urban uses and makes efficient use of public services and infrastructure, including transit.
43. **Policy 2.1, Population Growth**, calls for accommodating the projected increase in city households. The amendments support this policy because Objective A of Policy 1, Land Use, calls for supporting land use strategies and developments that increase the amount of housing in the district, and Objective 4 of Policy 5, Housing, calls for increasing the number of housing units in the district. Over 53 acres of land is removed from Industrial Sanctuary designation, where residential land uses are severely restricted, and given commercial or employment designations, which allow, and, in the context of the plan's policies and plan district provisions, actually encourage residential development in targeted areas.
44. **Policy 2.2, Urban Diversity**, calls for promotion of a range of living environments and employment opportunities for Portland residents. The amendments support this policy for the following reasons.
- a. Policy 5, Housing, calls for promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size.
 - b. Policy 6, Business and Economic Development, calls for retaining and expanding the diverse mix of businesses and jobs.
 - c. The application of the Central Employment (EX) designation to sites in the Transition Subarea, allows a broad variety of residential, commercial, industrial and mixed-uses, in conjunction with the new Northwest Plan District provisions. This will facilitate creation of a diverse new living and working environment in an area transitioning out of predominantly industrial use.
45. **Policy 2.3, Annexation**, calls for phasing the annexation program of the City to allow for the incorporation of urban and urbanizable land in a manner that is consistent with the *Comprehensive Plan* and Urban growth boundary, that provides a smooth transition in urban services, that establishes logical city boundaries, and that promotes coordinated capital improvements programming. The amendments are not relevant to this policy because the entire *Northwest District Plan* is already contained within the city of Portland.
46. **Policy 2.4, Urban Lands**, calls for the City to encourage as a regional policy that urban and urbanizable areas in the Portland metropolitan area be in an incorporated city. The amendments are not inconsistent with this policy.
47. **Policy 2.5, Future Urban Areas**, calls for the City to not extend urban services to areas within the Urban Services Boundary which are designated as future urban areas. The amendments are not inconsistent with this policy.
48. **Policy 2.6, Open Space**, calls for provision of opportunities for recreation and visual relief by preserving existing open space, establishing a loop trail that encircles the city and promoting recreational use of the city's rivers, creek, lakes and sloughs. The amendments support this policy for

the reasons below. State Goal 5, Open Space, Scenic and Historic Areas, and Natural Resources also support this policy.

- a. Policy 10, Quality of Life, calls for ensuring that recreational resources continue to be a vital part of public life. The following objectives implement this policy.
 - (1) Objective A calls for enhancing and protecting Forest Park as a natural resource area providing passive recreation activities.
 - (2) Objective B calls for maintaining, enhancing, and expanding current parks, open spaces, and recreational facilities.
 - (3) Objective C calls for creating new parks, plazas, and community facilities in areas where significant growth is anticipated and where opportunities arise for new open space development.
 - (4) Objective D calls for improving public access to nearby parks, natural areas, and the Willamette River.
 - (5) The Quality of Life implementation action items contain projects and programs designed to implement the Quality of Life policy and objectives. Key action items include QL1, QL5, QL6, and QL12 which describe desired new open space and park facilities.
 - b. Objective I of Policy 13, Transition Subarea, calls for creating plazas, parks, community facilities, and open spaces to meet the needs of the subarea's residents and employees. The following actions implement this objective. Action TS4 calls for locating, acquiring, and building a neighborhood park or other public open space in the subarea. Action TS5 calls for locating, acquiring, and building a community center in the subarea.
 - c. Objective F of Policy 16, Willamette Heights Subarea, calls for protecting and enhancing Forest Park as a regionally significant natural and recreational resource.
 - d. The plan redesignates more than three acres of land owned and administered by the Portland Parks and Recreation Bureau to Open Space (OS), thus preserving and protecting land for open space uses into the future.
 - e. The plan's Urban Design Concept, policies, objectives, and action charts call for the creation of new parks and open spaces to meet the needs of the area's growing population.
- 49. Policy 2.7, Willamette River Greenway Plan**, calls for implementation of the *Willamette River Greenway Plan*, which preserves a strong working river while promoting recreation, commercial and residential waterfront development along the Willamette south of the Broadway Bridge. The amendments support this policy because they create no situation that would compromise implementation of the *Willamette River Greenway Plan*.
- 50. Policy 2.8, Forest Lands**, calls for limiting density in areas with forested lands consistent with the City's land use policies and the Urban Growth Boundary. The amendments are not relevant to this policy because none of the *Northwest District Plan* contains forest lands.

51. Policy 2.9, Residential Neighborhoods, calls for allowance of a range of housing types to accommodate increased population growth while improving and protecting the city's residential neighborhoods. The amendments support this policy for the reasons below.

- a. Policy 5, Housing, calls for retaining the district's existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size.

- (1) Objective A calls for increasing the number of rental and for-sale housing units in the district.

- (2) Objective B calls for increasing the supply of affordable housing and housing for those with special needs.

- (3) Objective C calls for retaining the supply of existing affordable rental housing in the district.

- (4) Objective D encourages housing that accommodates a variety of living situations and a diverse population.

- (5) Objective E encourages mixed-use projects to include housing in commercial and some employment zones.

- (6) Objective F encourages renovation and rehabilitation of existing housing as an alternative to clearance.

- (7) Objective G encourages upkeep of residential properties.

- (8) Objective H encourages new opportunities for home ownership through new development rather than conversion of rental stock.

- (9) Objective I encourages housing attractive to families with children.

- b. Policy 1, Land Use, which calls for enhancing the district's sense of place as a distinct yet diverse community. Objective G of Policy 1, Land Use calls for developments to include usable public outdoor spaces such as plazas, play areas and gardens, thus supporting the provision of amenities that make residential developments more appealing and livable.

- c. Overall, the plan's Comprehensive Plan Map, Zoning Map and Zoning Code text amendments have been designed to minimize the potential for increased redevelopment pressure in the Alphabet Historic District, Willamette Heights and other established residential areas, instead focussing new development potential primarily in the underutilized Transition Subarea and parts of the Eastern Edge and Central City.

52. Policy 2.10, Downtown Portland, calls for maintenance and reinforcement of downtown Portland as the principal retail, commercial, service, cultural and high density housing center in the city and region; and calls for implementation of the Downtown Plan. The amendments are consistent with this policy because they provide for urban-scale supportive residential and commercial development in a long-established area adjacent to downtown.

53. Policy 2.11, Commercial Centers, calls for expanding the role of major established commercial centers that are well served by transit in a manner compatible with the surrounding area. The amendments support this policy for the following reasons.

- a. Commercial activity in the study area is primarily located along the W Burnside, NW 21st and 23rd main streets, which are well served by transit. The plan reinforces these areas, as well as the new streetcar line corridor as a primary location for commercial development.
- b. Existing medium and high density multi-family zoning is retained adjacent to these areas.

54. Policy 2.12, Transit Corridors, calls for providing a mixture of activities along major transit routes and Main Streets that supports the use of transit and is compatible with the surrounding area. The amendments support this policy for the following reasons.

- c. Objective C of Policy 1, Land Use, calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line. Objective D calls for reinforcing main streets and the Portland Streetcar line as the focus for retail activity in the district.
- d. Objective H of Policy 2, Institutions, calls for encouraging institutions along main streets and the Portland Streetcar line to orient active uses to these street frontages.
- e. Objective E of Policy 6, Business and Economic Development, calls for encouraging new commercial development and job creation opportunities to locate along main streets, the Portland Streetcar line, and close to the I-405 freeway.
- f. Objective D of Policy 7, Urban Design calls for fostering a continuous frontage of buildings and active uses along main streets and the Portland Streetcar line. Objective F calls for encouraging new development on main streets and the Portland Streetcar line to include additions to the public realm, such as additional sidewalk width, a public square, or other open space.
- g. Northwest Plan District regulations contain provisions designed to reinforce the main streets and the streetcar line as pedestrian and transit-friendly places, including required windows above the ground floor, ground floor active uses, parking and motor vehicle access restrictions and prohibition of drive-through uses.
- l. The *Comprehensive Plan* Map amendments increase the housing potential in the study area, which is well served by public transit.
- j. The plan supports more intensive commercial and residential development along West Burnside Street by extending Central Commercial (CX) zoning and extending the Central City Plan District west to NW 24th Avenue. A portion of this area is also eligible for the Bonus Height Option for Housing only and the Residential Bonus Target Area to promote urban infill residential development at the confluence of the Burnside and 23rd main streets.
- k. The plan supports denser employment densities on the north side of NW Vaughn Street by redesignating a limited area to Mixed Employment (ME) on the Comprehensive Plan Map.

55. Policy 2.13, Auto-Oriented Commercial Development, calls for allowing auto-oriented commercial development to locate on streets designated as Major City Traffic Streets by the Arterial Streets

Classifications and Policies; and calls for allowing neighborhood level auto-oriented commercial development near neighborhoods where allowed densities will not support transit- and pedestrian-oriented development. The amendments change *Comprehensive Plan* map designations on sites along West Burnside Street from General Commercial to Central Commercial. This change will allow a more urban level of commercial development in an already intensively urban portion of the city.

56. Policy 2.14, Industrial Sanctuaries, calls for encouraging the growth of industrial activities by preserving industrial land primarily for manufacturing purposes. The amendments are consistent with this policy for the following reasons.

- a. The *Northwest District Plan (NWDP)* is the final piece of a two-part comprehensive land use planning effort for Northwest Portland from the St. Johns Bridge to West Burnside. The first part, the *Guild's Lake Industrial Sanctuary Plan*, was adopted on 2001 and provides a policy framework to preserve and protect industrial sanctuary lands north of NW Vaughn for manufacturing and other industrial uses. The *Northwest District Plan* provides the framework for preserving and enhancing residential and mixed-use areas south of NW Vaughn. The *NWDP* also provides for a broader mix of uses, including commercial and residential, in the Transition Subarea, where a transition from an industrial emphasis has been found to be appropriate, given long-term economic and land use trends, the large number of existing non-industrial uses, and extensive stakeholder input.
- b. In 1996, the City Council recommended that the four northwest neighborhood associations with industrial zoning agree on issues relating to long-term industrial land use. A joint working group was formed, the Northwest Industrial Sanctuary Working Group (SWG). In 1999, the SWG coalition reached consensus and recommended the creation of an industrial plan district, bounded on the south by NW Vaughn. The group also recommended that land south of NW Vaughn was appropriate for a transition out of industrial use and that the neighborhoods should continue to work on defining "buffer zones." Taken together, the *Northwest District Plan* and the *Guild's Lake Industrial Sanctuary (GLIS) Plan* implement these recommendations and are intended to facilitate the continuing evolution of Northwest Portland south of Vaughn Street into a diverse urban neighborhood, while further strengthening protections to the industrial land north of Vaughn Street.
- c. Policy 13, Transition Subarea calls for integrating the subarea into the existing urban fabric, while allowing a range of uses, including light industrial.
 - (1) Objective C encourages job creation and retention.
 - (2) Objective D calls for protecting existing industrial firms from involuntary displacement.
 - (3) Objective K calls for protecting the Guild's Lake Industrial Sanctuary by locating uses compatible with industry along it's the subarea's northern edge.
- d. The plan removes Industrial Sanctuary (IS) *Comprehensive Plan* designated land, primarily south of I-405/Hwy 30/NW Thurman, and applies the Central Employment (EX) designation to approximately 36 acres in the Transition Subarea. Approximately 12 acres are redesignated from IS to Mixed Employment (ME, implemented by the EG zones) Most industrial land uses are allowed in the EX and EG zones. Industrial Sanctuary land north of I-405/Hwy 30/NW Thurman in the study area will retain the IS designation due its proximity to the Guild's Lake Industrial

Sanctuary and the potential for negative impacts from nonindustrial development, such as an increase in auto congestion.

- e. At the time of the adoption of the *Guild's Lake Industrial Sanctuary Plan* (GLISP) in 2001, City Council directed staff to address issues pertaining to the interface between industrial and nonindustrial lands along NW Vaughn Street as part of the *Northwest District Plan* process, and to refine as needed GLISP policies and regulations (see GLISP action item L10).
 - f. The plan removes the Industrial Sanctuary *Comprehensive Plan* designation and applies the Mixed Employment designation (EG) to approximately 12 acres on the north side of NW Vaughn Street in the *Guild's Lake Industrial Sanctuary Plan* district. This creates a transitional area between industrial and nonindustrial lands that allows additional office uses in addition to many types of industrial land uses, which are allowed in EG zones.
- 57. Policy 2.15, Living Closer to Work**, calls for locating greater residential densities, including affordable housing, near major employment centers, including Metro-designated regional and town centers, to reduce vehicle miles traveled per capita and maintain air quality; and calls for encouraging home-based work where the nature of the work is not disruptive to the neighborhood. The Northwest District is a major employment center with two major regional employers, CNF, inc. and Legacy Good Samaritan Hospital and Medical Center, as well as numerous small and medium-sized employers. The Northwest District is also one of the city's densest residential areas, strongly facilitating opportunities for living closer to work. The amendments contain the following policies and implementing measures to support this policy.
- a. Objective A of Policy 1, Land Use, calls for supporting land use strategies and developments that increase the amount of housing in the district.
 - b. Objective A of Policy 5, Housing, calls for increasing the number of housing units in the district. Objective E encourages mixed-use projects that include housing in commercial and residential zones.
 - c. Objective F of Policy 6, Business and Economic Development, encourages live/work spaces and home occupations.
 - d. Objective B of Policy 13, Transition Subarea calls for promoting the subarea as a prime location for increasing the supply of affordable housing. This policy is implemented by redesignating properties to a zone that allows household living by right, as well including provisions in the Northwest Plan District to encourage the construction of market-rate and affordable housing.
 - e. Objective B of Policy 15, Thurman-Vaughn Subarea, emphasizes residential and live/work opportunities on NW Upshur Street.
 - f. Objective C of Policy 1, Land Use, calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line.
 - g. Over 53 acres of land is removed from Industrial Sanctuary designation, where residential and commercial land uses are severely restricted, and given commercial or employment designations.

58. Policy 2.16, Strip Development, calls for discouraging the development of new strip commercial areas and focusing future activity in such areas to create a more clustered pattern of commercial development. The amendments support this policy for the reasons below.

- a. Policy 1, Land Use calls for an active mix of housing and businesses.
 - (1) Objective C calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line. The NW 21st and 23rd avenue main streets are the area's long-established commercial areas.
 - (2) Objective E calls for limiting large-scale auto-dependant retail throughout the district.
 - (3) Objective F supports small-scale developments that are oriented to pedestrian uses.
- b. Objective E of Policy 6, Business and Economic Development, calls for encouraging new commercial development and job creation opportunities to locate along main streets, the Portland Streetcar line, and close to the I-405 freeway.
- c. Policy 15, Thurman-Vaughn Subarea, calls for enhancing this mixed-use subarea by emphasizing housing along NW Upshur and NW Thurman Streets and commercial uses on the south side of NW Vaughn Street and in nodes at intersections along NW Thurman Street. Objective C encourages development on the south side of NW Vaughn Street that includes a continuous frontage of commercial buildings, unifies the streetscape, and supports both the mixed-use area to the south and the industrial sanctuary to the north.
- d. The plan recognizes the more residential character of the Thurman main street by implementing a zoning pattern that encourages residential development in between commercial nodes at street intersections. The plan changes the zoning of selected properties along NW Upshur and NW Thurman streets from commercial to residential or mixed residential-commercial designations to encourage residential uses.
- e. The Northwest Plan District reinforces the main streets, streetcar line and portions of the development bonus area as foci for retail activity by limiting retail sales and service uses in the Central Employment zone.

59. Policy 2.17, Transit Stations and Transit Centers, calls for encouraging transit-oriented development patterns at light rail transit stations and at transit centers to provide for easy access to transit service. The amendments are not directly relevant to this policy, because there are no light rail transit stations or transit centers in the Northwest District. However, the Portland streetcar line runs through a portion of the district. Findings for *Comprehensive Plan* Policy 2.12, Transit Corridors address transit-oriented developments along both the streetcar line and other transit streets within the Northwest District.

60. Policy 2.18, Transit Supportive Density, calls for establishing average minimum residential densities of 15 units per acre within one-quarter mile of existing and planned transit streets, Main Streets, town centers, and transit centers, and 25 units per acre within one-half mile of light rail stations and regional centers. Where existing development patterns preclude these densities, this policy calls for encouraging infill through accessory units or allowing increased density on vacant lots. The amendments support this policy because the existing and recommended zoning designations near main streets, the Portland streetcar line and other transit streets are primarily: Storefront

Commercial (CS), Central Employment (EX), high density multi-dwelling residential (RH), Mixed Commercial (CM), medium density multi-dwelling residential (R1), and low density multi-dwelling residential (R2) and Central Commercial (CX). All of these designations allow residential uses.

The following assumptions for units-per-acre capacity were used as part of the City's Compliance with Metro's Functional Plan. Metro accepted these calculations.

CS = 28	EX = 120
RH = 43	CX = 80
R2 = 17	CM = 16
R1 = 34	

The large area being redesignated from IS to EX greatly increases the expected housing density of areas well-served by transit.

61. **Policy 2.19, Infill and Redevelopment**, calls for encouraging infill and redevelopment as a way to implement the Livable City growth principles and accommodate expected increases in population and employment. The amendments support this policy for the following reasons.
 - a. Policy 1, Land Use, calls for participating in the growth of the metropolitan region in a manner that protects and enhances the quality of life in the Northwest District. Objectives A and B support strategies which increase housing and employment opportunities in the district.
 - b. Policy 16, Willamette Heights Subarea, contains Objective A, which calls for supporting infill development.
 - c. Infill development, in addition to larger-scale redevelopment in the Transition Subarea is the primary way in which development will occur in the district, given that is largely built-out.
62. **Policy 2.20, Utilization of Vacant Land**, calls for providing for full utilization of existing vacant land except in those areas designated as open space. The amendments support this policy because the City of Portland has adopted minimum density standards for most zones in the city. The zoning map amendments include application of the EX designation to currently vacant and underutilized lands in the Transition Subarea and the CX designation to areas near W Burnside. These more intensive designations will encourage better utilization of these lands.
63. **Policy 2.21, Existing Housing Stock**, calls for providing for full utilization of larger single-dwelling homes with conditions that preserve the character of the neighborhood and prevent speculation. The amendments support this policy for the following reasons.
 - a. Much of the Northwest District is already designated for low, medium and high-density multi-family residential uses. The plan does not propose to change any of these zones to lower-density designations.
 - b. Objective F of Policy 5, Housing, encourages the renovation and rehabilitation of existing housing as a preferred alternative to clearance and redevelopment.
64. **Policy 2.22, Mixed Use**, calls for continuation of a mechanism that will allow for the maintenance and enhancement of areas of mixed use character where such areas act as buffers and where

opportunities exist for the creation of mixed use nodes. The amendments support this policy because the policies, objectives, and implementing actions work together to ensure the continued predominant mixed use character of the Northwest District.

- a. Policy 1, Land Use, calls for enhancing the district's sense of place as a distinct yet diverse community, with an active mix of housing and businesses. Objective 3 calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line.
 - b. The plan retains the Mixed Commercial, CM, zoning along NW Upshur and just west of NW 23rd Street and applies it in areas along NW Thurman.
 - c. The plan retains the ability of all commercial designations to include residential as well commercial uses on sites.
 - d. The plan encourages a mixture of residential, commercial, and employment uses on properties designated Central Employment, EX.
 - e. Objective A of Policy 14, Eastern Edge Subarea, calls for supporting the established mixed-use character of this subarea.
 - f. Objective A of Policy 11, Transition Subarea, encourages the mixing of land uses, both on individual sites and throughout the subarea.
 - g. Policy 7, Urban Design, calls for respecting the urban design principles and architectural qualities that define the district's human-scaled, pedestrian-oriented character. Objective B calls for promoting a high level of design quality in mixed-use areas, including main streets, the Portland Streetcar line, and other areas where more intensive development is anticipated.
- 65. Policy 2.23, Buffering,** calls for mitigating the impacts from non residential uses on residential areas through the use of buffering and access limitations, in particular when residentially zoned lands are changed to commercial, employment or industrial zones. Most of the Northwest District, with the exception of the single family homes to the west of NW 23rd, is composed of a mix of commercial, employment, light industrial and residential uses.
- a. The plan calls for a continuation of this mixture of uses in areas where they currently exist. Policy 13, Transition Subarea, calls for integrating the subarea into the pedestrian-oriented, architecturally diverse urban fabric to the south and west, and encourages a mix of housing, commercial, institutional, open space, and light industrial uses.
 - b. The plan redesignates properties primarily south of the I-405/Hwy 30 exit, within the Transition Subarea from General Industrial, IG1, to Central Employment, EX.
 - c. At the time of the adoption of the *Guild's Lake Industrial Sanctuary Plan* (GLISP) in 2001, City Council directed staff to address issues pertaining to the interface between industrial and nonindustrial lands along NW Vaughn Street as part of the *Northwest District Plan* process, and to refine as needed GLISP policies and regulations (see GLISP action item L10).

- d. The plan amends the *Guild's Lakes Industrial Sanctuary Plan* by adding Objective 11, Create a limited transitional area along NW Vaughn Street between industrial land uses in the GLIS and nonindustrial land uses to the south.
 - e. The plan amends the *Guild's Lake Industrial Sanctuary Plan* District by adding a Subdistrict B that would provide for a limited employment, retail, and light industrial transitional area on the north side of NW Vaughn Street. The intent is to foster a better interface with the mixed-use commercial/residential neighborhood to the south and to promote a better streetscape along NW Vaughn Street.
 - f. The plan redesignates properties north of NW Vaughn Street from General Industrial, IG1, to General Industrial, IG1 with a *Comprehensive Plan* designation of Central Employment, EX: IG1(ME). The ME designation is intended for areas where a wide variety of employment opportunities are encouraged in an industrial-type setting.
 - g. The GLIS Plan District includes development standards in Subdistrict B that will lead to a more uniform pattern of development along NW Vaughn Street, as the south side is zoned Commercial Storefront (CS), including but not limited to vehicular site access limitations along Vaughn.
66. **Policy 2.25, Central City Plan**, calls for encouraging continued investment within Portland's Central City while enhancing its attractiveness for work, recreation and living through implementation of the *Central City Plan*. The *Northwest District Plan* supports this provision for the following reasons. *Central City Plan* findings also support this goal
- a. The plan extends the boundary of the *Central City Plan* to include selected properties along the north and south sides of West Burnside Street.
 - b. The plan amends Policy 15, Goose Hollow, 1) by encouraging the retention of existing housing in addition to creating opportunities for 1,000 new households within the Goose Hollow District, and 2) with the addition of West Burnside Street as a location for improving pedestrian and bicycle connections.
 - c. The plan adds two action items to Policy 15, Goose Hollow, the first to create wider pedestrian areas along West Burnside Street and the second to explore as part of the next update of the *Central City Plan* (CCP) the application of active use area and required building line standards to properties west of the current CCP boundary.
 - d. The plan redesignates several properties along West Burnside Street currently zoned high-density multi-family residential (RH), General Commercial (CG), and Storefront Commercial (CS) to Central Commercial (CX). This zone will allow a more urban level of residential, commercial, and mixed-use development along West Burnside Street. The plan also extends the area eligible for the Bonus Height Option for Housing only and the Residential Bonus Target Area to encourage infill development at this gateway location at the intersection of the Burnside and 23rd main streets.
 - e. The plan amends the Central City Plan District by applying parking provisions to properties along West Burnside Street added to the *Central City Plan*, and clarifying under the bonus heights provision, a development review body's ability to shape a project and criteria on new development relating to its surroundings.

67. Goal 3, Neighborhoods, calls for preservation and reinforcement of the stability and diversity of the city's neighborhoods while allowing for increased density. The amendments are consistent with this goal because the combination of policies, objectives and actions work together to ensure that increased density occurs within the Northwest District while simultaneously preserving and reinforcing the stability and diversity of the district.

a. Policy 1, Land Use, calls for participating in the growth of the metropolitan region in a manner that protects and enhances the quality of life in the Northwest District. Objective A supports land use strategies and developments that increase the amount of housing in the district. Objective B supports land use strategies and developments that enhance employment opportunities in the district.

b. Policy 7, Urban Design, calls for respecting the urban design principles and architectural qualities that define the district's human-scaled, pedestrian-oriented character.

(1) Objective A calls for integrating new development with the existing urban fabric by acknowledging the scale, proportions, orientation, quality of construction and other architectural and site design elements of the building's immediate area.

(2) Objective C calls for preserving and enhancing the distinct character of different parts of the Northwest District.

(3) Objective G encourages building designs that consider solar access to streets and public spaces.

c. Overall, the plan's Comprehensive Plan Map, Zoning Map and Zoning Code text amendments have been designed to minimize the potential for increased redevelopment pressure in the more established areas, instead focussing new development potential primarily in the underutilized Transition Subarea and parts of the Eastern Edge and Central City.

68. Policy 3.1, Physical Conditions, calls for providing and coordinating programs to prevent the deterioration of existing structures and public facilities. The amendments support this policy because they propose no actions that would jeopardize or cause existing structures and public facilities to deteriorate. The amendments also include objectives and actions that address maintenance of particular structures and public facilities.

a. Objective C of Policy 2, Institutions, calls for maintaining and augmenting facilities and programs that provide educational, recreational, and cultural resources and opportunities.

b. Objective C of Policy 3, Transportation, calls for maintaining, improving, and expand pedestrian and bicycle connections within the district and to other parts of the city and minimize conflicts between motorized and non-motorized transportation.

c. Objective A of Policy 11, Environment, calls for developing and operating public facilities and infrastructure to be sustainable and to address multiple objectives, including public health and safety, natural resource protection and recreation.

d. The plan's action charts identify numerous public improvements and facilities that will support development in the district.

69. Policy 3.2, Social Conditions, calls for providing and coordinating programs to promote neighborhood interest, concern and security and to minimize the social impact of land use decisions. The amendments support this policy because of the following reasons.

- a. Policy 10, Quality of Life, calls for strengthening the sense of community and ensuring that cultural, educational and recreational resources continue to be a vital part of public life. Objective E calls for fostering events and activities that create positive interactions among community members. Objective F encourages residents and businesses to participating in planning efforts for major entertainment and recreation facilities, such as PGE Park, in and near the district. The Plan implements this policy and its objectives with ten action items.
- b. Policy 9, Public Safety, calls for increasing public safety by promoting measures that foster personal security.
 - (1) Objective A encourages site and building designs that incorporate “Crime Prevention Through Environmental Design” principles.
 - (2) Objective B encourages projects that support active and passive spaces that focus toward the street.
 - (3) Objective C encourages and expands participation in community policing.
 - (4) Objective D calls for increased police visibility in the district.
 - (5) Objective E calls for improved security at parks in the district.
 - (6) Objective F calls for forging partnerships with adjacent neighborhoods to address common public safety issues and allocation of resources.
- c. Policy 2, Institutions, calls for supporting institutional planning, programming, and development that provides educational, cultural, medical, religious, and social services and amenities in the Northwest District. Objective D calls for maintaining and augment facilities offering social and institutional services for community members. Objective K calls for expanding opportunities for institutions and community organizations to work together on programs beneficial to those who use their services.

70. Policy 3.3, Neighborhood Diversity, calls for promoting neighborhood diversity and security by encouraging a diversity in age, income, race and ethnic background within the City’s neighborhoods. The amendments support this policy for the following reasons.

- a. Policy 1, Land Use, calls for enhancing the district’s sense of place as a distinct yet diverse community.
- b. Policy 2, Institutions and its objectives, support institutional planning, programming and development that provides educational, cultural, medical, religious and social services and amenities.
- c. Policy 5 Housing calls for retaining a mix of housing types and tenures and that support a population diverse in income, age, and household size.

- (1) Objectives B and C call housing affordable to a full range of income, including preserving existing affordable housing, and for special-needs housing.
- (2) Objective D calls for encouraging housing that accommodates a variety of living situations and a diverse population.
- (3) Objective I calls for housing attractive to families with children.

71. Policy 3.4, Historic Preservation, calls for the preservation and retention of historic structures and areas throughout the city. The amendments support this policy for the reasons below. Findings for State Goal 5, Open Space, Scenic and Historic Areas, and Natural Resources also support this policy.

- b. Policy 8, Historic Preservation, calls for identifying, preserving, and protecting historic resources and supporting development that enhances the historic qualities of the district.
 - (1) Objective A calls for restoration and renovation that maintains the historic character of the original structure.
 - (2) Objective B encourages adaptive reuse of historic resources.
 - (3) Objective C promotes awareness of the district's history and historic resources, including buildings, streetscapes, stairways, trees, parks, bridges and natural areas.
 - (4) Objective D encourages listings of individual and multiple properties in the National Register, as well as the development of additional historic districts in the study area.
 - (5) The plan's Historic Preservation implementation actions include projects and programs designed to implement the plan's historic preservation policy and objectives.
- c. Objective F of Policy 5, Housing encourages renovation and rehabilitation of existing housing as an alternative to clearance and redevelopment.

72. Policy 3.5, Neighborhood Involvement, provides for the active involvement of neighborhood residents and businesses in decisions affecting their neighborhood. The amendments support this policy for the reasons cited in the findings for State Goal 1, Citizen Involvement and Portland Comprehensive Plan Goal 9 Citizen Involvement. In addition the plan policies below also support this policy.

- a. Objective H of Policy 1, Land Use, calls for promoting neighborhood and citizen participation early in the land use review and development process. The following actions implement this objective. Action LU8 seeks greater neighborhood participation in the City's pre-application conference for land use reviews. Action LU9 calls for increasing neighborhood and citizen participation in the land use and development processes. Ensure timely notification about proposed development projects. Action LU10 calls for working with adjacent neighborhoods to develop uses that support the needs of both neighborhoods.

- b. Action QL17 of Policy 10, Quality of Life, calls for ensuring that district residents and businesses participate in plans to mitigate negative impacts from improvements to major entertainment facilities such as PGE Park.
- 73. **Policy 3.6, Neighborhood Plan**, calls for the maintenance and enforcement of neighborhood plans that are consistent with the Portland *Comprehensive Plan* and that have been adopted by City Council. The amendments support this policy because the *Northwest District Plan* is adopted by City Council as part of the *Comprehensive Plan*.
- 74. **Policy 3.7, Visual Communication**, calls for maintaining a balance between adequate signage and public safety, welfare, and community appearance. The amendments support this policy for the following reasons.
 - a. Policy 3, Transportation, contains three actions that support this policy. Action T10 of calls for improving pedestrian crossings along main streets and near neighborhood attractions using measures such as curb extensions, improved markings and signage, and signalized intersections. Action T23 calls for developing a network of pedestrian and bicycle-oriented “Greenstreets”, as identified in the Urban Design Concept, with elements such as special sidewalk furniture, public art, signage, street lighting, landscaping and crossing improvements. Action TP6 calls for a review of existing on-street parking limitations and signage to determine whether they are still appropriate for adjacent land uses.
 - b. Policy 8, Historic Preservation contains five actions that support this policy. Action HP1 calls for placing plaques on historic landmarks or at locations where visitors may easily read the plaque and see the landmark. Action HP3 calls for establishing more and rehabilitating existing podium signs that share the district’s history and unique qualities with its current residents and visitors. Action HP6 calls for identifying, through signage or other visible means, the original locations of buried streams in the district. Action HP7 calls for developing a program to alert pedestrians to the historic basis of the street names in the Northwest District. HP9 calls for placing historic district tops on street signs denoting the Alphabet Historic District.
- 75. **Goal 4, Housing**, calls for enhancing Portland’s vitality as a community at the center of the region’s housing market by providing housing of different types, tenures, density, sizes, costs and locations that accommodates the needs, preferences, and financial capabilities of current and future households. The amendments support this Goal and its policies for the reasons below. The findings for State Goal 10, Housing also support this goal and its objectives.
 - a. Policy 5, Housing, calls for retaining the district’s existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size.
 - (1) Objective A calls for increasing the number of rental and for-sale housing units in the district.
 - (2) Objective B calls for increasing the supply of affordable housing and housing for those with special needs.
 - (3) Objective C calls for retaining the supply of existing affordable rental housing in the district.
 - (4) Objective D encourages housing that accommodates a variety of living situations and a diverse population.

- (5) Objective E encourages mixed-use projects to include housing in commercial and some employment zones
 - (6) Objective F encourages renovation and rehabilitation of existing housing as an alternative to clearance.
 - (7) Objective G encourages upkeep of residential properties
 - (8) Objective H encourages new opportunities for home ownership through new development rather than conversion of rental stock.
 - (9) Objective I encourages housing attractive to families with children.
- b. Action H22 makes the Northwest Plan District eligible for transit-oriented development tax abatements for mixed-use and affordable housing projects. This is accomplished through amendments to Title 3.
 - c. Objective A of Policy 1, Land Use supports land use strategies and developments that increase the amount of housing.
 - d. Objective G of Policy 1, Land Use calls for developments to include usable public outdoor spaces such as plazas, play areas and gardens, thus supporting the provision of amenities that make residential developments more appealing and livable.
 - e. Objective A of Policy 15, Willamette Heights Subarea calls for supporting infill development in an area predominantly designated residential.
 - f. The plan recognizes the more residential character of the Thurman main street by implementing a zoning pattern that encourages residential development in between commercial nodes at street intersections. The plan changes the zoning of selected properties along NW Upshur and NW Thurman streets from commercial to residential or mixed residential-commercial designations to encourage residential uses.
 - g. Objective E of Policy 14, Eastern Edge Subarea, calls for protecting existing housing from conversion to other uses.
 - h. Objective B of Policy 13, Transition Subarea, calls for promoting the subarea as a prime location for increasing the supply of affordable housing. This policy is implemented by redesignating properties to a zone that allows household living by right, as well including zoning and bonus provisions in the Northwest Plan District to encourage the construction of market-rate and affordable housing.
 - i. The plan amends Policy 15, Goose Hollow, of the Central City Plan by adding a provision to Further Statement A to encourage the retention of existing housing.
 - j. The Northwest Plan District regulations contain provisions that provide incentives for residential and affordable residential development through height and FAR bonuses and restrictions on certain nonresidential uses in employment zones.

- k. The amendments increase the housing potential in the study area. The amendments change more than four acres of land from a nonresidential to a residential *Comprehensive Plan* designation. More than six acres of residentially designated land is changed to nonresidential designations, of which over half is owned by the City of Portland and is changed to the Open Space designation. Over 53 acres of land is removed from Industrial Sanctuary designation, where residential land uses are severely restricted, and given commercial or employment designations, which allow, and, in the context of the plan's policies and plan district provisions, actually encourage residential development in targeted areas.
 - l. The plan supports more intensive development along West Burnside Street by extending Central Commercial (CX) zoning and extending the Central City Plan District west to NW 24th Avenue. Housing development is encouraged on a portion of this area by the application of the Bonus Height Option for Housing only and the Residential Bonus Target Area as shown on maps 510-3 and 510-4. Infill development at this gateway location will benefit the immediate area located at the intersection of the Burnside and 23rd main streets.
76. **Policy 4.1, Housing Availability**, calls for ensuring that an adequate supply of housing is available to meet the needs, preferences, and financial capabilities of Portland's households now and in the future. The amendments support this policy for the reasons below.
- a. The plan increases the housing potential in the study area. The amendments change more than four acres of land from a nonresidential to a residential *Comprehensive Plan* designation. More than six acres of residentially designated land is changed to nonresidential designations, of which over half is owned by the City of Portland and is changed to the Open Space designation. Over 53 acres of land is removed from Industrial Sanctuary designation, where residential land uses are severely restricted, and given commercial or employment designations, which allow, and, in the context of the plan's policies and plan district provisions, actually encourage residential development in targeted areas.
 - b. The plan implements a zoning pattern that encourages residential development in between commercial nodes at street intersections along NW Thurman. The plan changes the zoning of selected properties along NW Upshur and NW Thurman streets from commercial to residential or mixed residential-commercial designations to encourage residential uses.
 - c. The plan supports more intensive development along West Burnside Street by extending Central Commercial (CX) zoning and extending the Central City Plan District west to NW 24th Avenue. Housing development is encouraged on a portion of this area by the application of the Bonus Height Option for Housing only and the Residential Bonus Target Area as shown on maps 510-3 and 510-4. Infill development at this gateway location will benefit the immediate area located at the intersection of the Burnside and 23rd main streets.
77. **Objective A:** Designate sufficient buildable land for residential development to accommodate Portland's share of regional household growth to reduce the need for urban growth boundary expansions. The amendments support this objective because the plan redesignates a number of properties from *Comprehensive Plan* designations that allow no or only a limited number of housing units to *Comprehensive Plan* designations that allow a more dense urban residential development pattern.
78. **Objective B:** Develop new relationships and mechanisms that increase private investment in, and production of, housing. The amendments propose two implementation tools to support this objective.

- a. The plan revises Title 3 of the Portland City Code to designate properties within a portion of the Northwest Plan District as eligible to take advantage of the Transit Oriented Development (TOD) tax abatement.
 - b. The expanded Northwest Plan District includes a bonus height and floor area ratio provision for developments that include housing.
- 79. Objective C:** Consider the cumulative impact of regulations on the ability of housing developers to meet current and future housing demand. The amendments support this objective because they do not either singly or cumulatively decrease the ability of housing developers to meet current and future housing demand within the Northwest District. Development bonuses are implemented to incent the construction of new housing.
- 80. Objective D:** Encourage the efficient use of existing housing. The amendments include Objective F of Policy 5, Housing, which encourages the renovation and rehabilitation of existing housing as a preferred alternative clearance and redevelopment.
- 81. Objective E:** Encourage the efficient use of infrastructure by focusing well-designed new and redeveloped housing on vacant, infill, or under-developed land. The plan includes the following, which support this objective.
- a. Objective C of Policy 1, Land Use, calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line in order to make efficient use of existing infrastructure.
 - b. Action H1 of Policy 5, Housing, calls for identifying areas suitable for new and infill housing development.
- 82. Objective F:** Encourage housing design that supports the conservation, enhancement, and continued vitality of areas of the city with special scenic, historic, architectural or cultural value. The amendments support this objective for the following reasons.
- a. Policy 8, Historic Preservation, calls for identifying, preserving, and protecting historic resources and supporting development that enhances the historic qualities of the district. Two objectives are particularly supportive of this objective. Objective A promotes restorations and renovations of residential and commercial structures that maintain the historic style, quality, and character of the original building. Objective B encourages adaptive reuse of historic resources that maintain their historic character.
 - b. Objective B of Policy 16, Willamette Heights Subarea, calls for preserving the subarea's stock of historically significant housing.
 - c. The *Northwest District Plan* includes revisions to the *Community Design* Guidelines that will help ensure the preservation the district's unique urban character and sense of place. New "Desired Characteristics and Traditions" statements that identify desired architectural and design features and relationships in the district have been developed to assist in the application of Community Design Guideline P1, Plan Area Character.

83. **Objective G:** Facilitate the redevelopment of surface parking lots zoned for residential and mixed-uses to accommodate housing and mixed-use development. The amendments support this objective because they retain or increase the allowed residential density under residential and mixed-use zoning and *Comprehensive Plan* designations on surface parking lots within the Northwest District, particularly in the Transition Subarea.
84. **Objective H:** Create alternatives to the demolition, without replacement, of structurally sound housing on residentially zoned property. The amendments support this objective because Objective F of Policy 5, Housing, encourages the renovation and rehabilitation of existing housing as a preferred alternative to clearance and redevelopment. In addition, the amendments do not repeal any element of the demolition review procedures established in the City Code.
85. **Objective I:** Reduce nonregulatory barriers to the development of vacant residentially zoned sites. There are very few vacant residentially zoned sites in the Northwest District. Almost all are located adjacent to Forest Park and contain environmental constraints. The amendments support this objective because they do not hinder the ability to reduce nonregulatory barriers for these parcels.
86. **Objective J:** Limit residential development in areas designated as industrial sanctuaries. The amendments support this objective because 1) they do not add residential potential to industrial sanctuary properties and 2) when industrial properties in the new *Guild's Lake Industrial Sanctuary Plan* district subdistrict B are rezoned to a mixed employment zone in conformance with the *Comprehensive Plan Map*, the amendments prohibit household and group living. Residential uses are also limited to 20 percent of net building area in the EX zone on sites shown on map 562-2 near the industrial sanctuary.
87. **Policy 4.2, Maintain Housing Potential**, calls for retaining housing potential by requiring no net loss of land reserved for, or committed to, residential, or mixed-use. The amendments support this policy because overall, no housing potential will be lost in the Northwest District.
- a. The plan increases the housing potential in the study area. The amendments change more than four acres of land from a nonresidential to a residential *Comprehensive Plan* designation. More than six acres of residentially designated land is changed to nonresidential designations, of which over half is owned by the City of Portland and is changed to the Open Space designation. Over 53 acres of land is removed from Industrial Sanctuary designation, where residential land uses are severely restricted, and given commercial or employment designations, which allow, and, in the context of the plan's policies and plan district provisions, actually encourage residential development in targeted areas.
 - b. The plan implements a zoning pattern that encourages residential development in between commercial nodes at street intersections along NW Thurman. The plan changes the zoning of selected properties along NW Upshur and NW Thurman streets from commercial to residential or mixed residential-commercial designations to encourage residential uses.
 - c. The plan supports more intensive development along West Burnside Street by extending Central Commercial (CX) zoning and extending the Central City Plan District west to NW 24th Place. Housing development is encouraged on a portion of this area by the application of the Bonus Height Option for Housing only and the Residential Bonus Target Area as shown on maps 510-3 and 510-4. Infill development at this gateway location will benefit the immediate area located at the intersection of the Burnside and 23rd main streets.

- d. Action H8 of Policy 5, Housing supports the City's 'no net housing loss' rule or a replacement that achieves the same goal.
- 88. Policy 4.3, Sustainable Housing**, calls for encouraging housing that supports sustainable development patterns by promoting the efficient use of land, conservation of natural resources, easy access to public transit and other efficient modes of transportation, easy access to services and parks, resource efficient design and construction, and the use of renewable energy resources. The amendments support this policy and its objectives for the reasons below.
- a. Objective C of Policy 1, Land Use, calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line in order to make efficient use of existing infrastructure. Land use action LU2 encourages the City to create a program that requires developers of new housing or commercial projects to either include public open space within their project or make a contribution to a new park land acquisition fund.
 - b. Objective E of Policy 5, Housing, encourages the development of mixed-use projects that include housing in all commercial and most employment zones. Action item H9 of Policy 5, Housing, calls for supporting City actions that will accommodate growth and reduce the need for the expansion of the Urban Growth Boundary (UGB).
 - c. Objective F of Policy 6, Business and Economic Development, encourages live/work spaces and home occupations.
 - d. Objective A of Policy 11, Environment calls for developing and operating public facilities and infrastructure to be sustainable and to address multiple objectives, including public health and safety, natural resource protection and recreation.
 - e. The plan's land use and transportation policies and objectives and their implementation measures generally support and build upon an existing development pattern that takes advantage of a well-developed existing infrastructure system including roads, transit and public services.
- 89. Objective A:** Place new residential developments at locations that increase potential ridership on the regional transit system and support the Central City as the region's employment and cultural center. The amendments support this objective for the following reasons.
- a. Objective C of Policy 1, Land Use, calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line in order to make efficient use of existing infrastructure.
 - b. The expanded Northwest Plan District creates bonus provisions for residential developments that have the potential of increasing ridership on the regional transit system and support the Central City as the region's employment and cultural center.
- 90. Objective B:** Establish development patterns that combine residential with other compatible uses in mixed-use areas such as the Central City, Gateway Regional Center, Station Communities, Town Centers, Main Streets, and Corridors. The amendments support this objective for the following reasons.
- a. Objective C of Policy 1, Land Use, calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line.

- b. The plan changes *Comprehensive Plan* map designations on selected sites throughout the plan area and along West Burnside so as to encourage an urban level of residential, commercial and mixed-use development.
 - c. The plan changes *Comprehensive Plan* map designations on sites within the Transition Subarea from General Industrial to Central Employment. This change will allow and encourage a more urban level of development. Residential, commercial, employment, and mixed-use developments are all allowed in this zone.
 - d. The plan changes *Comprehensive Plan* map designations on sites along West Burnside Street from General Commercial to Central Commercial. This change will allow and encourage a more urban level of commercial development. Residential, commercial and mixed-use developments are all allowed in this zone. The residential bonus target area is also extended to a portion of this area.
 - e. Policy 15, Thurman-Vaughn Subarea, calls for enhancing this mixed-use subarea by emphasizing housing along NW Upshur and NW Thurman Streets and commercial uses on the south side of NW Vaughn Street and in nodes at intersections along NW Thurman Street.
 - f. Policy 13, Transition Subarea, encourages a mix of housing, commercial, institutional, open space, and light industrial uses.
- 91. Objective C:** Encourage the development of housing at transit-supportive densities near transit streets, especially where parks or schools are present, to ensure that the benefits of the public's investment in those facilities are available to as many households as possible. The amendments support this objective for the following reasons.
- a. Objective C of Policy 1, Land Use, calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line.
 - b. The plan changes *Comprehensive Plan* map designations on selected sites throughout the plan area and along West Burnside so as to encourage an urban level of residential, commercial and mixed-use development.
- 92. Objective D:** Foster flexibility in the division of land and the siting of buildings, and other improvements to reduce new development's impacts on environmentally sensitive areas. The amendments are not inconsistent with this objective because they propose no new regulations that would reduce flexibility in the division of land and the siting of buildings so as to reduce new development's impacts on environmentally sensitive areas.
- 93. Objective E:** Use resource efficient technologies and materials in housing construction that increase the useful life of new and existing housing. The amendments are not inconsistent with this objective because they propose no regulations that would limit the use of resource efficient technologies and materials in housing construction.
- 94. Policy 4.4, Housing Safety,** calls for ensuring a safe and healthy built environment and assisting in the preservation of sound existing housing and the improvement of neighborhoods. The amendments support this policy for the following reasons.

- a. The amendments propose no regulations that would compromise a safe and healthy built environment.
 - b. Policy 5, Housing, contains two objectives that support this policy. Objective F encourages the renovation and rehabilitation of existing housing as a preferred alternative to clearance and redevelopment. Objective G encourages upkeep of residential properties.
 - c. Policy 9, Public Safety, calls for increasing public safety by promoting measures that foster personal security. Objective A encourages site and building designs that incorporate “Crime Prevention Through Environmental Design” principles. Objective B encourages projects that support active and passive spaces that focus toward the street.
95. **Objective A:** Ensure safe housing for Portland’s citizens of all income levels. The amendments support this objective for the following reasons.
- a. The amendments propose no regulations that would compromise safe housing for Portland’s citizens of all income levels.
 - b. Objective A of Policy 9, Public Safety, encourages site and building designs that incorporate “Crime Prevention Through Environmental Design” principles. These include designs that (1) bring more light and visibility to streets, (2) create opportunities for those within buildings to observe activities taking place on the streets and in public open spaces, and (3) avoid attractions to properties where potential harmful objects exist.
96. **Objective B:** Encourage the return of abandoned housing to useful and safe occupancy. There is little or no abandoned housing in the Northwest District. However, should this situation arise, Objective F of Policy 5, Housing, which encourages the renovation and rehabilitation of existing housing as a preferred alternative to clearance and redevelopment, supports this objective.
97. **Objective C:** Ensure the safety of the general public by requiring owners to repair substandard housing or as a last resort, demolish dangerous housing. The amendments support this objective because of the following reasons.
- a. The amendments propose no regulations that would dilute the power of the City to require owners to repair substandard housing or demolish dangerous housing if necessary.
 - b. Objective G of Policy 5, Housing, encourages upkeep of residential properties.
 - c. Objective F of Policy 5, Housing, encourages the renovation and rehabilitation of existing housing as a preferred alternative to clearance and redevelopment.
 - d. Objective A of Policy 9, Public Safety, encourages site and building designs that incorporate “Crime Prevention Through Environmental Design” principles.
98. **Policy 4.5, Housing Conservation,** calls for restoring, rehabilitating, and conserving existing sound housing as one method of maintaining housing as a physical asset that contributes to an area’s desired character. Policy 5, Housing, contains two objectives that support this policy. Objective F encourages the renovation and rehabilitation of existing housing as a preferred alternative to clearance and redevelopment. Objective G encourages upkeep of residential properties.

99. **Objective A:** Require owners, investors, and occupants, to be responsible for maintenance of the housing stock. The amendments are not inconsistent with this objective because they propose no regulations that would limit the ability of the City to require owners, investors, and occupants, to be responsible for maintenance of the housing stock. Objective G of Policy 5, Housing, encourages upkeep of residential properties.
100. **Objective B:** Encourage the adaptive reuse of existing buildings for residential use. The amendments support this objective for the following reasons.
- a. Objective F of Policy 1, Housing, encourages the renovation and rehabilitation of existing housing as a preferred alternative to clearance and redevelopment.
 - b. Policy 8, Historic Preservation, contains two objectives that support this object. Objective A promotes restorations and renovations of residential and commercial structures that maintain the historic style, quality, and character of the original building. Objective B encourages adaptive reuse of historic resources that maintain their historic character.
101. **Policy 4.6, Housing Quality,** calls for encouraging development of housing that exceeds minimum construction standards. The amendments support this policy for the reasons below.
- a. Objective A of Policy 7, Urban Design, calls for integrating new development with the existing urban fabric by acknowledging the scale, proportions, orientation, quality of construction and other architectural and site design elements of the building's immediate area. Objective B promotes a high level of design quality in mixed-use areas.
 - b. The plan extends the Design 'd' overlay zone throughout the expanded plan district. The design review process takes into account building materials.
102. **Objective A:** Promote housing that provides air quality, access to sunlight, and is well protected from noise and weather. The amendments support this objective for the following reasons.
- a. Objective G of Policy 1, Land Use, promotes development that includes useable public outdoor spaces such as plazas, play areas, gardens, and pocket parks.
 - b. Land use action LU1 considers developing a program with tax incentives for developers who dedicate land for a public open space.
 - c. Land use action LU2 encourages the City to create a program that requires developers of new housing or commercial projects to either include public open space within their project or make a contribution to a new park land acquisition fund.
 - d. Objective G of Policy 7, Urban Design, encourages building designs that consider solar access impacts on streets and other public spaces.
 - e. Action QL18 of Policy 10, Quality of Life, calls for working with the Housing and Nuisance officer to improve enforcement of the City's nuisance abatement and other ordinances that affect the district's quality of life.
 - f. Policy 12, Business and Residential Interaction, calls for fostering cooperation between business and residential interests in the district, enhancing ways residential, commercial, and industrial

uses can benefit from their interaction and mitigate negative impacts. This policy also contains two actions that support this objective. BR3 calls for seeking ways to reduce late-night and very early morning noise associated with commercial garbage and recycling pick-up. BR8 calls for providing regular, consistent enforcement of noise and other nuisance laws.

103. Objective B: Ensure that owners, managers, and residents of rental property improve the safety, durability, and livability of rental housing. The amendments support this objective for the following reasons.

- a. Objective G of Policy 5, Housing, encourages upkeep of residential properties.
- b. Policy 9, Public Safety, contains several objectives and actions that support this objective. Objective A encourages site and building designs that incorporate “Crime Prevention Through Environmental Design” principles. These include designs that (1) bring more light and visibility to streets, (2) create opportunities for those within buildings to observe activities taking place on the streets and in public open spaces, and (3) avoid attractions to properties where potential harmful objects exist. Action PS 5 calls for working with property owners to install lighting that will promote safety both on and off the site. Action PS6 calls for working with developers to creating building designs and developments that apply crime prevention design techniques, contribute to a safer pedestrian environment, and provide ‘eyes on the street.’
- c. Action BR7 of Policy 12, Business and Residential Interaction, calls for encouraging multi-dwelling residential and business property owners to provide litter collection on and around their sites.

104. Objective C: Protect housing from excessive off-site impacts including pollution, noise, vibration, odors, and glare. The amendments support this objective for the following reasons.

- a. Action QL18 of Policy 10, Quality of Life, calls for working with the Housing and Nuisance officer to improve enforcement of the City’s nuisance abatement and other ordinances that affect the district’s quality of life.
- b. Policy 11, Environment, contains several objectives and actions that support this objective. Objective C calls for promoting the use of innovative measures that improve air and water quality. Action E15 calls for working cooperatively to resolve and mitigate air quality pollution concerns through business assistance and other programs.
- c. Policy 12, Business and Residential Interaction, calls for fostering cooperation between business and residential interests in the district, enhancing ways residential, commercial, and industrial uses can benefit from their interaction and mitigate negative impacts. This policy also contains two actions that support this objective. BR3 calls for seeking ways to reduce late-night and very early morning noise associated with commercial garbage and recycling pick-up. BR8 calls for providing regular, consistent enforcement of noise and other nuisance laws.

105. Objective D: Limit conflicts between existing business areas and housing caused by traffic and parking, noise, and signage. The amendments support this objective for the following reasons.

- a. Policy 12, Business and Residential Interaction, calls for fostering cooperation between business and residential interests in the district, enhancing ways residential, commercial, and industrial uses can benefit from their interaction and mitigate negative impacts.

- (1) Objective A promotes communication among residents, businesses, industries neighborhood organizations and the City.
- (2) Objective B promotes development of good neighbor agreements.
- (3) Objective C calls for increased understanding and community-based problem solving between residents and nonresidential activities.

- b. The Northwest Plan District includes a Northwest Transportation Fund Bonus Option to be applied in the Transition Subarea along with a similar provision applied in Subdistrict B of the GLIS plan district, which raises funds for transportation system improvements from new non-residential development (or office as with Subdistrict B) above a certain floor area.

106. Policy 4.7, Balanced Communities, calls for striving for livable mixed-income neighborhoods throughout Portland that collectively reflect the diversity of housing types, tenures, and income levels of the region. The amendments support this policy and its objectives for the reasons below.

- a. Policy 5, Housing, calls for retaining the district's existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size.
 - (1) Objective A calls for increasing the number of rental and for-sale housing units in the district.
 - (2) Objective B calls for increasing the supply of affordable housing and housing for those with special needs.
 - (3) Objective C calls for retaining the supply of existing affordable rental housing in the district.
 - (4) Objective D encourages housing that accommodates a variety of living situations and a diverse population.
 - (5) Objective E encourages mixed-use projects to include housing in commercial and some employment zones
 - (6) Objective F encourages renovation and rehabilitation of existing housing as an alternative to clearance.
 - (7) Objective G encourages upkeep of residential properties
 - (8) Objective H encourages new opportunities for home ownership through new development rather than conversion of rental stock.
 - (9) Objective I encourages housing attractive to families with children.
- b. Action H22 makes the Northwest Plan District eligible for transit-oriented development tax abatements for mixed-use and affordable housing projects. This is accomplished through amendments to Title 3

- c. The Northwest District contains approximately 803 acres of land with a diverse mix of residential, commercial and industrial land uses. It is one of the city's most densely settled and complex urban areas. The plan maintains a mixture of *Comprehensive Plan* and zoning designations ranging from low-density single-dwelling residential to high-density multi-dwelling residential, as well as commercial and employment zoning that accommodates both residential and commercial activities. This diversity of zoning supports the diversity of living situations in the district.
- 107. Objective A:** Achieve a distribution of household incomes similar to the distribution of household incomes found citywide, in the Central City, Gateway Regional Center, in town centers, and in large redevelopment projects. The amendments support this objective because they provide actions and zoning code provisions that encourage the retention and development of housing for households for a range of incomes.
- a. Policy 5, Housing, calls for retaining the district's existing housing stock and mix of types and tenures and promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size. Objective B calls for increasing the supply of housing that is affordable, accessible to a full range of incomes, and provides for special needs housing. Objective C calls for retaining the existing supply of rental housing units affordable to the district's low- and very low- income households. Action H2 calls for creating new and preserving existing affordable housing units for low- and moderate-income people as well as those with special needs.
 - b. The following implementation actions support this objective: Action H4 calls for lobbying the State Legislature to allow the imposition of inclusionary zoning provisions. When allowed, create an inclusionary zoning provision that ensures new housing developments include units affordable to households with incomes at or below 60 percent of median. Require at least 15 percent of the housing units in a multi-dwelling project to be affordable. Action H6 calls for working with City officials to codify the local condominium conversion ordinance. Action H7 calls for working with state legislators to change state laws to control excessive rent increases. Action H11 encourages the replacement of low income, very low income, and special needs housing units with similar units on a one per one basis. Action H12 calls for the active support of not-for-profit and other organizations that develop housing in the district for low- to moderate-income people. Action H13 encourages managers of rental properties to accept households with housing vouchers that subsidize their rents. Action H14 calls for supporting the development of new housing in the district that meets the needs of employees, especially those who work for large employers like Legacy Good Samaritan Hospital and Medical Center and CNF.
 - c. Amendments to Policy 15, Goose Hollow, of the *Central City Plan* call for encouraging the retention of existing housing.
- 108. Objective B:** Maintain income diversity within neighborhoods by 1) allowing a mix of housing types and tenures, including houses, houses on smaller lots, small houses, duplexes, attached housing, accessory dwelling units, multi-dwelling housing, and mixed-use developments; and 2) ensure that income diversity is maintained over the long-term. The amendments support this objective for the following reasons.
- a. The Northwest District contains the following mix of residential *Comprehensive Plan* and zoning designations: low, medium and high-density single family (R10, R7, R5) and low, medium and high density multi-family (R2, R1, RH). In addition, housing is allowed in all commercial zones

and the Central Employment, EX, zone. The combination of these designations allow a mix of housing types and tenures, including houses, houses on smaller lots, small houses, duplexes, attached housing, accessory dwelling units, multi-dwelling housing, and mixed-use developments.

- b. Under the Northwest Plan District affordable housing bonus, when a developer provides affordable housing and takes advantage of the height and floor area bonus provisions, the property owner must execute a covenant with the City that ensures that rental units will remain affordable for at least 60 years after the occupancy permit is issued.
- c. This plan extends applicability of the Transit Oriented Development (TOD) tax abatement including its affordability requirements.

109. Objective C: Promote the development of mixed-income housing that may include a mix of housing types. The amendments support this objective for the following reasons.

- a. Policy 5, Housing, calls for retaining the district's existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size.
 - (1) Objective A calls for increasing the number of rental and for-sale housing units in the district.
 - (2) Objective B calls for increasing the supply of affordable housing and housing for those with special needs.
 - (3) Objective C calls for retaining the supply of existing affordable rental housing in the district.
 - (4) Objective D encourages housing that accommodates a variety of living situations and a diverse population.
 - (5) Objective E encourages mixed-use projects to include housing in commercial and some employment zones
- b. Action H16 of Policy 5, Housing, encourages the inclusion of housing and live/work spaces in the development of mixed use projects.
- c. Objective C of Policy 1, Land Use, calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line.
- d. The plan provides development bonuses for certain residential developments, many of which will be located in the Central Employment, EX, zone, along main streets, and the Portland Streetcar line. The bonuses are available for developments that are at least 50 percent housing, and can thus include mixed-use development
- e. Objective A of Policy 13, Transition Subarea, encourages the mixing of land uses, both on individual sites and throughout the subarea.

110. Objective D: Encourage housing opportunities for extremely low and very low-income households (below 50% MFI) in all neighborhoods to avoid their concentration in any one area. The amendments support this objective for the following reasons.

- a. The expanded Northwest Plan District provides a height and floor bonus for projects that include the possibility of at least 10% of units being affordable to those earning no more than 30% of the area median family income. The bonus is also available for those projects that include the possibility of at least 20% of units being affordable to those earning no more than 60% of the area median family income.
 - b. Action H4 of Policy 5, Housing, calls for lobbying the State Legislature to allow the imposition of inclusionary zoning provisions. When allowed, create an inclusionary zoning provision that ensures new housing developments include units affordable to households with incomes at or below 60 percent of median. Require at least 15 percent of the housing units in a multi-dwelling project to be affordable.
 - c. The plan extends applicability of the Transit Oriented Development (TOD) tax abatement including its affordability requirements.
- 111. Objective E:** Actively encourage the dispersal of housing with on-site social services throughout the city. The amendments support this objective for the following reasons.
- a. Action H10 of Policy 5, Housing, calls for forming partnerships among nonprofit, private housing developers, institutions, and social service providers to identify and develop special needs housing options that complement current services.
 - b. Objective J of Policy 2, Institutions, calls for utilizing the resources of institutions to encourage partnerships among non-profit, private housing developers, and social service providers.
- 112. Objective F:** Support public and private actions that improve the physical and social environment of areas that have experienced disinvestment in housing, that have a concentration of low-income households, or that lack infrastructure. The Northwest District does not experience any significant disinvestment in housing, has little or no concentration of low-income households, and does not lack infrastructure. The amendments are not inconsistent with this objective because they do not prevent action to improve the physical and social environment of areas that do suffer from these situations.
- 113. Objective G:** Encourage the development and preservation of housing that serves a range of household income levels at locations near public transit and employment opportunities. The entire Northwest District is a major housing and employment center and contains five major transit corridors in addition to the Portland streetcar line: Burnside, 18th, 19th, 21st, 23rd, and Glisan. The amendments contain the following policies and their implementing measures to support this policy.
- a. Policy 1, Land Use, calls for participating in the growth of the metropolitan region. The policy contains nine objectives and 19 action items that implement the policy.
 - b. Policy 5, Housing, calls for retaining the district's existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size. This Housing Policy contains nine objectives and 22 action items that implement it.
 - c. Policy 13, Transition Subarea, encourages a mix of housing, commercial, institutional, open space, and light industrial uses. This policy contains seven objectives and five action items that implement it.

- 114. Objective H:** Improve the balance in the city's population by attracting a proportionate share of the region's families with children in order to encourage stabilized neighborhoods and a vital public school system. The amendments support this objective. Objective I of Policy 5, Housing, calls for increasing the supply of housing attractive to families with children. Action H17 encourages developers of multi-dwelling housing projects to include useable outdoor space for residents, especially space designed for families and children.
- 115. Objective I:** Expand homeownership opportunities for existing residents in neighborhoods with homeownership rates lower than the regional average. The percentage of renters in Northwest Portland has decreased from 88% in 1980 to 83% in 2000, and, while this is considerably higher than the city's percentage of renters, 44% in 2000, this district has long provided an important reservoir of rental housing, much of it affordable to a wide range of income levels, in close proximity to the central core. Despite this favorable situation, the amendments support this objective. Objective A of Policy 5, Housing, calls for increasing the number of housing units in the district, including rental and ownership opportunities for current and future district residents. Objective H encourages an increase of ownership opportunities through new development rather than conversion of existing rental housing stock.
- 116. Objective J:** Expand multi-dwelling and rental housing opportunities in neighborhoods with homeownership rates higher than the regional average. This objective does not apply to the Northwest District because of the high rate – 83% - of rental housing in the district.
- 117. Objective K:** As neighborhoods evolve, discourage the involuntary displacement of low-income residents from their community, while expanding housing opportunities to create more balanced communities. In 1996, 19% of the population in Northwest Portland was below the federal poverty line, a figure close to the city's figure of 15%. The amendments support this objective for the reasons below.
- a. Policy 5, Housing, calls for retaining the district's existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size.
 - (1) Objective B calls for increasing the supply of affordable housing and housing for those with special needs.
 - (2) Objective F encourages renovation and rehabilitation of existing housing as an alternative to clearance
 - (3) Objective H encourages new opportunities for home ownership through new development rather than conversion of rental stock.
 - b. Objective E of Policy 14, Eastern Edge Subarea, calls for protecting existing housing from conversion to other uses.
 - c. The plan amends Policy 15, Goose Hollow, of the *Central City Plan* by adding a provision to Further Statement A to encourage the retention of existing housing.
 - d. Policy 5, Housing, contains five actions that support this objective. Action H4 calls for lobbying the State Legislature to allow the imposition of inclusionary zoning provisions. Action

H6 calls for working with City officials to codify the local condominium conversion ordinance. Action H7 calls for working with state legislators to change state laws to control excessive rent increases. Action H11 encourages the replacement of low income, very low income, and special needs housing units with similar units on a one per one basis. Action H13 encourages managers of rental properties to accept households with housing vouchers that subsidize their rents.

118. **Policy 4.8, Regional Housing Opportunities**, calls for ensuring opportunities for economic and racial integration throughout the region by advocating for the development of a range of housing options affordable to all income levels throughout the region. The amendments support this policy for the reasons cited in the findings for *Comprehensive Plan* Policy 4.7, Balanced Communities and its objectives.
119. **Objective A:** Support programs that increase opportunities for minorities, low-income people, and people in protected classes to gain access to housing throughout the region. The amendments support this objective. Policy 5, Housing, contains the following action items that increase opportunities for minorities, low-income people, and people in protected classes to gain access to housing in Northwest Portland. H4 calls for lobbying the State Legislature to allow the imposition of inclusionary zoning provisions. When allowed, create an inclusionary zoning provision that ensures new housing developments include units affordable to households with incomes at or below 60 percent of median. H5 calls for exploring resource development opportunities, such as the City Lights Program, for the development of moderate-income rental housing in the district. Action H12 calls for the active support of not-for-profit and other organizations that develop housing in the district for low- to moderate-income people. Action H13 encourages managers of rental properties to accept households with housing vouchers that subsidize their rents.
120. **Objective B:** Prohibit discrimination in selling, renting, leasing, or subleasing residential real estate on the basis of an individual's race, color, age if over 18, gender, marital status, familial status, sexual orientation, religion, national origin, source of income, or disability. The amendments support this objective because there is nothing in this plan enables discrimination in selling, renting, leasing or subleasing residential real estate. Action H13 encourages managers of rental properties to accept households with housing vouchers that subsidize their rents.
122. **Objective C:** Reduce barriers to the siting of housing for the elderly or people with disabilities at residential locations throughout the city that have access to needed social services and transit while recognizing that different populations have different needs. The amendments support this objective for the following reasons.
 - a. Objective B of Policy 5, Housing, calls for increasing the supply of housing that is affordable, accessible to a full range of incomes, and provides for special needs housing.
 - b. Action H2 calls for creating new and preserving existing affordable housing units for low- and moderate-income people as well as those with special needs. Action H4 calls for lobbying the State Legislature to allow the imposition of inclusionary zoning provisions. When allowed, create an inclusionary zoning provision that ensures new housing developments include units affordable to households with incomes at or below 60 percent of median.
123. **Objective D:** Ensure the development of housing accessible to people with physical limitations, and the adaptation of existing homes to improve accessibility for people with disabilities. The amendments support this objective for the following reasons.

- a. Objective B of Policy 5, Housing, calls for increasing the supply of housing that is affordable, accessible to a full range of incomes, and provides for special needs housing.
 - b. Action H2 calls for creating new and preserving existing affordable housing units for low- and moderate-income people as well as those with special needs. Action H4 calls for lobbying the State Legislature to allow the imposition of inclusionary zoning provisions. When allowed, create an inclusionary zoning provision that ensures new housing developments include units affordable to households with incomes at or below 60 percent of median. Require at least 15 percent of the housing units in a multi-dwelling project to be affordable.
- 124. Policy 4.10, Housing Diversity**, calls for promoting creation of a range of housing types, prices, and rents to 1) create culturally and economically diverse neighborhoods; and 2) allow those whose housing needs change to find housing that meets their needs within their existing community. The amendments support this policy and its objectives for the reasons below. In addition findings for *Comprehensive Plan* Policy 4.7, Balanced Communities and its objectives also support this policy and its objectives.
- a. Policy 5, Housing calls for retaining the district's existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size, and includes nine objectives and 22 action items supporting and implementing this policy.
- 125. Objective A:** Keep Portland inviting to households with children by ensuring through public and private action the availability of housing that meets their needs throughout the city. The amendments support this objective for the following reasons.
- a. Objective H of Policy 5, Housing, calls for increasing the supply of housing attractive to families with children. Action H17 encourages developers of multi-dwelling housing projects to include useable outdoor space for residents, especially space designed for families and children.
 - b. Objective G of Policy 1, Land Use, promotes development that includes useable public outdoor spaces such as plazas, play areas, gardens, and pocket parks. LU1 considers developing a program with tax incentives for developers who dedicate land for a public open space. LU2 encourages the City to create a program that requires developers of new housing or commercial projects to either include public open space within their project or make a contribution to a new park land acquisition fund.
- 126. Objective B:** Support homeownership opportunities in new multi-dwelling housing by encouraging the creation of condominiums, cooperatives, mutual housing associations, and limited equity cooperatives. The amendments support this objective for the following reasons.
- a. Objective H of Policy 5, Housing encourages an increase of ownership opportunities through new development rather than conversion of existing rental housing stock.
 - b. The percentage of renters in Northwest Portland has decreased from 88% in 1980 to 83% in 2000, and, while this is considerably higher than the city's percentage of renters, 44% in 2000, this district has long provided an important reservoir of rental housing, much of it affordable to a wide range of income levels, in close proximity to the central core. Despite this favorable situation, the amendments support this objective. Policy 5, Housing, contains two objectives that support this objective: Objective A calls for increasing the number of housing units in the

district, including rental and ownership opportunities for current and future district residents. Objective H encourages an increase of ownership opportunities through new development rather than conversion of existing rental housing stock.

127. Objective C: Accommodate a variety of housing types that are attractive and affordable to potential homebuyers at all income levels. The amendments support this objective. Policy 5, Housing, which calls for retaining the district's existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size. Objective B calls for increasing the supply of housing that is affordable, accessible to a full range of incomes, and provides for special needs housing. Objective D encourages housing that accommodates a variety of living situations and a diverse population.

128. Objective D: Encourage the production of a range of housing types for the elderly and people with disabilities, including but not limited to independent living, assisted living, and skilled nursing care facilities. The amendments support this objective because there is nothing in the plan that would preclude the production of a range of housing types for the elderly and people with disabilities. Objective B calls for increasing the supply of housing that is affordable, accessible to a full range of incomes, and provides for special needs housing.

129. Objective E: Support opportunities for renter households by providing a range of housing types, sizes, and rent levels throughout the city. The amendments support this objective. The percentage of renters in Northwest Portland has decreased from 88% in 1980 to 83% in 2000, and, while this is considerably higher than the city's percentage of renters, 44% in 2000, this district has long provided an important reservoir of rental housing, much of it affordable to a wide range of income levels, in close proximity to the central core. The amendments support this objective for the reasons below:

- a. Policy 5, Housing, calls for retaining the district's existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size.
 - (1) Objective A calls for increasing the number of housing units in the district, including rental and ownership opportunities for current and future district residents.
 - (2) Objective B calls for increasing the supply of affordable housing and housing for those with special needs.
 - (3) Objective C calls for retaining the existing supply of rental housing units affordable to the district's low- and very low-income households.
 - (4) Objective D encourages housing developments that accommodate a variety of living situations and support the district's diverse population.

130. Objective F: Increase the public school population in Portland, preventing widespread school closures, and the consequent underutilization of public facilities. The amendments support this objective.

- a. Objective I of Policy 5, Housing, calls for increasing the supply of housing attractive to families with children. Action H17 encourages developers of multi-dwelling housing projects to include useable outdoor space for residents, especially space designed for families and children.

- b. Objective G of Policy 1, Land Use, promotes development that includes useable public outdoor spaces such as plazas, play areas, gardens, and pocket parks.

131. Policy 4.11, Housing Affordability, calls for promoting the development and preservation of quality housing that is affordable across the full spectrum of household incomes. The amendments support this policy for the following reasons.

- a. Policy 5, Housing, calls for retaining the district's existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size. Objective B calls for increasing the supply of housing that is affordable, accessible to a full range of incomes, and provides for special needs housing. H21 encourages residential development between NW Thurman and NW Kearney Streets and between NW 23rd and NW19th Avenues by establishing a residential bonus area. Allow additional bonus height for projects that include a percentage of affordable housing units. H22 calls for the application of the transit-oriented development (TOD) property tax abatement within the Northwest Plan District and encourages developers of affordable housing to take advantage of it.
- b. The expanded Northwest Plan District creates bonus floor area and building height provisions to encourage residential developments. Additional floor area of either 1:1 or 2:1, depending on the parcel size, and additional height up to 75 feet for residential development. The second bonus allows additional floor area of 1:1 and additional height up to 120 feet for affordable housing.
- c. The plan extends the transit-oriented tax abatement program to properties in a portion of the Northwest Plan District through amendments to Title 3.

132. Objective A: Include strategies and actions that encourage the provision of housing affordable to all income levels in neighborhood, and community plans, and other area plans that pertain to housing. The amendments support this objective for the following reasons.

- a. The expanded Northwest Plan District creates bonus floor area and building height provisions to encourage residential developments. Additional floor area of either 1:1 or 2:1, depending on the parcel size, and additional height up to 75 feet for residential development. The second bonus allows additional floor area of 1:1 and additional height up to 120 feet for affordable housing.
- b. The plan extends the transit-oriented tax abatement program to properties in a portion of the Northwest Plan District through amendments to Title 3.
- c. Objective B calls for increasing the supply of affordable housing and housing for those with special needs. Objective C calls for retaining the existing supply of rental housing units affordable to the district's low- and very low-income households.

133. Objective B: Ensure the availability of housing that meets the needs of all Portland households. The *Northwest District Plan* area cannot contain housing to meet the needs of all Portland households. But, within its 803 acres, the Northwest District already contains a diverse mixture of *Comprehensive Plan* and zoning designations that encompass the entire spectrum of residential land uses within its residential, commercial, and employment zones. The district contains low, medium and high-density single family (R10, R7, R5), low, medium and high density multi-family (R2, R1, RH), commercial (CS, CM, CN, CO, CX), and employment (EX) zones. All of these zones allow

housing; many of them already contain multi-dwelling units. The *Northwest District Plan* expands these possibilities by changing the *Comprehensive Plan* designation on a number of properties currently zoned General Industrial, IG, which does not allow housing, to Central Employment, EX, which does.

- 134. Objective C:** Encourage the development and use of housing construction technologies that streamline the housing construction process, reduce development costs and environmental impacts, and produce sound and durable housing. The amendments are not inconsistent with this objective for the following reasons.
- a. There is nothing in this plan that would prevent the development and use of housing construction technologies to streamline the housing construction process, reduce development costs and environmental impacts, and produce sound and durable housing
 - b. Action E9 calls for implementing incentive programs for the use of green building, eco-roof, and other low-impact techniques, such as on-site stormwater management, landscaping with native vegetation and porous pavements, in public and private development and redevelopment projects.
- 135. Objective D:** Promote conservation programs and energy-efficient practices and programs that reduce housing operating costs for energy, sewer, and water usage. Policy 11, Environment, contains two objectives and three actions that support this objective. Objective C promotes the use of innovative measures that improve air and water quality and energy efficiency. Objective E encourages recycling and the reduction of solid waste generation and litter in the district. E3 calls for identifying opportunities for retrofitting existing facilities and for innovative demonstration stormwater projects, especially on large commercial and institutional sites, with resource-conserving techniques, to reduce the need for additional infrastructure capacity. E8 calls for implementing stormwater mitigation measures to avoid the construction of new storm sewers. Action E9 calls for implementing incentive programs for the use of green building, eco-roof, and other low-impact techniques, such as on-site stormwater management, landscaping with native vegetation and porous pavements, in public and private development and redevelopment projects.
- 136. Objective F:** Pursue adequate financial resources to develop, maintain and preserve housing and housing assistance programs for households whose needs are not met by the housing market. The amendments support this objective for the following reasons.
- a. The plan extends the transit-oriented tax abatement program to properties in a part of the Northwest Plan District.
 - b. H5 calls for exploring resource development opportunities, such as the City Lights Program, for the development of moderate-income rental housing in the district.
 - c. H10 calls for forming partnerships among nonprofit, private housing developers, institutions, and social service providers to identify and develop special needs housing options that complement current services.
- 137. Objective G:** Narrow the gap between housing costs and income. Within the 5 census tracts within the Northwest District in 1996, the income distribution ranged from 66% of the City's median income to 163%. In 1996 rents in those 5 tracts ranged from \$400 to \$510, or 84% of the City's median rent to 107%. In the same year owner-occupied housing units were valued between

\$115,000, or 96% of the City median value to \$300,000. What this says is that the “gap” between housing costs and income varies throughout the district and actually is strikingly low, compared to other locations. There is nothing in this plan that would increase housing costs such that persons at the lower income levels will be forced out.

138. Policy 4.12, Housing Continuum, calls for ensuring that a range of housing from temporary shelters, to transitional, and to permanent housing for renters and owners is available, with appropriate supportive services for those who need them. The amendments support this policy and its objectives for the reasons below.

- a. Policy 5, Housing, calls for retaining the district’s existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size. Objective B calls for increasing the supply of affordable housing and housing for those with special needs.
- b. Policy 2, Institutions, calls for supporting institutional planning, programming, and development that provides educational, cultural, medical, religious, and social services and amenities in the Northwest District. Objective D calls for maintaining and augment facilities offering social and institutional services for community members. Objective J calls for utilizing institutional resources to encourage partnerships among nonprofits, private housing developers and social service providers. Objective K calls for expanding opportunities for institutions and community organizations to work together on programs beneficial to those who use their services.
- c. The plan extends the transit-oriented tax abatement program to properties in a part of the Northwest Plan District.
- d. H5 calls for exploring resource development opportunities, such as the City Lights Program, for the development of moderate-income rental housing in the district.
- e. H10 calls for forming partnerships among nonprofits, private housing developers, institutions, and social service providers to identify and develop special needs housing options that complement current services.

139. Policy 4.13, Humble Housing, calls for ensuring that there are opportunities for development of small homes with basic amenities to ensure housing opportunities for low-income households, members of protected classes, households with children, and households supportive of reduced resource consumption. The amendments are not inconsistent with this policy and its objectives because they do not do not inhibit opportunities for these kinds of housing.

140. Policy 4.14, Neighborhood Stability, calls for stabilizing neighborhoods by promoting: 1) a variety of homeownership and rental housing options; 2) security of housing tenure; and 3) opportunities for community interaction. The amendments support this policy for the following reasons.

- a. Policy 5, Housing, calls for retaining the district’s existing housing stock and mix of types and tenures, as well as promoting new housing opportunities that reflect the existing diversity of housing and support a population diverse in income, age, and household size.
- (1) Objective A calls for increasing the number of housing units in the district, including rental and ownership opportunities for current and future district residents.

- (2) Objective B calls for increasing the supply of affordable housing and housing for those with special needs.
 - (3) Objective C calls for retaining the existing supply of rental housing units affordable to the district's low- and very low-income households.
 - (4) Objective D encourages housing developments that accommodate a variety of living situations and support the district's diverse population.
- b. Policy 10, Quality of Life, and its objectives call for strengthening the sense of community and ensuring that cultural, educational and recreational resources continue to be a vital part of public life.
- 141. Objective A:** Promote and maintain homeownership options within neighborhoods. Objective A of Policy 5, Housing calls for increasing the number of housing units in the district, including rental and ownership opportunities for current and future district residents. Objective H encourages home ownership through new development.
- 142. Objective B:** Promote housing opportunities that build a sense of community, civic involvement and neighborhood pride. Policy 10, Quality of Life calls for strengthening the sense of community.
- 143. Objective D:** Encourage the retention of existing rental housing at rent levels affordable to area residents. Objective B of Policy 5, Housing calls for increasing the supply of affordable housing and housing for those with special needs. Objective C calls for retaining the existing supply of rental housing units affordable to the district's low- and very low-income households
- 144. Objective E:** Increase opportunities for construction, acquisition, or preservation of housing affordable to area residents in locations where rising property values and gentrification contribute to their involuntary displacement. The findings for *Comprehensive Plan* Policy 4.11, housing affordability and its objectives support this objective.
- 145. Objective F:** Require the property owner to assist in the relocation of low-income residents whenever multi-dwelling buildings are converted to condominiums. The amendments are not inconsistent with this objective because they do nothing to prohibit such requirements.
- 146. Objective G:** Promote good neighbor relationships between housing developers and their neighbors. The amendments support this policy. Policy 12, Business and residential interaction and its objectives call for cooperation between businesses and residents in the district, including formation of good neighbor agreements.
- 147. Objective K:** Enhance the quality of the design of new infill residential development. The amendments support this objective for the reasons below.
- a. Policy 7, Urban Design and its objectives call for new development to respect the urban design and architectural principles that define the districts character.
 - b. The *Northwest District Plan* extends the application of the Design 'd' Overlay Zone to all properties within the expanded Northwest Plan District. The Design Overlay Zone promotes the conservation, enhancement and continued vitality of areas with special scenic, architectural and cultural value, such as the Northwest District. Most new development in the zone will be

required to go through design review, historic design review or comply with the Community Design Standards.

- c. The *Northwest District Plan* includes revisions to the *Community Design* Guidelines that will help ensure the preservation the district's unique urban character and sense of place. New "Desired Characteristics and Traditions" statements that identify desired architectural and design features and relationships in the district have been developed to assist in the application of Community Design Guideline P1, Plan Area Character.

148. Goal 5, Economic Development, calls for promotion of a strong and diverse economy that provides a full range of employment and economic choices for individuals and families in all parts of the city. The amendments support this goal and its policies and objectives for the reasons below. Findings for Comprehensive Plan Goal 2, Urban Development and its policies and objectives and for State Goal 9, Economic Development also support this Goal and its policies and objectives.

- a. Policy 6, Business and Economic Development, calls for fostering a healthy and prosperous business community that serves the needs of the district, as well as retaining and expanding the diverse mix of businesses and jobs. Its nine objectives each address aspects of business and economic development to ensure adequate opportunities for a variety of economic activities vital to public health, welfare, and prosperity. Its 10 action items implement the policy and objectives.
 - (1) Objective B calls for accommodating the establishment, retention, and growth of institutions that serve district residents and employees.
 - (2) Objective J calls for utilizing the resources of institutions to encourage partnerships among non-profit, private housing developers, and social service providers.
 - (3) Action IN9 calls for institutions to conduct outreach activities in the community that promote institutional employment opportunities for local residents.
- c. Policy 13, Transition Subarea, encourages a mix of housing, commercial, institutional, open space, and light industrial uses.
 - (1) Objective D calls for protecting existing industrial firms in the subarea from being forced to relocate out of the area.
 - (2) Objective K calls for protecting the Guild's Lake Industrial Sanctuary by locating activities and uses that are compatible with industry at the northern edge of the subarea.
 - (3) Actions TS3, TS10, and TS11 propose strategies for retaining existing industrial firms and attracting companies that provide living-wage jobs.
- d. The plan proposes to ensure the continuation of employment and industrial uses on properties zoned Central Employment north of the I-405 by including a provision in the Northwest Plan District to restrict residential development to 20% of the total floor area.

- e. Policy 14, Eastern Edge Subarea, calls for fostering the development of the Eastern Edge as a transition between the more urban Central City and the Northwest District.
 - (1) Objective B encourages the location of businesses that serve local needs along NW 18th and NW 19th Streets.
 - (2) Objective C calls for fostering the establishment and growth of firms that provide living-wage jobs in this subarea.
 - (3) Objective E calls for protecting existing industrial firms in the subarea from being forced to relocate out of the area.
 - (4) Actions EE3 and EE4 encourage existing companies to remain and companies that provide living-wage jobs to locate in the subarea.

149. Policy 5.1, Urban Development and Revitalization, calls for encouraging investment in the development, redevelopment, rehabilitation and adaptive reuse of urban land and buildings for employment and housing opportunities. The amendments support this policy for the reasons below. Findings for Comprehensive Plan Goal 2, Urban Development and its policies and objectives and for State Goal 9, Economic Development also support this policy and its objectives.

- a. Policy 1, Land Use, calls for participating in the growth of the metropolitan region in a manner that protects and enhances the quality of life in the Northwest District. The following objectives help maintain natural resources by accommodating growth and development in urban areas and by protecting and conserving rural area natural resources:
 - 1) Objective A supports land use strategies and developments that increase the amount of housing in the district.
 - 2) Objective B supports land use strategies and developments that enhance employment opportunities in the district.
 - 3) Objective C calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line in order to make efficient use of existing infrastructure.
- b. Policy 5, Housing and its objectives call for retaining existing housing and promoting new housing that reflects the existing diversity of housing. Objective F calls for renovation and rehabilitation as the preferred alternative to clearance and redevelopment of existing housing.
- c. Policy 6, Business and Economic Development, calls for fostering a healthy and prosperous business community that serves the needs of the district, as well as retaining and expanding the diverse mix of businesses and jobs. Its nine objectives each address aspects of business and economic development to ensure adequate opportunities for a variety of economic activities vital to public health, welfare, and prosperity. Its 10 action items implement the policy and objectives.
- c. The plan supports increased employment and housing potential by applying the Central Employment (EX) Comprehensive Plan Designation and zone to formerly IG1-designated areas within the Transition Subarea primarily south of I-405/Hwy 30. The EX zone allows a broad array of industrial, commercial and residential uses at urban intensities.

- d. The plan supports more intensive development along West Burnside Street by extending Central Commercial (CX) zoning and extending the Central City Plan District west to NW 24th Avenue. Housing development is encouraged on a portion of this area by the application of the Bonus Height for Housing only and the Residential Bonus Target Area as shown on maps 510-3 and 510-4.

150. Objective C: Retain industrial sanctuary zones and maximize use of infrastructure and intermodal transportation linkages with and within these areas. The amendments support this objective for the reasons below. Findings for Comprehensive Plan Policy 2.14, Industrial Sanctuaries also support this objective.

- a. The *Northwest District Plan (NWDP)* is the final piece of a two-part comprehensive land use planning effort for Northwest Portland from the St. Johns Bridge to West Burnside. The first part, the *Guild's Lake Industrial Sanctuary Plan*, was adopted in 2001 and provides a policy framework to preserve and protect industrial sanctuary lands north of NW Vaughn for manufacturing and other industrial uses. The *Northwest District Plan* provides the framework for preserving and enhancing residential and mixed-use areas south of NW Vaughn. The *NWDP* also provides for a broader mix of uses, including commercial and residential, in the Transition Subarea, where a transition from an industrial emphasis has been found to be appropriate, given long-term economic and land use trends, the large number of existing non-industrial uses, and extensive stakeholder input.
- b. In 1996, the City Council recommended that the four northwest neighborhood associations with industrial zoning agree on issues relating to long-term industrial land use. A joint working group was formed, the Northwest Industrial Sanctuary Working Group (SWG). In 1999, the SWG coalition reached consensus and recommended the creation of an industrial plan district, bounded on the south by NW Vaughn. The group also recommended that land south of NW Vaughn was appropriate for a transition out of industrial use. Taken together, the *Northwest District Plan* and the *Guild's Lake Industrial Sanctuary Plan* implement these recommendations and are intended to facilitate the continuing evolution of Northwest Portland south of Vaughn Street into a diverse urban neighborhood, while further strengthening protections to the industrial land north of Vaughn Street.
- c. At the time of the adoption of the *Guild's Lake Industrial Sanctuary Plan (GLISP)* in 2001, City Council directed staff to address issues pertaining to the interface between industrial and nonindustrial lands along NW Vaughn Street as part of the *Northwest District Plan* process, and to refine as needed GLISP policies and regulations (see GLISP action item L10).
- d. Policy 13, Transition Subarea, contains two objectives that support this objective. Objective D calls for protecting existing industrial firms in the subarea from being forced to relocate out of the area. Objective K calls for protecting the Guild's Lake Industrial Sanctuary by locating activities and uses that are compatible with industry at the northern edge of the subarea. Actions TS3, TS10, and TS11 propose strategies for retaining existing industrial firms and attracting companies that provide living-wage jobs.
- e. The plan proposes to ensure the continuation of employment and industrial uses on properties zoned Central Employment north of the I-405 by including a provision in the Northwest Plan District to restrict residential development to 20% of the total floor area.

- f. The plan retains the General Industrial zoning on properties within the Guild's Lake Industrial Sanctuary and adds the *Comprehensive Plan* designation of Mixed Employment. Manufacturing and production are allowed uses under both the General Industrial and Mixed Employment designations.
 - g. The plan retains the General Industrial zoning for most of the properties north of I-405/Hwy30. Manufacturing and production are allowed uses under both the General Industrial and Central Employment designations.
- 151. Objective D:** Provide for a diversity of housing types and price ranges to meet the varied needs of Portland citizens, including market, moderate and low income housing. The findings for *Comprehensive Plan* Policy 5, Housing, and its objectives and actions support this objective, as do those for State Goal 10, Housing.
- 152. Objective E:** Define and develop Portland's cultural, historic, recreational, educational and environmental assets as important marketing and image-building tools of the city's business districts and neighborhoods. The amendments support this objective for the reasons below. Findings for State Goal 5, Open Space, Scenic and Historic Areas, and Natural Resources, Goal 6, Air, Water and Land Resource Quality, and Goal 8, Recreational Needs also support this objective.
- a. Policy 11, Environment and its objectives, calls for protecting and enhancing the natural resources of the district.
 - b. Policy 8, Historic Preservation and its objectives, calls for identifying, preserving, and protecting historic resources and supporting development that enhances the historic qualities of the district.
 - c. Policy 10, Quality of Life and its objectives, calls for strengthening the sense of community and ensuring that cultural, educational and recreational resources continue to be a vital part of public life.
 - d. The Plan's Zoning Code amendments, including its main street development standards, surface parking limitations and prohibition of drive-through land uses are designed to reinforce the historic pedestrian orientation and urban character of the district's streetscapes.
 - e. The *Northwest District Plan* extends the application of the Design 'd' Overlay Zone to all properties within the expanded Northwest Plan District. The Design Overlay Zone promotes the conservation, enhancement and continued vitality of areas with special scenic, architectural and cultural value, such as the Northwest District. Most new development in the zone will be required to go through design review, historic design review or comply with the Community Design Standards.
 - f. Objective C of Policy 2, Institutions calls for maintaining and augmenting facilities and programs that provide educational, recreational and cultural resources and opportunities.
 - g. Objective I of Policy 6, Business and Economic Development calls for building on the unique identity and economic strength of the district's main streets.
- 153. Objective F:** Recognize and support environmental conservation and enhancement activities for their contribution to the local economy and quality of life for residents, workers and wildlife in the city. The amendments support this objective for the reasons below and for the reasons cited in the

findings for State Goal 5, Open Space, Scenic and Historic Areas, and Natural Resources, Goal 6, Air, Water and Land Resource Quality and Comprehensive Plan Policy 8, Environment.

- a. Policy 11, Environment and its objectives, calls for protecting and enhancing the natural resources of the district.
 - (1) Objective A calls for developing and operating public facilities and infrastructure to be sustainable and to address multiple objectives, including public health and safety, natural resource protection and recreation.
 - (2) Objective B promotes measures that encourage landscaping with native species.
 - (3) Objective C promotes the use of innovative measures that improve air and water quality and energy efficiency.
 - (4) Objective D promotes improved environmental connections between open spaces and the Willamette River.
 - (5) Objective E encourages recycling and the reduction of solid waste generation and litter in the district.
- b. Policy 10, Quality of Life, calls for strengthening the sense of community and ensuring that cultural, educational and recreational resources continue to be a vital part of public life. Objective A calls for the protection of Forest Park as a natural and recreational resource. Objective D calls for improved access to parks, natural areas and the Willamette River.
- c. The Open Space *Comprehensive Plan* designation and zone is placed on several properties owned by the City of Portland, thus ensuring their long-term preservation as open space and environmental resources.

154. Policy 5.2, Business Development, calls for sustaining and supporting business development activities to retain, expand, and recruit businesses. The amendments support this policy for the reasons below.

- a. Policy 6, Business and Economic Development, calls for fostering a healthy and prosperous business community that serves the needs of the district, as well as retaining and expanding the diverse mix of businesses and jobs.
 - (1) Objective A promotes the formation of new and the growth of established businesses.
 - (2) Objective C supports the growth of neighborhood-serving retail businesses while responding to the regional nature of the Northwest retail and service market.
 - (3) Objective D supports the provision of living wage jobs and attaining the city's economic and employment goals.
 - (4) Objective H recognizes the important role that large employers play in providing employment opportunities.

- (5) Objective I calls for building on the unique identity and economic strength of the district's main streets.

Key action items include ED1 which calls for investigating the formation of an economic improvement district, ED6 which calls for incentives and technical assistance for job and firm retention, and ED7 which encourages industrial firms needing to expand or move to relocate within the City of Portland.

- b. Objective B of Policy 1, Land Use, supports land use strategies and developments that enhance employment opportunities.
 - c. Policy 2, Institutions, recognizes the importance of institutions to the economy and to public health, welfare, and prosperity.
 - d. Policy 14, Eastern Edge, contains two objectives that support this policy. Objective C calls for fostering the establishment and growth of firms that provide living-wage jobs in this subarea. Objective E calls for protecting existing industrial firms in the subarea from being forced to relocate out of the area. Actions EE3 and EE4 encourage existing companies to remain and companies that provide living-wage jobs to locate in the subarea
- 155. Objective B:** Incorporate economic considerations in long-range planning activities undertaken by the Bureau of Planning. The *Northwest District Plan* addresses economic concerns in the following ways.
- a. The *Northwest District Plan* process included many avenues for input from business community stakeholders. The Northwest Planning Citizen Advisory Committee (CAC) met regularly throughout the planning process, advising staff and providing written and oral input. The CAC included community residents, business people, and property owners from the Northwest District, Northwest Industrial, Pearl District, Hillside, Goose Hollow and Linnton neighborhoods. The Vaughn Corridor Focus Group (VCFG) advised staff on amendments affecting land uses in the NW Vaughn Street corridor area and included property owners and their representatives, community stakeholders, and technical advisors from public agencies. A parking issues working group advised staff on parking-related plan proposals and included representatives from the Northwest District Association and Nob Hill Business Association and representatives from the Portland Office of Transportation's *On-Street Parking Plan* Citizen Advisory Committee. A development community group, that included private sector real estate developers, advised staff on the zoning code amendment proposals. Throughout the planning process, staff sought input from affected neighborhood and business associations by attending meetings, making presentations, and exchanging ideas. These groups included the Northwest District (NWDA), Northwest Industrial (NINA), Pearl District (PDNA), Hillside (HNA), and Goose Hollow-Foothills League (GHFL) Neighborhood Associations and the Nob Hill Business Association (NHBA). Staff met individually with district property owners and business people whenever asked.
 - a. Policy 6, Business and Economic Development calls for fostering a healthy and prosperous business community that serves the needs of the district, as well as retaining and expanding the diverse mix of businesses and jobs. Nine objectives and 10 action items support and implement the policy.
 - b. Policy 3, Transportation, calls for providing a full range of transportation options for moving people and goods, thereby supporting neighborhood livability and commerce.

- c. Policy 4 Parking calls for providing and managing parking to serve the community while protecting livability. Objective B calls for providing for efficient use of on- and off-street parking through such means as “shared use” of parking facilities and minimizing the number and size of curb cuts. Parking objective C calls for accommodating a limited amount of additional structured off-street parking to serve local residents and businesses, while mitigating for negative impacts.
- 156. Policy 5.3, Community-Based Economic Development and its objectives,** call for supporting community-based economic development initiatives consistent with the *Comprehensive Plan* and compatible with neighborhood livability. The amendments support this policy because the *Northwest District Plan* process included numerous means for input from community-based business and neighborhood organizations. The findings for State Goals 1, Citizen Involvement and 9, Economic Development also support this policy and its objectives.
- 157. Objective A:** calls for assisting community coalitions to implement development objectives and programs of adopted plans. The *Northwest District Plan* supports this objective because the planning process included a broad representation from community and business organizations.
- 158. Objective B:** calls for coordinating activities with other governments and service providers to implement adopted plans. The *Northwest District Plan* supports this objective because the planning process included a broad representation from community and business organizations as well as other bureaus government agencies.
- 159. Objective C:** calls for evaluating the impact of zoning regulations on neighborhood businesses and for involving business and neighborhood associations in that evaluation. The *Northwest District Plan* supports this objective because the planning process included many avenues for input from business and community stakeholders. The Northwest Planning Citizen Advisory Committee (CAC) met regularly throughout the planning process, advising staff and providing written and oral input. The CAC included community residents, business people, and property owners from the Northwest District, Northwest Industrial, Pearl District, Hillside, Goose Hollow and Linnton neighborhoods. The Vaughn Corridor Focus Group (VCFG) advised staff on amendments affecting land uses in the NW Vaughn Street corridor area and included property owners and their representatives, community stakeholders, and technical advisors from public agencies. A parking issues working group advised staff on parking-related plan proposals and included representatives from the Northwest District Association and Nob Hill Business Association and representatives from the Portland Office of Transportation’s *On-Street Parking Plan* Citizen Advisory Committee. A development community group, that included private sector real estate developers, advised staff on the zoning code amendment proposals. Throughout the planning process, staff sought input from affected neighborhood and business associations by attending meetings, making presentations, and exchanging ideas. These groups included the Northwest District (NWDA), Northwest Industrial (NINA), Pearl District (PDNA), Hillside (HNA), and Goose Hollow-Foothills League (GHFL) Neighborhood Associations and the Nob Hill Business Association (NHBA). Staff met individually with district property owners and business people whenever asked.
- 160. Objective D** Calls for encouraging consensus-building activities at the community and neighborhood level. The Northwest District Association supports this objective for the following reasons:
- a. Objective F of Policy 10, Quality of life encourages residents and businesses to participate in planning efforts for entertainment and recreation facilities in the district.

- b. Policy 12 Business and Residential Interaction and its objectives call for fostering cooperation and communication between business and residential interests in the district and for creative, community-based approaches to problem solving.

161. Policy 5.4, Transportation System, calls for promotion of a multi-modal regional transportation system that encourages economic development. The amendments support this policy and its objectives for the reasons below. Findings for State Goal 12, Transportation also support this policy and its objectives.

- a. Policy 3, Transportation, calls for providing a variety of transportation option for the movement of people and goods to improve opportunities for work, trade, and social contact and to reduce reliance on the automobile. The policy contains 23 objectives and 47 action items to implement the policy.
 - (1) Objective A calls for increasing the availability of, and incentives to use alternatives to the automobile.
 - (2) Objective B calls for maintaining, and re-establishing the historic street grid, for example, by re-establishing streets or pedestrian connections through existing superblocks.
 - (3) Objectives C, D and E call for providing safe and convenient access to and improved frequency of service and route coverage of public transportation services and promotes their use.
 - (4) Objective F calls for maintaining, improving, and expanding pedestrian and bicycle connections and minimizing conflicts between motorized and non-motorized transportation.
 - (5) Objective G calls for enhancing main streets and the Portland Streetcar line as key pedestrian places.
 - (6) Objective H calls for supporting bicycle use in the district by providing convenient facilities, such as parking and other support services.
 - (7) Objective I calls for preserving the local circulation function of streets that are classified as Local Service Traffic Streets in the Transportation Element of the *Comprehensive Plan* and encourage through-traffic to use streets that are consistent with their traffic classifications.
 - (8) Objectives J, K and L call for avoiding street improvements in residential and commercial areas that are designed to accommodate increased vehicular traffic, discouraging through-commuter and truck traffic in residential zones, and for the use of traffic calming measures to ensure the appropriate functioning of streets, while discouraging street closures.
- b. Objective E of Policy 16, Willamette Heights Subarea, calls for maintaining or improving public transit service to Willamette Heights. Action WH3 of this policy calls for improving pedestrian connections through Willamette Heights to Forest Park.
- c. Policy 15, Thurman-Vaughn Subarea, contains two actions that support this goal. Action TV1 calls for encouraging PDOT to improve NW Vaughn and NW Thurman Streets and NW 26th

Avenue as pedestrian ways. Action TV3 calls for widening sidewalks along NW Vaughn Street, where possible.

- d. Policy 13, Transition Subarea, contains four objectives that support this goal. Objective E calls for re-establishing key transportation system connections through the subarea. Objective F calls for implementing multi-modal transportation improvements that address circulation and safety needs. Objective G calls for improving connections through the subarea and to the Willamette River. Objective H calls for supporting additional transit services and facilities to meet the growing needs of the subarea. Three action items implement these objectives.
 - e. The amendments include a Master Street Plan that identifies the existing and preferred future street layout for the study area. The Master Street Plan will be incorporated into the Transportation System Plan and, as it is implemented, will provide increased connectivity by establishing new street connections and extending the historic street grid.
 - f. Transportation system modeling taking into account *Northwest District Plan* zoning, as well as updated employment and housing assumptions in areas adjacent to the study area, projects increased traffic flows and congestion in certain parts of the transportation system in the year 2020. It also projects an improved “mode split” for non-automobile modes. *Northwest District Plan* traffic mitigation provisions include the following actions:
 - Retaining IG1 zone in northern portion of Transition Subarea
 - Limiting commercial uses and encouraging housing in Transition Subarea
 - Limiting retail uses in Transition Subarea
 - Eliminating minimum parking space requirements
 - Limiting access to parking along NW Vaughn
 - Increasing connectivity through NW Master Street Plan
 - Surface parking restrictions
 - Support for Transportation Demand Management (TDM) measures, including formation of a TMA, transit subsidies, extending fareless square, and promoting carsharing.
 - Support for increased transit service including improved headways and expanded service
 - Proposals for Transportation System Management (TSM) improvements, e.g. traffic control measures
 - Planning and support for pedestrian and bicycle system improvements
 - Implementing a NW Transportation Fund to help fund transportation system improvements in the Transition Subarea and the GLIS Subdistrict B areas.
- 162. Objective C:** Work closely with public agencies, such as Tri-Met, and the private sector to deliver an efficient and effective transportation system and network. Improve transit connections between residential communities and work sites. The amendments support this objective for the following reasons:
- a. The planning process included the active participation of TriMet and the Portland Office of Transportation.
 - b. Policy 3, Transportation, calls for providing a variety of transportation options for the movement of people and goods to improve opportunities for work, trade, and social contact and to reduce reliance on the automobile. The policy contains 23 objectives and 47 action items to implement the policy.

- (1) Objective A calls for increasing the availability of, and incentives to use alternatives to the automobile.
 - (2) Objectives C, D and E call for providing safe and convenient access to and improved frequency of service and route coverage of public transportation services and promotes their use.
 - c. Objective E of Policy 16, Willamette Heights Subarea, calls for maintaining or improving public transit service to Willamette Heights. Action WH3 of this policy calls for improving pedestrian connections through Willamette Heights to Forest Park.
- 163. Objective D:** Support transit-supportive development and redevelopment along designated transit streets and in the vicinity of light rail stations. The amendments support this objective for the reasons below.
- a. Generally, the plan area is very well served by public transit, with the entire area within one-quarter mile of a transit line. The existing and recommended zoning designations near main streets, the Portland streetcar line and other transit streets are primarily: Storefront Commercial (CS), Central Employment (EX), high density multi-dwelling residential (RH), Mixed Commercial (CM), medium density multi-dwelling residential (R1), and low density multi-dwelling residential (R2) and Central Commercial (CX). All of these designations are supportive of public transit.
 - b. The area north of the I-405 is less well served by transit at this time compared to other parts of the district. In this area, industrial zoning is retained except for a small area near I-405/Hwy 30, where residential development is restricted to 20% of the total floor area for properties zoned EX.
 - c. The plan supports more intensive commercial development along West Burnside Street, which is well served by transit by extending Central Commercial (CX) zoning and extending the Central City Plan District west to NW 24th Avenue.
 - d. The Northwest Plan District includes provisions to allow a limited amount of retail development in the RH zone along the streetcar line.
 - e. Objective C of Policy 1, Land Use calls for concentrating a mix of higher intensity residential and commercial development along main streets, which are well served by transit, and the Portland streetcar line.
- 164. Objective E:** Promote safe and pleasant bicycle and pedestrian access to and circulation within commercial areas. Provide convenient, secure bicycle parking for employees and shoppers. The amendments support this objective for the reasons below.
- a. Policy 3, Transportation, calls for providing a variety of transportation option for the movement of people and goods to improve opportunities for work, trade, and social contact and to reduce reliance on the automobile. The policy contains 23 objectives and 47 action items to implement the policy.
 - (1) Objective A calls for increasing the availability of, and incentives to use alternatives to the automobile.

- (2) Objective B calls for maintaining, and re-establishing the historic street grid, for example, by re-establishing streets or pedestrian connections through existing superblocks.
 - (3) Objective F calls for maintaining, improving, and expanding pedestrian and bicycle connections and minimizing conflicts between motorized and non-motorized transportation.
 - (4) Objective G calls for enhancing main streets and the Portland Streetcar line as key pedestrian places.
 - (5) Objective H calls for supporting bicycle use in the district by providing convenient facilities, such as parking and other support services.
 - (6) Objectives J, K and L call for avoiding street improvements in residential and commercial areas that are designed to accommodate increased vehicular traffic, discouraging through-commuter and truck traffic in residential zones, and for the use of traffic calming measures to ensure the appropriate functioning of streets, while discouraging street closures.
- 165. Objective F:** Encourage a wide range of goods and services in each commercial area in order to promote air quality and energy conservation. The amendments are not inconsistent with this objective because they do nothing to prevent provision of a wide range of goods and services in each commercial area.
- 166. Objective G:** Pursue special opportunities for alternative modes of transportation to serve as attractors themselves. Such projects include water taxis, streetcars and bicycle/pedestrian facilities and amenities. The amendments support this objective because they support the streetcar line as an important focus for development and commercial activities and as a key pedestrian place.
- 167. Objective H:** Pursue transportation and parking improvements that reinforce commercial, industrial and residential districts and promote development of new commercial, industrial, and residential districts. The amendments support this objective for the reasons below.
- a. Policy 3, Transportation, calls for providing a variety of transportation options for the movement of people and goods to improve opportunities for work, trade, and social contact and to reduce reliance on the automobile. The policy contains 23 objectives and 47 action items to implement the policy.
 - (1) Objective B calls for maintaining, and re-establishing the historic street grid, for example, by re-establishing streets or pedestrian connections through existing superblocks.
 - (2) Objective F calls for maintaining, improving, and expanding pedestrian and bicycle connections and minimizing conflicts between motorized and non-motorized transportation.
 - (3) Objective G calls for enhancing main streets and the Portland Streetcar line as key pedestrian places.
 - (4) Objective H calls for supporting bicycle use in the district by providing convenient facilities, such as parking and other support services.

- (5) Objective I calls for preserving the local circulation function of streets that are classified as Local Service Traffic Streets in the Transportation Element of the *Comprehensive Plan* and encourage through-traffic to use streets that are consistent with their traffic classifications.
 - (6) Objectives J, K and L call for avoiding street improvements in residential and commercial areas that are designed to accommodate increased vehicular traffic, discouraging through-commuter and truck traffic in residential zones, and for the use of traffic calming measures to ensure the appropriate functioning of streets, while discouraging street closures.
- b. Action WH3 of Policy 16, Willamette Heights Subarea calls for improving pedestrian connections through Willamette Heights to Forest Park.
 - c. Policy 15, Thurman-Vaughn Subarea, contains two actions that support this goal. Action TV1 calls for encouraging PDOT to improve NW Vaughn and NW Thurman Streets and NW 26th Avenue as pedestrian ways. Action TV3 calls for widening sidewalks along NW Vaughn Street, where possible.
 - d. Policy 13, Transition Subarea, contains four objectives that support this goal. Objective E calls for re-establishing key transportation system connections through the subarea. Objective F calls for implementing multi-modal transportation improvements that address circulation and safety needs. Objective G calls for improving connections through the subarea and to the Willamette River. Objective H calls for supporting additional transit services and facilities to meet the growing needs of the subarea. Three action items implement these objectives.
 - e. The amendments include a Master Street Plan that identifies the existing and preferred future street layout for the study area. The Master Street Plan will be incorporated into the Transportation System Plan and, as it is implemented, will provide increased connectivity by establishing new street connections and extending the historic street grid.

168. Policy 5.6, Area Character and Identity Within Designated Commercial Areas, calls for promotion and enhancement of the special character and identity of Portland's designated commercial areas. The amendments support this policy because for the following reasons.

- a. Objectives C and D of Policy 1, Land Use call for concentrating a mix of higher intensity residential, commercial and retail development along main streets, which are the district's historic commercial cores, the location of the majority of the district's commercial zoning, and the source of an important part of its urban character and identity.
- b. Objective H of Policy 2, institutions, encourages institutions to along main streets to orient active uses to these street frontages, in support of the historic urban character of these commercial areas.
- c. Policy 6, Business and Economic Development, calls for fostering a healthy and prosperous business community that serves the needs of the district, as well as retaining and expanding the diverse mix of businesses and jobs. Objective C calls for supporting the establishment and growth of retail businesses that provide goods and services needed by district residents and employees while responding to the regional nature of the Northwest retail and service market. Objective D calls Objective I calls for building on the unique identity and economic strength provided by the district's main streets.

- d. Policy 7, Urban Design and its objectives call for development to respect the urban design principals that define the human-scaled, pedestrian-oriented character of the district. Elements highlighted in the objectives include acknowledgement of the existing urban fabric, continuous building frontages, and a high level of design quality. Objective C calls for preserving and enhancing the distinct character of different parts of the district.
 - e. Police 8, Historic Preservation and its objectives call for protecting the historic resources and qualities of the district.
 - f. The Plan's Zoning Code amendments, including its main street development standards, surface parking limitations and prohibition of drive-through land uses are designed to reinforce the historic pedestrian orientation of the district's streetscapes.
 - g. The *Northwest District Plan* includes revisions to the *Community Design* Guidelines that will help ensure the preservation the district's unique urban character and sense of place and identity. New "Desired Characteristics and Traditions" statements have been developed to assist in the application of Community Design Guideline P1, Plan Area Character. The statements for the "Streetcar Main Streets" urban character area, where the majority of the district's commercial activity and zoning is located, highlight many features that contribute to the area's unique character and should be preserved and extended.
- 169. Objective A:** Encourage cooperative efforts by area business, business associations and neighborhood associations to define and enhance the character and identity of commercial areas. The amendments support this objective because the *Northwest District Plan* process included participation from area business, business associations and neighborhood associations, and provided a forum for these stakeholders to define and enhance the character and identity of the district's commercial areas through the policies and implementing measures of the plan.
- 170. Objective B:** Reinforce the character and identity of commercial areas as neighborhood focal points. The amendments support this objective for the reasons cited in the findings supporting Comprehensive Plan Policy 5.6, Area Character and Identity Within Designated Commercial Areas, above.
- 171. Objective C:** Promote voluntary improvements to the physical environment within commercial areas that are attractive to customers and visitors. The amendments support this objective for the reasons below and for the reasons cited in the findings supporting Comprehensive Plan Policy 5.6, Area Character and Identity Within Designated Commercial Areas, above.
- a. Policy 7, Urban Design and its objectives call for development to respect the urban design principals that define the human-scaled, pedestrian-oriented character of the district. Objective F encourages new development on main streets and the streetcar line to include additions to the public realm, such as additional sidewalk width or other public space. Objective H fosters creation of public gathering places at concentrations of activities and focal points.
- 172. Objective D:** Implement crime prevention measures, including design improvements, in commercial areas to increase the safety of business people, employees and customers and to maintain and promote neighborhood patronage. The amendments support this objective for the reasons below.
- a. Policy 9, Public Safety, calls for increasing public safety by promoting measures that foster personal security.

- (1) Objective A encourages site and building designs that incorporate “Crime Prevention Through Environmental Design” principles.
 - (2) Objective B encourages projects that support active and passive spaces that focus toward the street.
 - (3) Objective C encourages and expands participation in community policing.
 - (4) Objective D calls for increased police visibility in the district.
 - (5) Objective E calls for improved security at parks in the district.
 - (6) Objective F calls for forging partnerships with adjacent neighborhoods to address common public safety issues and allocation of resources.
- 173. Objective E:** Work with local businesses, neighbors and property owners, as well as City-recognized business and neighborhood associations, to identify and designate historical landmarks, Historic Districts and Historic Conservation Districts within commercial areas. The amendments support this objective for the reasons cited in the findings for State Goal 5, Open Space, Scenic and Historic Areas, and Natural Resources and for Portland Comprehensive Plan Policy 3.4, Historic Preservation.
- 174. Objective F:** Support public and private improvements and maintenance actions which help enhance a commercial area’s identity and provide a safe and attractive physical environment. The amendments support this objective for the reasons cited in the findings for Comprehensive Plan Policy 5.6, Area Character and Identity Within Designated Commercial Areas.
- 175. Policy 5.7, Business Environment Within Designated Commercial Areas** and its objectives call for promotion of a business environment within designated commercial areas that is conducive to the formation, retention, and expansion of commercial businesses. The amendments support this policy for the reasons below and for the reason cited in the findings for State Goal 9, Economic Development.
- a. Policy 1, Land Use, calls for participating in the growth of the metropolitan region in a manner that protects and enhances the quality of life in the Northwest District.
 - (1) Objective A supports land use strategies and developments that increase the amount of housing in the district.
 - (2) Objective B supports land use strategies and developments that enhance employment opportunities in the district.
 - (3) Objectives C and D call for concentrating a mix of higher intensity residential, commercial and retail development along main streets and the Portland Streetcar line
 - b. Policy 6, Business and Economic Development, calls for fostering a healthy and prosperous business community that serves the needs of the district, as well as retaining and expanding the diverse mix of businesses and jobs.

- (1) Objective A promotes the formation of new and the growth of established businesses.
- (2) Objective C supports the growth of neighborhood-serving retail businesses while responding to the regional nature of the Northwest retail and service market.
- (3) Objective F encourages live/work spaces and home occupations.
- (4) Objective H recognizes the important role that large employers play in providing employment opportunities.
- (5) Objective I calls for building on the unique identity and economic strength of the district's main streets.
- (6) Key action items include ED1 which calls for investigating the formation of an economic improvement district, ED6 which calls for incentives and technical assistance for job and firm retention, and ED7 which encourages industrial firms needing to expand or move to relocate within the City of Portland.

176. Policy 5.8, Diversity and Identity in Industrial Areas and its objectives call for promotion of a variety of efficient, safe and attractive industrial sanctuary and mixed employment areas in Portland. The amendments support this policy for the reasons below.

- a. The *Northwest District Plan (NWDP)* is the final piece of a two-part comprehensive land use planning effort for Northwest Portland from the St. Johns Bridge to West Burnside. The first part, the *Guild's Lake Industrial Sanctuary Plan*, was adopted on 2001 and provides a policy framework to preserve and protect industrial sanctuary lands north of NW Vaughn for manufacturing and other industrial uses. The *Northwest District Plan* provides the framework for preserving and enhancing residential and mixed-use areas south of NW Vaughn. The *NWDP* also provides for a broader mix of uses, including commercial and residential, in the Transition Subarea, where a transition from an industrial emphasis has been found to be appropriate, given long-term economic and land use trends, the large number of existing non-industrial uses, and extensive stakeholder input.
- b. In 1996, the City Council recommended that the four northwest neighborhood associations with industrial zoning agree on issues relating to long-term industrial land use. A joint working group was formed, the Northwest Industrial Sanctuary Working Group (SWG). In 1999, the SWG coalition reached consensus and recommended the creation of an industrial plan district, bounded on the south by NW Vaughn. The group also recommended that land south of NW Vaughn was appropriate for a transition out of industrial use and that the neighborhoods should continue to work on defining "buffer zones." Taken together, the *Northwest District Plan* and the *Guild's Lake Industrial Sanctuary Plan* implement these recommendations and are intended to facilitate the continuing evolution of Northwest Portland south of Vaughn Street into a diverse urban neighborhood, while further strengthening protections to the industrial land north of Vaughn Street.
- c. At the time of the adoption of the *Guild's Lake Industrial Sanctuary Plan (GLISP)* in 2001, City Council directed staff to address issues pertaining to the interface between industrial and nonindustrial lands along NW Vaughn Street as part of the *Northwest District Plan* process, and to refine as needed GLISP policies and regulations (see GLISP action item L10).

- d. The plan revises the *Guild's Lake Industrial Sanctuary Plan* District by adding a new Subdistrict B that serves as a transition between the Industrial Sanctuary lands north of NW Vaughn Street and the residential and mixed-use areas to the south. In Subdistrict B, land is redesignated Mixed Employment (ME) and retail sales and service uses are limited in to 10,000 square feet. Additional office development is allowed as a transitional use. Other incompatible uses are prohibited in Subdistrict B (once rezoned to an EG zone), including: residential, quick vehicle service, commercial outdoor recreation and major event entertainment. This employment area is also intended to reduce the likelihood of land use conflicts that can negatively impact nearby residents and restrict the ability of industrial firms to operate efficiently. Traffic impacts of EG uses will be evaluated as applicants request rezoning of properties to the EG zone. A NW Transportation Fund Bonus Option requires a contribution based on office square footage to help implement transportation system improvements.
 - e. The plan removes Industrial Sanctuary (IS) *Comprehensive Plan* designated land, primarily south of I-405/Hwy 30/NW Thurman, and applies the Central Employment (EX) designation to approximately 36 acres in the Transition Subarea. Approximately 12 acres are redesignated from IS to Mixed Employment (ME, implemented by the EG zones) Most industrial land uses are allowed in the EX and EG zones. Industrial Sanctuary land north of I-405/Hwy 30/NW Thurman in the study area will retain the IS designation due its proximity to the Guild's Lake Industrial Sanctuary and the potential for negative impacts from nonindustrial development, such as an increase in auto congestion.
 - f. Policy 13, Transition Subarea, encourages a mix of housing, commercial, institutional, open space, and light industrial uses.
 - (1) Objective C encourages the retention of existing and the creation of new jobs in the subarea.
 - (2) Objective D calls for protecting existing industrial firms in the subarea from being forced to relocate out of the area.
 - (3) Objective K calls for protecting the Guild's Lake Industrial Sanctuary by locating activities and uses that are compatible with industry at the northern edge of the subarea.
 - (4) Actions TS3, TS10, and TS11 propose strategies for retaining existing industrial firms and attracting companies that provide living-wage jobs.
 - g. Policy 14, Eastern Edge Subarea, calls for fostering the development of the Eastern Edge as a transition between the more urban Central City and the Northwest District.
 - (1) Objective B encourages the location of businesses that serve local needs along NW 18th and NW 19th Streets.
 - (2) Objective C calls for fostering the establishment and growth of firms that provide living-wage jobs in this subarea.
 - (3) Objective E calls for protecting existing industrial firms in the subarea from being forced to relocate out of the area.
- 177. Policy 5.9, Protection of Non-Industrial Lands** and its objectives, call for protection of non-industrial lands from the potential adverse impacts of industrial activities and development. The

amendments support this policy for the reasons below and the reasons cited in the findings for Comprehensive Plan Policy 5.8, Diversity and Identity in Industrial Areas.

- a. In 1996, the City Council recommended that the four northwest neighborhood associations with industrial zoning agree on issues relating to long-term industrial land use. A joint working group was formed, the Northwest Industrial Sanctuary Working Group (SWG). In 1999, the SWG coalition reached consensus and recommended the creation of an industrial plan district, bounded on the south by NW Vaughn. The group also recommended that land south of NW Vaughn was appropriate for a transition out of industrial use and that the neighborhoods should continue to work on defining “buffer zones.” Taken together, the *Northwest District Plan* and the *Guild’s Lake Industrial Sanctuary Plan* implement these recommendations and are intended to facilitate the continuing evolution of Northwest Portland south of Vaughn Street into a diverse urban neighborhood, while further strengthening protections to the industrial land north of Vaughn Street.
- b. At the time of the adoption of the *Guild’s Lake Industrial Sanctuary Plan* (GLISP) in 2001, City Council directed staff to address issues pertaining to the interface between industrial and nonindustrial lands along NW Vaughn Street as part of the *Northwest District Plan* process, and to refine as needed GLISP policies and regulations (see GLISP action item L10).
- c. The plan revises the *Guild’s Lake Industrial Sanctuary Plan* District by adding a new Subdistrict B which serves as a transition between the Industrial Sanctuary lands north of NW Vaughn Street and the residential and mixed-use areas to the south. In Subdistrict B, land is redesignated Mixed Employment (ME) and retail sales and service uses are limited in to 10,000 square feet. Additional office development is allowed as a transitional use. Other incompatible uses are prohibited in Subdistrict B (once rezoned to an EG zone), including: residential, quick vehicle service, commercial outdoor recreation and major event entertainment. This employment area is also intended to reduce the likelihood of land use conflicts that can negatively impact nearby residents and restrict the ability of industrial firms to operate efficiently. Traffic impacts of EG uses will be evaluated as applicants request rezoning of properties to the EG zone. A NW Transportation Fund Bonus Option requires a contribution based on office square footage to help implement transportation system improvements.
- d. The plan removes Industrial Sanctuary (IS) *Comprehensive Plan* designated land, primarily south of I-405/Hwy 30/NW Thurman, and applies the Central Employment (EX) designation to approximately 36 acres in the Transition Subarea. Approximately 12 acres are redesignated from IS to Mixed Employment (ME, implemented by the EG zones) Most industrial land uses are allowed in the EX and EG zones. Industrial Sanctuary land north of I-405/Hwy 30/NW Thurman in the study area will retain the IS designation due its proximity to the Guild’s Lake Industrial Sanctuary and the potential for negative impacts from nonindustrial development, such as an increase in auto congestion.
- e. The plan supports the continuation of industrial uses for properties zoned General Industrial (IG1) in the northern most portion of the Northwest Plan District, adjacent to GLIS. For properties near the I-405/ Hwy 30 right-of way, and zoned Central Employment (EX), a provision is included in the Northwest Plan District to restrict residential development to 20% of the total floor area. This is also intended to minimize the potential for land use conflicts with industrial areas to the north.
- f. Policy 13, Transition Subarea, encourages a mix of housing, commercial, institutional, open space, and light industrial uses. Objective K calls for protecting the Guild’s Lake Industrial

Sanctuary by locating activities and uses that are compatible with industry at the northern edge of the subarea.

- g. Policy 14, Eastern Edge Subarea and its objectives, calls for fostering the development of the Eastern Edge as a transition between the more urban Central City and the Northwest District.

178. Objective B: When industrial zoned lands abut residential zoned lands, and there are no natural boundaries, apply special buffer overlay zone provisions to ensure that development is compatible. The amendments are not inconsistent with this objective because they remove RH zoning on the south side of NW Vaughn abutting the Guild's Lake Industrial Sanctuary (GLIS).

179. Goal 6, Transportation, calls for developing a balanced, equitable, and efficient transportation system that provides a range of transportation choices; reinforces the livability of neighborhoods; supports a strong and diverse economy; reduces air, noise, and water pollution; and lessens reliance on the automobile while maintaining accessibility. The amendments support this goal and its policies and objectives for the reasons below and for the reasons cited in the findings for State Goal 11, Public Facilities and Services and State Goal 12, Transportation and Portland Comprehensive Plan Goal 2, Urban Development.

- a. Policy 3, Transportation, calls for providing a variety of transportation options for the movement of people and goods to improve opportunities for work, trade, and social contact and to reduce reliance on the automobile. The policy contains 23 objectives and 47 action items to implement the policy.
 - (1) Objective A calls for increasing the availability of, and incentives to use alternatives to the automobile.
 - (2) Objective B calls for maintaining, and re-establishing the historic street grid, for example, by re-establishing streets or pedestrian connections through existing superblocks.
 - (3) Objectives C, D and E call for providing safe and convenient access to and improved frequency of service and route coverage of public transportation services and promotes their use.
 - (4) Objective F calls for maintaining, improving, and expanding pedestrian and bicycle connections and minimizing conflicts between motorized and non-motorized transportation.
 - (5) Objective G calls for enhancing main streets and the Portland Streetcar line as key pedestrian places.
 - (6) Objective H calls for supporting bicycle use in the district by providing convenient facilities, such as parking and other support services.
 - (7) Objective I calls for preserving the local circulation function of streets that are classified as Local Service Traffic Streets in the Transportation Element of the *Comprehensive Plan* and encourage through-traffic to use streets that are consistent with their traffic classifications.
 - (8) Objectives J, K and L call for avoiding street improvements in residential and commercial areas that are designed to accommodate increased vehicular traffic, discouraging through-

commuter and truck traffic in residential zones, and for the use of traffic calming measures to ensure the appropriate functioning of streets, while discouraging street closures.

- b. Objective E of Policy 16, Willamette Heights Subarea, calls for maintaining or improving public transit service to Willamette Heights. Action WH3 of this policy calls for improving pedestrian connections through Willamette Heights to Forest Park.
- c. Policy 15, Thurman-Vaughn Subarea, contains two actions that support this goal. Action TV1 calls for encouraging PDOT to improve NW Vaughn and NW Thurman Streets and NW 26th Avenue as pedestrian ways. Action TV3 calls for widening sidewalks along NW Vaughn Street, where possible.
- d. Policy 13, Transition Subarea, contains four objectives that support this goal. Objective E calls for re-establishing key transportation system connections through the subarea. Objective F calls for implementing multi-modal transportation improvements that address circulation and safety needs. Objective G calls for improving connections through the subarea and to the Willamette River. Objective H calls for supporting additional transit services and facilities to meet the growing needs of the subarea. Three action items implement these objectives.
- e. The amendments include a Master Street Plan that identifies the existing and preferred future street layout for the study area. The Master Street Plan will be incorporated into the Transportation System Plan and, as it is implemented, will provide increased connectivity by establishing new street connections and extending the historic street grid.
- f. The *Northwest District Plan* zoning map amendments support urban-level, transit-supportive density within the plan area including along main streets and the Portland Streetcar line. This helps to reduce long-term regional pressures for conversion of rural lands to urban uses and makes efficient use of public services and infrastructure.
- g. Transportation system modeling taking into account *Northwest District Plan* zoning, as well as updated employment and housing assumptions in areas adjacent to the study area, projects increased traffic flows and congestion in certain parts of the transportation system in the year 2020. It also projects an improved “mode split” for non-automobile modes. *Northwest District Plan* traffic mitigation provisions include the following actions:
 - Retaining IG1 zone in northern portion of Transition Subarea
 - Limiting commercial uses and encouraging housing in Transition Subarea
 - Limiting retail uses in Transition Subarea
 - Eliminating minimum parking space requirements
 - Limiting access to parking along NW Vaughn
 - Increasing connectivity through NW Master Street Plan
 - Surface parking restrictions
 - Support for Transportation Demand Management (TDM) measures, including formation of a TMA, transit subsidies, extending fareless square, and promoting carsharing.
 - Support for increased transit service including improved headways and expanded service
 - Proposals for Transportation System Management (TSM) improvements, e.g. traffic control measures
 - Planning and support for pedestrian and bicycle system improvements

- Implementing a NW Transportation Fund to help fund transportation system improvements in the Transition Subarea and the GLIS Subdistrict B areas

- 180. Policy 6.1, Coordination** and its objectives, call for coordinating with affected state and federal agencies, local governments, special districts, and providers of transportation services when planning for and funding transportation facilities and services. The amendments support this objective because the *Northwest District Plan* process included the active participation of and interaction with the Oregon Department of Transportation, Metro, the Portland Office of Transportation, the Port of Portland, TriMet, private railroad service providers and other public and private organizations.
- 181. Policy 6.2, Public Involvement** and its objectives, call for carrying out a public involvement process that provides information about transportation issues, projects, and processes to citizens, businesses and other stakeholders. The amendments support this policy for the reasons cited in the findings for State Goal 1, Citizen Involvement, Comprehensive Plan Goal 9, Citizen Involvement and in the General Findings of the Ordinance to which this exhibit is attached.
- 182. Policy 6.3, Transportation Education** and its objectives, call for implementing educational programs that support a range of transportation choices and emphasize safety for all modes of travel. The amendments are not inconsistent with this policy because they do nothing to prevent such programs and the planning process itself provided many educational opportunities such as public events, workshops and publication of documents.
- 183. Policy 6.5, Traffic Classification Descriptions**, calls for maintaining a system of traffic streets that support the movement of motor vehicles for regional, interregional, interdistrict, and local trips. The amendments support this policy because none of the *Northwest District Plan* transportation-related recommendations are inconsistent with existing street classifications.
- 184. Policy 6.12, Regional and City Travel Patterns** and its objectives, calls for supporting the use of the street system consistent with its state, regional, and city classifications and its classification descriptions. The amendments support this policy because none of the *Northwest District Plan* transportation-related recommendations are inconsistent with existing street classifications. Objective I of Policy 3, Transportation calls for preserving the local circulation function of streets that are classified as Local Service Traffic Streets in the Transportation Element of the *Comprehensive Plan* and encourage through-traffic to use streets that are consistent with their traffic classifications. Objectives J, K and L call for avoiding street improvements in residential and commercial areas that are designed to accommodate increased vehicular traffic, discouraging through-commuter and truck traffic in residential zones, and for the use of traffic calming measures to ensure the appropriate functioning of streets, while discouraging street closures.
- 185. Policy 6.13, Traffic Calming** and its objectives call for managing traffic on Neighborhood Collectors and Local Service Traffic Streets, along main streets, and in centers consistent with their street classifications, classification descriptions, and desired land uses. The amendments support this policy because none of the *Northwest District Plan* transportation-related recommendations are inconsistent with existing street classifications. Objective I of Policy 3, Transportation calls for preserving the local circulation function of streets that are classified as Local Service Traffic Streets in the Transportation Element of the *Comprehensive Plan* and encourage through-traffic to use streets that are consistent with their traffic classifications. Objectives J, K and L call for avoiding street improvements in residential and commercial areas that are designed to accommodate increased vehicular traffic, discouraging through-commuter and truck traffic in residential zones, and for the use of traffic calming measures to ensure the appropriate functioning of streets, while discouraging street closures.

- 186. Policy 6.16, Access Management**, calls for promoting an efficient and safe street system, and provide adequate accessibility to planned land uses. The amendments support this policy for the reasons cited in the findings for Comprehensive Plan Goal 6, Transportation.
- 187. Policy 6.17, Coordinate Land Use and Transportation**, calls for implementing the *Comprehensive Plan* Map and the 2040 Growth Concept through long-range transportation and land use planning and the development of efficient and effective transportation projects and programs. The amendments support this policy because the *Northwest District Plan* process included coordinated land use and transportation planning and the cooperation of the Bureau of Planning and the Office of Transportation.
- 188. Policy 6.18, Adequacy of Transportation Facilities**, calls for ensuring that amendments to the *Comprehensive Plan* (including goal exceptions and map amendments), zone changes, conditional uses, master plans, impact mitigation plans, and land use regulations that change allowed land uses are consistent with the identified function and capacity of, and adopted performance measures for, affected transportation facilities. The amendments support this policy for the reasons below and for the reasons cited in the findings for State Goal 12, Transportation and Portland Comprehensive Plan Goal 6, Transportation.
- a. Transportation system modeling taking into account *Northwest District Plan* zoning, as well as updated employment and housing assumptions in areas adjacent to the study area, projects increased traffic flows and congestion in certain parts of the transportation system in the year 2020. It also projects an improved “mode split” for non-automobile modes. *Northwest District Plan* traffic mitigation provisions include the following actions:
 - Retaining IG1 zone in northern portion of Transition Subarea
 - Limiting commercial uses and encouraging housing in Transition Subarea
 - Limiting retail uses in Transition Subarea
 - Eliminating minimum parking space requirements
 - Limiting access to parking along NW Vaughn
 - Increasing connectivity through NW Master Street Plan
 - Surface parking restrictions
 - Support for Transportation Demand Management (TDM) measures, including formation of a TMA, transit subsidies, extending fareless square, and promoting carsharing.
 - Support for increased transit service including improved headways and expanded service
 - Proposals for Transportation System Management (TSM) improvements, e.g. traffic control measures
 - Planning and support for pedestrian and bicycle system improvements
 - Implementing a NW Transportation Fund to help fund transportation system improvements in the Transition Subarea and the GLIS Subdistrict B areas
 - b. The portion of the Transition Subarea south of US-30 that is rezoned to EX and where the transportation system is more fully developed is the preferred location for the first phase of new development. For the most part, the Transition Subarea north of NW Thurman and US-30 remains IG1 zoned as long-term industrial next to GLIS. The new GLIS Plan District Subdistrict B, where IG1 zoning is retained (but higher intensity Comprehensive Plan designations are applied) is intended for change but over a longer-range time-frame and with a more gradual transition. Transportation system adequacy will be evaluated when applicants seek to rezone Subdistrict B property to an EG zone. This phasing prioritization is necessary due to limited transportation capacity of the existing street and transit system. Long-term change out of

primarily industrial uses can thus be linked to increases in transportation capacity and/or reduction in transportation demand over a longer time frame. Additionally, a NW Transportation Fund Bonus Option will help raise funds for the City to make transportation system improvements to these areas.

- 189. Policy 6.19, Transit-Oriented Development**, calls for reinforcing the link between transit and land use by encouraging transit-oriented development and supporting increased residential and employment densities along transit streets, at existing and planned light rail transit stations, and at other major activity centers. The amendments support this policy for the reasons below and for the reasons cited in the findings for Portland Comprehensive Plan Goal 2, Urban Development.
- a. The *Northwest District Plan* zoning supports urban-level, transit-supportive density throughout most of the plan area including along main streets and the Portland Streetcar line. This helps to reduce long-term regional pressures for conversion of rural lands to urban uses.
 - b. The plan amends Title 3 of the Portland City Code to designate properties within a portion of the Northwest Plan District as eligible for the Transit Oriented Development (TOD) tax abatement, thus supporting new development in areas well served by transit.
- 190. Policy 6.20, Connectivity**, calls for supporting development of an interconnected, multimodal transportation system to serve mixed-use areas, residential neighborhoods, and other activity centers. The amendments support this policy for the reasons cited in the findings for Portland Comprehensive Plan Goal 6, Transportation and because they include a Master Street Plan that identifies the existing and preferred future street layout for the study area. The Master Street Plan will be incorporated into the Transportation System Plan and, as it is implemented, will provide increased connectivity by establishing new street connections and extending the historic street grid.
- 191. Policy 6.21, Right-of-Way Opportunities**, calls for preserving existing rights-of-way unless there is no existing or future need for them, established street patterns will not be significantly interrupted, and the functional purposes of nearby streets will be maintained. The amendments are consistent this policy because they propose no street vacations or closures and encourage connectivity.
- 192. Policy 6.22, Pedestrian Transportation**, calls for planning and completing a pedestrian network that increases the opportunities for walking to shopping and services, schools and parks, employment, and transit. The amendments support this policy for the reasons cited in the findings for Portland Comprehensive Plan Goal 6, Transportation and because they include a Master Street Plan that identifies the existing and preferred future street and pedestrian connectivity layout for the study area. The Master Street Plan will be incorporated into the Transportation System Plan and, as it is implemented, will provide increased connectivity by establishing new street and pedestrian connections. Action item TS1 calls for the extension of the Northwest Pedestrian District into the Transition Subarea. This action will be further evaluated at the time of the next update of the Transportation System Plan.
- 193. Policy 6.23, Bicycle Transportation**, calls for making the bicycle an integral part of daily life in Portland, particularly for trips of less than five miles, by implementing a bikeway network, providing end-of-trip facilities, improving bicycle/transit integration, encouraging bicycle use, and making bicycling safer. The amendments support this policy for the reasons cited in the findings for Portland Comprehensive Plan Goal 6, Transportation and because they include a Master Street Plan that identifies the existing and preferred future street and pedestrian/bicycle connectivity layout for the study area. The Master Street Plan will be incorporated into the Transportation System Plan and, as

it is implemented, will provide increased connectivity by establishing new street and pedestrian/bicycle connections.

- 194. Policy 6.24, Public Transportation**, calls for developing a public transportation system that conveniently serves City residents and workers 24 hours a day, seven days a week and can become the preferred form of travel to major destinations, including the Central City, regional and town centers, main streets, and station communities. The amendments support this policy for the reasons cited in the findings for Portland Comprehensive Plan Goal 6, Transportation and because the *Northwest District Plan* zoning map and code amendments support urban-level, transit-supportive density within the plan area including along main streets and the Portland Streetcar line. This helps to reduce long-term regional pressures for conversion of rural lands to urban uses and makes efficient use of public services and infrastructure, including transit.
- 195. Policy 6.25, Parking Management**, calls for managing the parking supply to achieve transportation policy objectives for neighborhood and business district vitality, auto trip reduction, and improved air quality. The amendments are consistent with this policy for the reasons below.
- a. Many of the policies and implementing measures of the *Northwest District Plan* are intended to enhance opportunities for alternative transportation modes such as public transit, bicycling and walking, thereby reducing the demand for automobile parking.
- 196. Policy 6.27, Off-Street Parking**, calls for regulating off-street parking to promote good urban form and the vitality of commercial and employment areas. The amendments support this policy for the reasons below and for the reasons cited in the findings for Portland Comprehensive Plan Policy 6.25, Parking Management.
- a. Parking strategy elements designed to limit conflicts between residential uses and parking facilities include design review provisions and development standards, parking space limitations and the creation of a Transportation Management Association to monitor and administer elements of the district's parking programs.
- 197. Objective A:** Consider eliminating requirements for off-street parking in areas of the City where there is existing or planned high-quality transit service and good pedestrian and bicycle access. The amendments support this objective because the Northwest Plan District eliminates minimum parking requirements.
- 198. Objective B:** Encourage the redevelopment of surface parking lots into transit-supportive uses or development or to include facilities for alternatives to the automobile. The amendments support this objective for the reasons below.
- a. The Northwest Plan District limits new surface parking lots to 20,000 square feet per site.
 - b. The plan retains or increases the allowed development potential under residential and mixed-use zoning and *Comprehensive Plan* designations on surface parking lots within the Northwest District, particularly in the Transition Subarea.
- 199. Policy 6.28, Travel Management**, calls for reducing congestion, improve air quality, and mitigate the impact of development-generated traffic by supporting transportation choices through demand management programs and measures and through education and public information strategies. The amendments support this policy for the reasons cited in the findings for State Goal 12, Transportation and Portland Comprehensive Plan Goal 6, Transportation and because the plan

supports Transportation Demand Management (TDM) measures, including formation of a TMA, transit subsidies, extending fareless square, and promoting carsharing.

- 200. Policy 6.29, Freight Intermodal Facilities and Freight Activity Areas**, calls for developing and maintaining an intermodal transportation system for the safe, efficient, and cost-effective movement of freight, goods, and commercial vehicles within and through the City on Truck Streets and for access and circulation in Freight Districts. The amendments are consistent with this policy for the reasons cited in the findings for the Transportation Policy of the *Guild's Lake Industrial Sanctuary Plan* and because none of the *Northwest District Plan* transportation-related recommendations are inconsistent with existing street classifications.
- 201. Policy 6.30, Truck Movement**, calls for providing a complete, safe, and reliable system of Major and Minor Truck Streets for local truck movement, connecting Freight Districts, intermodal facilities, and commercial areas. The amendments are consistent with this policy for the reasons cited in the findings for the Transportation Policy of the *Guild's Lake Industrial Sanctuary Plan* and because none of the *Northwest District Plan* transportation-related recommendations are inconsistent with existing street classifications.
- 202. Policy 6.39 Northwest Transportation District** calls for strengthening the multimodal transportation system in the Northwest District by increasing public transit use, encouraging transportation demand management measures, and improving pedestrian and bicycle access. The amendments support this objective for the reasons below.
- a. Policy 3, Transportation, calls for providing a variety of transportation options for the movement of people and goods to improve opportunities for work, trade, and social contact and to reduce reliance on the automobile. The policy contains 23 objectives and 47 action items to implement the policy.
 - (1) Objective A calls for increasing the availability of, and incentives to use alternatives to the automobile.
 - (2) Objective B calls for maintaining, and re-establishing the historic street grid, for example, by re-establishing streets or pedestrian connections through existing superblocks.
 - (3) Objectives C, D and E call for providing safe and convenient access to and improved frequency of service and route coverage of public transportation services and promotes their use.
 - (4) Objective F calls for maintaining, improving, and expanding pedestrian and bicycle connections and minimizing conflicts between motorized and non-motorized transportation.
 - (5) Objective G calls for enhancing main streets and the Portland Streetcar line as key pedestrian places.
 - (6) Objective H calls for supporting bicycle use in the district by providing convenient facilities, such as parking and other support services.
 - (7) Objective I calls for preserving the local circulation function of streets that are classified as Local Service Traffic Streets in the Transportation Element of the *Comprehensive Plan* and encourage through-traffic to use streets that are consistent with their traffic classifications.

- (8) Objectives J, K and L call for avoiding street improvements in residential and commercial areas that are designed to accommodate increased vehicular traffic, discouraging through-commuter and truck traffic in residential zones, and for the use of traffic calming measures to ensure the appropriate functioning of streets, while discouraging street closures.
- b. Objective E of Policy 16, Willamette Heights Subarea, calls for maintaining or improving public transit service to Willamette Heights. Action WH3 of this policy calls for improving pedestrian connections through Willamette Heights to Forest Park.
 - c. Policy 15, Thurman-Vaughn Subarea, contains two actions that support this goal. Action TV1 calls for encouraging PDOT to improve NW Vaughn and NW Thurman Streets and NW 26th Avenue as pedestrian ways. Action TV3 calls for widening sidewalks along NW Vaughn Street, where possible.
 - d. Policy 13, Transition Subarea, contains four objectives that support this goal. Objective E calls for re-establishing key transportation system connections through the subarea. Objective F calls for implementing multi-modal transportation improvements that address circulation and safety needs. Objective G calls for improving connections through the subarea and to the Willamette River. Objective H calls for supporting additional transit services and facilities to meet the growing needs of the subarea. Three action items implement these objectives.
 - e. The amendments include a Master Street Plan that identifies the existing and preferred future street layout for the study area. The Master Street Plan will be incorporated into the Transportation System Plan and, as it is implemented, will provide increased connectivity by establishing new street connections and extending the historic street grid.
 - f. Transportation system modeling taking into account *Northwest District Plan* zoning, as well as updated employment and housing assumptions in areas adjacent to the study area, projects increased traffic flows and congestion in certain parts of the transportation system in the year 2020. It also projects an improved “mode split” for non-automobile modes. *Northwest District Plan* traffic mitigation provisions include the following actions:
 - Retaining IG1 zone in northern portion of Transition Subarea
 - Limiting commercial uses and encouraging housing in Transition Subarea
 - Limiting retail uses in Transition Subarea
 - Eliminating minimum parking space requirements
 - Limiting access to parking along NW Vaughn
 - Increasing connectivity through NW Master Street Plan
 - Surface parking restrictions
 - Support for Transportation Demand Management (TDM) measures, including formation of a TMA, transit subsidies, extending fareless square, and promoting carsharing.
 - Support for increased transit service including improved headways and expanded service
 - Proposals for Transportation System Management (TSM) improvements, e.g. traffic control measures
 - Planning and support for pedestrian and bicycle system improvements
 - Implementing a NW Transportation Fund to help fund transportation system improvements in the Transition Subarea and the GLIS Subdistrict B areas

- 203. Objective A.** Expand transit service throughout the district, including adding more cross-town service, connecting bus service from the Civic Stadium light rail station to the northwest industrial area, and improving service in low-density areas such as Linnton. The amendments support this objective for the reasons below.
- a. Objectives C, D and E call for providing safe and convenient access to and improved frequency of service and route coverage of public transportation services and promotes their use.
 - b. Several Transportation action items call for increased transit service including increased streetcar frequency, expansion of fareless square, and reduced headways.
- 204. Objective B.** Route non-local traffic, including non-local truck traffic, on Major City Traffic Streets and Regional Trafficways in order to minimize conflicts among modes. The amendments support this objective because none of the *Northwest District Plan* transportation-related recommendations are inconsistent with existing street classifications and because Objective I calls for preserving the local circulation function of streets that are classified as Local Service Traffic Streets in the Transportation Element of the *Comprehensive Plan* and encourage through-traffic to use streets that are consistent with their traffic classifications
- 205. Objective D.** Protect Forest Park's natural resources in the design and development of transportation projects in or near the park. The amendments support this objective because Objective F of Policy 16, Willamette Heights Subarea, calls for protecting and enhancing Forest Park as a regionally significant natural and recreational resource and Objective A of Policy, 10 Quality of Life calls for enhancing and protecting Forest Park as a natural resource area providing passive recreation activities.
- 206. Objective E.** Reinforce the Northwest District main streets – NW 21st, 23rd, Burnside, and Thurman – by retaining and improving their pedestrian-oriented character and improving access to transit. The amendments support this objective for the reasons below.
- a. The Plan's Zoning Code amendments, including its main street development standards, surface parking limitations and prohibition of drive-through land uses are designed to reinforce the historic pedestrian orientation and transit-friendliness of the district's streetscapes. Main street provisions include required windows above the ground floor, ground floor active uses, and restrictions on the location of parking and vehicle access.
 - b. Policy 1, Land Use, includes two objectives that support this policy. Objective 3 calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line in order to make efficient use of existing infrastructure. Objective E calls for limiting large-scale auto-dependent retail throughout the district.
 - c. Objective H of Policy 2 Institutions encourages institutions along main streets and the Portland Streetcar line to orient active uses to these street frontages. Objective I encourages institutions to locate parking within structures. Both of these provisions will encourage a more pedestrian-oriented environment.
 - d. Objective G of Policy 3 Transportation calls for enhancing main streets and the Portland Streetcar line as key pedestrian places.

- e. The plan limits the amount of retail sales and service use to 20,000 sq. ft. in the Central Employment zone and to 3,000 sq. ft. in certain areas more than 200 feet from main streets in the Transition Subarea. This provision will encourage a more pedestrian-oriented environment.

207. Objective H. Limit transportation projects on West Burnside to those that reduce vehicle miles traveled, give preference to transit, improve pedestrian and bicycle access, or improve safety, but do not increase automobile capacity. The amendments are consistent with this objective because the plan amends Policy 15, Goose Hollow, of the Central City Plan by adding a provision to Further Statement C that calls for improving pedestrian and bicycle connections to light rail and across West Burnside Street. An action item is added to the Goose Hollow action chart calling for wider pedestrian areas along West Burnside by providing arcades on new building frontages

208. Goal 7, Energy, calls for promotion of a sustainable energy future by increasing energy efficiency in all sectors of the city by ten percent by the year 2000. The amendments support this Goal and its policies for the reasons below and for the reasons cited in the findings for State **Goal 13, Energy Conservation.**

- a. The plan supports the conservation of energy with *Comprehensive Plan* map designations throughout the plan area that encourage an urban level of development and a mix of uses. This supports reduced need for travel and the efficient provision of public facilities.
- b. Policy 3, Transportation, calls for providing a full range of transportation options and reducing reliance on the automobile. The objectives below support pedestrian, bicycle and public transit modes, all of which are generally more energy efficient than single-occupancy autos as a transportation mode.
- c. Policy 11, Environment, calls for protecting and enhancing the environmental and natural resources of the district.
 - 1) Objective A calls for developing and operating public facilities and infrastructure to be sustainable and to address multiple objectives, including public health and safety, natural resource protection and recreation.
 - 2) Objective B promotes measures that protect and enhance trees as a vital part of the urban landscape.
 - 3) Objective C promotes the use of innovative measures that improve air and water quality and energy efficiency.
 - 4) Objective E encourages recycling and the reduction of solid waste generation and litter in the district.
 - 5) Action E9 calls for implementing incentive programs for the use of green building, eco-roof, and other low-impact techniques, such as on-site stormwater management, landscaping with native vegetation and porous pavements, in public and private development and redevelopment projects.
- b. Policy 1, Land Use, calls for participating in the growth of the metropolitan region in a manner that protects and enhances the quality of life in the Northwest District. Objective C calls for

concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line in order to make efficient use of existing infrastructure.

- c. Policy 3, Transportation, calls for providing a variety of transportation systems in part to reduce reliance on the automobile. The following objectives encourage the use of alternative modes, such as walking and transit. More compact mixed-use development with a balanced transportation system should reduce vehicle miles traveled in the study area and reduce energy consumption.
 - 1) Objective A calls for increasing the availability of, and incentives to use, alternatives to the automobile.
 - 2) Objective B calls for maintaining, reinforcing, and re-establishing the historic street grid, for example, by re-establishing streets or pedestrian connections through existing superblocks.
 - 3) Objective C calls for providing safe and convenient access to public transit.
 - 4) Objective D calls for improving the frequency of service and route coverage of public transportation services.
 - 5) Objective E calls for promoting increased use of public transit by residents, employees and visitors.
 - 6) Objective F calls for maintaining, improving, and expanding pedestrian and bicycle connections within the district and to other parts of the city and minimize conflicts between motorized and non-motorized transportation.
 - 7) Objective G calls for enhancing main streets and the Portland Streetcar line as key pedestrian places.
 - 8) Objective H calls for supporting bicycle use in the district by providing convenient facilities, such as parking and other support services.

311. Policy 7.4, Energy Efficiency Through Land Use Regulations and its objectives, call for promoting residential, commercial, industrial, and transportation energy efficiency and the use of renewable resources. The amendments support this policy for the following reasons.

- a. Policy 1, Land Use, includes two objectives that support this policy. Objective 3 calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line in order to make efficient use of existing infrastructure. Objective E calls for limiting large-scale auto-dependent retail throughout the district. Two non-regulatory action items implement these objectives.
- b. The plan supports the conservation of energy with *Comprehensive Plan* map designations throughout the plan area that encourage an urban level of development and a mix of uses. This supports reduced need for travel and the efficient provision of public facilities.
- c. Policy 3, Transportation, calls for providing a full range of transportation options for moving people and goods thereby supporting neighborhood livability and commerce and reducing

reliance on the automobile, and balancing the need for adequate parking with the need to limit the negative impacts of automobile use on the district's livability. The first Transportation Objective calls for increasing the availability of, and incentives to use, alternatives to the automobiles. The first Parking Objective calls for reducing the demand for automobile parking. With few exceptions all remaining objectives address aspects of these desires. In addition, almost all action items implement the policy direction away from reliance on the automobile as the sole means of transportation.

- d. Policies 13, 14, and 15, Transition, Eastern Edge, and Thurman-Vaughn Subareas respectively, all contain objectives and action items identifying transportation improvements to increase the transportation mode split and land use proposals to encourage increased residential, commercial, and employment uses within walking or biking distance from each other.
 - e. Policy 6, Business and Economic Development Action, contains two action items that support this goal. ED5 calls for actively seeking businesses that address local needs, offer a variety of goods and services for shoppers with diverse incomes, and provide employment opportunities for local residents. Action ED9 of Policy 5, Business and Economic Development, calls for reinforcing main streets, the Portland streetcar line, and the development bonus target area as the focus for retail and service uses by limiting retail sales and service uses. To do this, the plan expands the Northwest Plan District and proposes to limit the amount of retail sales and service use to 20,000 sq. ft. in the Central Employment zone and to 3,000 sq. ft. in certain areas more than 200 feet from main streets in the Transition Subarea.. This provision will encourage a more pedestrian-oriented environment and reduce the amount of energy used for automobile travel.
 - f. Policy 2, Institutions, contains two objectives that encourage energy conservation. Policy 2, Institutions, contains three objectives that support this policy. Objective F encourages Legacy Good Samaritan Hospital and Medical Center to focus future expansion in underutilized and underdeveloped areas within its approved campus boundary. Objective H encourages institutions along main streets and the Portland Streetcar line to orient active uses to these street frontages. Objective I encourages institutions to locate parking within structures. Both of these provisions will encourage a more pedestrian-oriented environment.
- 312. Policy 7.6, Energy Efficient Transportation** and its objectives call for providing opportunities for non-auto transportation and for reducing gasoline and diesel use by increasing fuel efficiency. The amendments support this policy for the reasons below and for the reasons cited in the findings for State Goal 12, Transportation.
- a. Policy 3, Transportation, calls for providing a variety of transportation options for the movement of people and goods to improve opportunities for work, trade, and social contact and to reduce reliance on the automobile. The policy contains 23 objectives and 47 action items to implement the policy.
 - (1) Objective A calls for increasing the availability of, and incentives to use alternatives to the automobile.
 - (2) Objective B calls for maintaining, and re-establishing the historic street grid, for example, by re-establishing streets or pedestrian connections through existing superblocks.

- (3) Objectives C, D and E call for providing safe and convenient access to and improved frequency of service and route coverage of public transportation services and promotes their use.
 - (4) Objective F calls for maintaining, improving, and expanding pedestrian and bicycle connections and minimizing conflicts between motorized and non-motorized transportation.
 - (5) Objective G calls for enhancing main streets and the Portland Streetcar line as key pedestrian places.
 - (6) Objective H calls for supporting bicycle use in the district by providing convenient facilities, such as parking and other support services.
 - (7) Objective I calls for preserving the local circulation function of streets that are classified as Local Service Traffic Streets in the Transportation Element of the *Comprehensive Plan* and encourage through-traffic to use streets that are consistent with their traffic classifications.
 - (8) Objectives J, K and L call for avoiding street improvements in residential and commercial areas that are designed to accommodate increased vehicular traffic, discouraging through-commuter and truck traffic in residential zones, and for the use of traffic calming measures to ensure the appropriate functioning of streets, while discouraging street closures.
- b. The amendments include a Master Street Plan that identifies the existing and preferred future street layout for the study area. The Master Street Plan will be incorporated into the Transportation System Plan and, as it is implemented, will provide increased connectivity by establishing new street connections and extending the historic street grid.
- 313. Objective H:** Promote walking and bicycle commuting by developing bikeways and walkways, encouraging spot hazard improvements on city streets, providing bicycle lockers at transit centers and park-and-ride lots, implementing bicycle commuter services such as long-term bicycle parking, showers, and changing facilities, and promoting covered walkways/sidewalks. The amendments support this objective for the reasons below.
- a. Objective F of Policy 3, Transportation calls for maintaining, improving, and expanding pedestrian and bicycle connections within the district and to other parts of the city and minimize conflicts between motorized and non-motorized transportation.
 - b. Objective H of Policy 3, Transportation calls for supporting bicycle use in the district by providing convenient facilities, such as parking and other support services.
 - c. The amendments include a Master Street Plan that identifies the existing and preferred future street layout for the study area. The Master Street Plan will be incorporated into the Transportation System Plan and, as it is implemented, will provide increased connectivity by establishing new street and bicycle/pedestrian connections.
- 314. Policy 7.8, Energy Supply,** calls for promoting conservation as the first choice energy resource and supporting environmentally acceptable, sustainable energy sources. The amendments support this policy because Objective C of Policy 11, Environment promotes the use of innovative measures that improve air and water quality and energy efficiency.

Policy 7.9, Waste Reduction and Recycling, calls for promoting energy-saving activities such as reduced use of excess materials, recovery of materials from the waste stream for direct reuse and manufacture into new products, recycling, and purchase of products made from recycled materials. The amendments support this policy because Objective E of Policy 11, Environment, encourages recycling and reduction of solid waste and litter.

315. Goal 8, Environment, calls for maintenance and improvement of the quality of Portland's air, water, and land resources, as well as protection of neighborhoods and business centers from noise pollution. The amendments support this goal for the reasons cited in the findings for State Goal 5, Open Space, Scenic and Historic Areas, and Natural Resources, State Goal 6, Air, Water and Land Resource Quality, State Goal 14, Urbanization and Portland Comprehensive Plan Goal 2, Urban Development and for the following reasons.

- a. Policy 11, Environment, calls for protecting and enhancing the environmental and natural resources of the district. The following objectives and action items implement the Environment policy.
 - (1) Objective A calls for developing and operating public facilities and infrastructure to be sustainable and to address multiple objectives, including public health and safety, natural resource protection and recreation.
 - (2) Objective B promotes measures that protect and enhance trees as a vital part of the urban landscape.
 - (3) Objective C promotes the use of innovative measures that improve air and water quality and energy efficiency.
 - (4) Objective E encourages recycling and the reduction of solid waste generation and litter in the district.
 - (5) Actions E1, E2, E3, E7, E8, and E9 address stormwater management as a means for protecting water and land resource quality.
 - (6) Actions E5, E14, E15, and E18 address ways to include and protect trees in the district, since trees are known to improve the quality of air, land and water resources.
 - (7) Action E6 calls for environmentally connecting existing and future parks, open spaces and the Willamette River through the use of main and green streets.
 - (8) Action E9 calls for implementing incentive programs for the use of green building, eco-roof, and other low-impact techniques, such as on-site stormwater management, landscaping with native vegetation and porous pavements, in public and private development and redevelopment projects.
 - (9) Action E10 calls for supporting natural area restoration efforts, including, but not limited to, revegetation, day-lighting "buried" stream channels, restoring wildlife habitat and wetlands, and restoring Lower Macleay stream.

Actions E11, E12, and E13 encourage stewardship of natural areas and minimal use of chemicals to maintain and enhance natural systems.

Action E15 calls for working cooperatively to resolve and mitigate air quality pollution concerns through business assistance and other programs.

Action E16 calls for working with the appropriate agencies to ensure compliance with environmental laws and regulations.

- b. Policy 1, Land Use, calls for participating in the growth of the metropolitan region in a manner that protects and enhances the quality of life in the Northwest District. The following objectives help maintain natural resources in the region by accommodating growth and development in urban areas and by protecting and conserving rural area natural resources:
 - (4) Objective A supports land use strategies and developments that increase the amount of housing in the district.
 - (5) Objective B supports land use strategies and developments that enhance employment opportunities in the district.
 - (6) Objective C calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line in order to make efficient use of existing infrastructure.
- c. Policy 3, Transportation, calls for providing a variety of transportation systems in part to reduce reliance on the automobile. The following objectives encourage the use of alternative modes, such as walking and transit. More compact mixed-use development with a balanced transportation system should reduce vehicle miles traveled in the study area and positively impact air quality.
 - (1) Objective A calls for increasing the availability of, and incentives to use, alternatives to the automobile.
 - (2) Objective B calls for maintaining, reinforcing, and re-establishing the historic street grid, for example, by re-establishing streets or pedestrian connections through existing superblocks.
 - (3) Objective C calls for providing safe and convenient access to public transit.
 - (4) Objective D calls for improving the frequency of service and route coverage of public transportation services.
 - (5) Objective E calls for promoting increased use of public transit by residents, employees and visitors.
 - (6) Objective F calls for maintaining, improving, and expanding pedestrian and bicycle connections within the district and to other parts of the city and minimize conflicts between motorized and non-motorized transportation.
 - (7) Objective G calls for enhancing main streets and the Portland Streetcar line as key pedestrian places.

- (8) Objective H calls for supporting bicycle use in the district by providing convenient facilities, such as parking and other support services.

316. Policy 8.4, Ride Sharing, Bicycling, Walking, and Transit, calls for promoting the use of alternative modes of transportation such as ridesharing, bicycling, walking, and transit throughout the metropolitan area. The amendments support this policy for the reasons cited in the findings for State Goal 12, Transportation and Portland Comprehensive Plan policy 6, Transportation.

317. Policy 8.7, Land Use and Capital Improvements Coordination, calls for coordinating land use planning and capital improvement to insure the most efficient use of the city's sanitary and stormwater run-off facilities. The amendments are consistent this policy for the reasons below.

- a. Policy 11, Environment, calls for protecting and enhancing the natural resources of the district.

- (1) Objective A calls for developing and operating public facilities and infrastructure to be sustainable and to address multiple objectives, including public health and safety, natural resource protection and recreation.
- (2) Objective C promotes the use of innovative measures that improve air and water quality and energy efficiency.
- (3) Actions E1, E2, E3, E7, E8, and E9 address stormwater management as a means for protecting water and land resource quality.

- b. Bureau of Planning staff worked with the Portland Bureau of Environmental Services throughout the planning process, coordinating ongoing planning efforts by both agencies.

318. Policy 8.8, Groundwater Protection, calls for protection of domestic groundwater and surface water resources from potential pollution through a variety of regulatory measures relating to land use, transportation, and hazardous substances. The amendments support this policy for the reasons cited in the findings for State Goal 6, Air, Water and Land Resource Quality.

319. Policy 8.9, Open Space, calls for protection of Portland Parks, cemeteries and golf courses through an Open Space designation on the *Comprehensive Plan* Map. The amendments support this policy for the reasons cited in the findings for State Goal 5, Open Space, Scenic and Historic Areas, and Natural Resources and because the Open Space *Comprehensive Plan* designation and zone is placed on several properties covering over three acres owned by the City of Portland, thus ensuring their long-term preservation as open space resources.

320. Policy 8.10, Drainageways, calls for regulation of development within identified drainageways for multiple objectives. The amendments support this policy for the reasons cited in the findings for State Goal 6, Air, Water and Land Resource Quality.

321. Policy 8.11, Special Areas, calls for recognition of the unique land qualities and adoption of specific planning objectives for special areas. The amendments support this policy for the reasons cited in the findings for State Goal 6, Air, Water and Land Resource Quality and because the plan retains lower intensity residential zoning in certain environmentally sensitive areas of the Willamette Heights where the Comprehensive Plan Map designation allows higher residential densities.

- 322. Objective A: Balch Creek Watershed.** Protect and preserve fishery, wildlife, flood control, and other natural resource values of the Balch Creek Watershed through the application of special development standards and approval criteria in the environmental overlay zones. The amendments support this objective for the reasons cited in the findings for State Goal 6, Air, Water and Land Resource Quality and because action item E10 calls for supporting natural area restoration efforts, including, but not limited to, revegetation, day-lighting “buried” stream channels, restoring wildlife habitat and wetlands, and restoring Lower Macleay stream.
- 323. Policy 8.13, Natural Hazards,** calls for controlling the density of development in areas of natural hazards consistent with the provisions of the City’s Building Code, Chapter 70, the Floodplain Ordinance and the Subdivision Code. The amendments support this policy for the reasons cited in the findings for State Goal 7, Areas Subject to Natural Disasters and Hazards.
- 324. Policy 8.14, Natural Resources,** calls for conservation of significant natural and scenic resource sites and values through a combination of programs which involve zoning and other land use controls, purchase, preservation, intergovernmental coordination, conservation, and mitigation. The policy also calls for balancing the conservation of significant natural resources with the need for other urban uses and activities through the evaluation of economic, social, environmental, and energy consequences of such actions. The amendments support this policy for the reasons cited in the findings for State Goal 6, Air, Water and Land Resource Quality, State Goal 14, Urbanization and Portland Comprehensive Plan Goal 2, Urban Development and because the plan provides additional development potential in an already urbanized area proximate to the central city, thus relieving pressure to extend development to environmentally sensitive resource lands.
- 325. Policy 8.15, Wetlands/Riparian/Water Bodies Protection,** calls for conservation of wetlands, riparian areas, and water bodies which have significant functions and values related to flood protection, sediment and erosion control, water quality, groundwater recharge and discharge, education, vegetation, and fish and wildlife habitat. The amendments support this policy for the reasons cited in the findings for State Goal 6, Air, Water and Land Resource Quality and because the plan retains lower intensity residential zoning in certain environmentally sensitive areas of the Willamette Heights subdistrict where the Comprehensive Plan Map designation allows higher residential densities.
- 326. Policy 8.16, Uplands Protection,** calls for conservation of significant upland areas and values related to wildlife, aesthetics and visual appearance, views and sites, slope protection, and groundwater recharge. The amendments support this policy for the reasons cited in the findings for State Goal 6, Air, Water and Land Resource Quality and because the plan retains lower intensity residential zoning in certain environmentally sensitive areas of the Willamette Heights subdistrict where the Comprehensive Plan Map designation allows higher residential densities and because the Open Space *Comprehensive Plan* designation and zone is placed on several properties covering over three acres owned by the City of Portland, thus ensuring their long-term preservation as open space resources.
- 327. Policy 8.17, Wildlife,** calls for conservation of significant areas and encouragement of the creation of new areas that increase the variety and quantity of fish and wildlife throughout the urban area in a manner compatible with other urban development and activities. The amendments support this policy for the reasons cited in the findings for State Goal 6, Air, Water and Land Resource Quality and because the plan retains lower intensity residential zoning in certain environmentally sensitive areas of the Willamette Heights subdistrict where the Comprehensive Plan Map designation allows higher residential densities and because the Open Space *Comprehensive Plan* designation and zone is placed

on several properties covering over three acres owned by the City of Portland, thus ensuring their long-term preservation as open space resources.

- 328. Goal 9, Citizen Involvement**, calls for improved methods and ongoing opportunities for citizen involvement in the land use decision-making process. The amendments are consistent with this goal for the reasons cited in the findings for State Goal 1, Citizen Involvement.
- 329. Policy 9.3, Comprehensive Plan Amendment**, calls for allowing for the review and amendment of the adopted *Comprehensive Plan* which ensures citizen involvement opportunities for the city's residents, businesses and organizations. The amendments support this policy. The amendments support this policy for the reasons cited in the findings for State Goal 1, Citizen Involvement and because the *Northwest District Plan* Process provided a forum for a district-specific review and update of portions of the *Comprehensive Plan*.
- 330. Policy 9.4, Intergovernmental Cooperation**, calls for promoting citizen involvement in land use decisions initiated by other governmental agencies. The amendments support this policy for the reasons cited in the findings for State Goal 1, Citizen Involvement and because the *Northwest District Plan* Process provided a forum for citizens to engage with other government agencies and their ongoing planning work.
- 331. Goal 10, Plan Review and Administration**, requires that Portland's *Comprehensive Plan* undergo a periodic review. The amendments support this goal for the reasons cited in the findings for State Goal 1, Citizen Involvement and because this plan updates Portland's *Comprehensive Plan* for this area of the city. Area and district plans are the current method the City of Portland is using to update the *Comprehensive Plan* map for specific geographic areas.
- 332. Policy 10.1, Comprehensive Plan Review**, calls for implementing a process for the review of the *Comprehensive Plan* goals, policies, objectives, and implementation provisions on a periodic basis. The amendments support this policy for the reasons cited in the findings State Goal 1, Citizen Involvement and because this plan updates Portland's *Comprehensive Plan* for this area of the city. Area and district plans are the current method the City of Portland is using to update the *Comprehensive Plan* map for specific geographic areas.
- 333. Policy 10.2, Comprehensive Plan Map Review**, calls for implementing a community and neighborhood planning process for review and update of the *Comprehensive Plan* Map. The amendments support this policy for the reasons cited in the findings for State Goal 1, Citizen Involvement and because this plan updates Portland's *Comprehensive Plan* for this area of the city. Area and district plans are the current method the City of Portland is using to update the *Comprehensive Plan* map for specific geographic areas.
- 334. Policy 10.4, Comprehensive Plan Map**, calls for the *Comprehensive Plan* Map to be the official long range planning guide for uses and development in the city. The amendments support this policy because for the reasons cited in the findings for Portland Comprehensive Plan Goal 2, Urban Development and because the plan applies Comprehensive Plan Map designations consistent with the goals and policies of the *Comprehensive Plan*.
- 335. Policy 10.5, Corresponding Zones and Less Intense Zones**, requires that base zones either correspond to the *Comprehensive Plan* Map designation or be a zone less intense than the corresponding zone. The amendments support this policy because all base zones in the plan area correspond or are less intensive than the zone corresponding to the plan designation.

336. Policy 10.6, Amendments to the Comprehensive Plan Goals, Policies, and Implementing Measures, requires that all proposed amendments to implementing ordinances be reviewed by the Planning Commission prior to action by the City Council. The amendments support this policy because on November 26, 2002, the Portland Planning Commission held a public hearing on the Proposed *Northwest District Plan*. The Planning Commission deliberated on the plan at subsequent work sessions on December 10, 2002, and January 14, January 28 and April 8, 2003. On April 8, 2003 the Planning Commission recommended that City Council adopt the Recommended *Northwest District Plan*.

337. Policy 10.7, Amendments to the Comprehensive Plan Map, requires that amendments be supportive of the overall *Comprehensive Plan* and Map, be consistent with the Statewide Planning Goals, and be consistent with any adopted applicable area plans. When the amendment is from a residential, or urban commercial, to another non-residential designation the policy requires that there be no net loss of housing units. The amendments support this policy for the reasons below and for the reasons cited in the findings for all of the State Goals and relevant area plans, especially: State Goal 5, Housing and Portland Comprehensive Plan Goal 4, Housing.

- a. The plan increases the housing potential in the study area. The amendments change more than four acres of land from a nonresidential to a residential *Comprehensive Plan* designation. More than six acres of residentially designated land is changed to nonresidential designations, of which over half is owned by the City of Portland and is changed to the Open Space designation. Over 53 acres of land is removed from Industrial Sanctuary designation, where residential land uses are severely restricted, and given commercial or employment designations, which allow, and, in the context of the plan's policies and plan district provisions, actually encourage residential development in targeted areas.
- b. The plan implements a zoning pattern that encourages residential development in between commercial nodes at street intersections along NW Thurman. The plan changes the zoning of selected properties along NW Upshur and NW Thurman streets from commercial to residential or mixed residential-commercial designations to encourage residential uses.
- c. The plan supports more intensive development along West Burnside Street by extending Central Commercial (CX) zoning and extending the Central City Plan District west to NW 24th Place. Housing development is encouraged on a portion of this area by the application of the Bonus Height Option for Housing only and the Residential Bonus Target Area as shown on maps 510-3 and 510-4. Infill development at this gateway location will benefit the immediate area located at the intersection of the Burnside and 23rd main streets.
- d. Action H8 of Policy 5, Housing supports the City's 'no net housing loss' rule or a replacement that achieves the same goal.

338. Policy 10.10, Amendments to the Zoning and Subdivision Regulations, requires amendments to the zoning and subdivision regulations to be clear, concise, and applicable to the broad range of development situations faced by a growing, urban city. The amendments are consistent with this policy for the reasons below.

- a. The amended Northwest plan district regulations provide a district-specific refinement of the City's zoning code that responds to the unique urban character and issues in the Northwest District.

- b. The code provisions provide clear regulatory guidance to help realize the vision for the district as expressed in its vision statement, urban design concept and policies. The guidance is in the form of clear and objective standards as well as provisions requiring discretionary review, where appropriate.
- c. The amendments replace the Northwest Master Plan requirements with plan district main street and other development standards, street connectivity through the NW District Master Street Plan, and design review, thus eliminating what would be an unnecessary review process in a part of the plan district.

339. Policy 10.13, Design Review, calls for development of recommendations for Council consideration for additional areas where design review would be appropriate and preparation of design review standards for both existing and proposed areas. The amendments support this policy because the *Northwest District Plan* extends the application of the Design 'd' Overlay Zone to all properties within the expanded Northwest Plan District. Most new development in the zone will be required to go through design review, historic design review or comply with the Community Design Standards. The *Northwest District Plan* also includes revisions to the *Community Design* Guidelines that will help ensure the preservation the district's unique urban character and sense of place and identity. New "Desired Characteristics and Traditions" statements have been developed to assist in the application of Community Design Guideline P1, Plan Area Character.

340. Goal 11 A, Public Facilities, General, calls for provision of a timely, orderly and efficient arrangement of public facilities and services that support existing and planned land use patterns and densities. For the most part, the portion of Northwest Portland included in the *Northwest District Plan* already contains sufficient public facilities and services to allow for significant changes and additions in population and economic expansion. The amendments address the few gaps and, therefore, are consistent with this goal. The amendments are consistent with this goal for the following reasons and for the reasons cited in the findings for State Goal 11, Public Facilities and Services, State Goal 12 Transportation, Portland Comprehensive Plan Goal 8 Environment and Portland Comprehensive Plan Goal 12, Transportation..

- a. Objective A of Policy 11, Environment, calls for developing and operating public facilities and infrastructure to be sustainable and to address multiple objectives, including public health and safety, natural resource protection and recreation. The policy contains five action items that implement this objective.
- b. Objective B of Policy 3, Transportation, calls for re-establishing the historic street grid, for example, by re-establishing streets or pedestrian connections through existing superblocks. Remaining transportation items, are addresses in the next finding.
- c. Policy 9, Public Safety, calls for increasing public safety by promoting measures that foster personal security. Six objectives and 15 action items implement this policy.
- d. Objective C of Policy 16, Willamette Heights, calls for ensuring that emergency response vehicles have fast and clear routes into and out of this area. This is implemented by action item WH4 to structurally improve and preserve the Thurman Street Bridge as a safe access route.
- e. Both Action EE1 in Policy 14, Eastern Edge and Action T13 in Policy 3, Transportation, address pedestrian and bicycle access across the I-405 freeway:

- f. Action ED8 of Policy 5, Business and Economic Development, encourages businesses to light their ground floor windows during evening hours.
 - g. Policy 13, Transition Subarea, contains three objectives that support this goal. Objective E calls for re-establishing key transportation system connections through the subarea. Objective F calls for implementing multi-modal transportation improvements that address circulation and safety needs. Objective I calls for creating plazas, parks, community facilities, and open spaces to meet the needs of the subarea's residents and employees. Seven action items implement these objectives.
- 341. Policy 11.2, Orderly Land Development,** calls for urban development to occur only where urban public facilities and services exist or can be reasonably made available. The amendments support this policy because they provide for an urban level of development in an area where adequate public facilities and services already exist. The portion of the Transition Subarea south of US-30 that is rezoned to EX and where the transportation system is more fully developed is the preferred location for the first phase of new development. The Transition Subarea north of NW Thurman and US-30 will mainly be retained for industrial uses under IG1. The new *Guild's Lake Industrial Sanctuary Plan* District Subdistrict B, where IG1 zoning is retained (but higher intensity Comprehensive Plan designation of Mixed Employment is applied) is intended for change but over a longer-range time-frame and with a more gradual transition. This phasing prioritization is necessary due to limited transportation capacity of the existing street and transit system. Applicants seeking rezoning to an EG zone in GLIS Subdistrict B will be evaluated for adequacy of facilities, especially transportation system impacts. Also, EG zoned properties in GLIS Subdistrict B and in the NWPD Transition Subarea above a designated non-residential or office FAR, will contribute to a NW Transportation Fund that will assist the City in implementing transportation system improvements. Long-term change out of primarily industrial uses can thus be linked to increases in transportation capacity and/or reduction in transportation demand over a longer time frame.
- 342. Policy 11.4, Capital Efficiency,** calls for supporting maximum use of existing public facilities and services by encouraging higher density development and development of vacant land within already developed areas. The amendments support this policy because they provide for dense, urban-scale development in an area proximate to the central city and well served by urban services and facilities and for the reasons cited in the findings for Portland Comprehensive Plan Policies 2, Urban Development, 4, Housing, and 8, Environment.
- 343. Goal 11 B, Public Rights-of-Way,** calls for preservation of the quality of Portland's land transportation system, protection of the City's capital investment in public rights-of-way, and implementation of street improvements in accordance with identified needs and balanced resource allocation. The amendments are consistent with this goal for the reasons cited in the findings for State Goal 12 Transportation and Portland Comprehensive Plan Goal 12, Transportation.
- 344. Policy 11.10, Street Improvements,** calls for allowing improvements to public rights-of-way only if consistent with the street classifications in the Arterial Streets Classifications and Policies. The amendments are consistent with this policy because none of the transportation-related plan recommendations are inconsistent with the areas street classifications.
- 345. Policy 11.12, Transit Improvements,** calls for constructing or modifying transit streets to promote more efficient and effective public transportation and to improve pedestrian access to transit. The amendments support this policy for the reasons cited in the findings for Portland Comprehensive Plan Policy 6, Transportation and because the *Northwest District Plan* zoning map amendments

support urban-level, transit-supportive density in an area well-served by transit including along main streets and the Portland Streetcar line.

- 346. Policy 11.13, Bicycle Improvements**, calls for providing bikeway facilities appropriate to the street classifications, traffic volume, and speed in the design and construction of all new or reconstructed streets. The amendments support this policy for the reasons cited in the findings for Portland Comprehensive Plan Goal 6, Transportation and because they include a Master Street Plan that identifies the existing and preferred future street and pedestrian/bicycle connectivity layout for the study area. The Master Street Plan will be incorporated into the Transportation System Plan and, as it is implemented, will provide increased connectivity by establishing new street and pedestrian/bicycle connections.
- 347. Policy 11.14, Public Bicycle Parking**, calls for providing for safe short- and long-term bicycle parking throughout the Central City and in other areas of the City where needed. The amendments support this policy because Objective H of Policy 3, Transportation calls for supporting bicycle use in the district by providing convenient facilities, such as parking and other support services.
- 348. Policy 11.15, Pedestrian Improvements on Arterials**, calls for providing for safe pedestrian movement along all new or reconstructed streets classified as Neighborhood Collectors or above and developing additional pedestrian walkways where needed. The amendments support this policy for the reasons cited in the findings for Portland Comprehensive Plan Goal 6, Transportation and because they include a Master Street Plan that identifies the existing and preferred future street and pedestrian/bicycle connectivity layout for the study area. The Master Street Plan will be incorporated into the Transportation System Plan and, as it is implemented, will provide increased connectivity by establishing new street and pedestrian/bicycle connections.
- 349. Goal 11 C, Sanitary and Stormwater Facilities**, calls for an efficient, adequate, and self-supporting wastewater collection treatment and disposal system which will meet the needs of the public and comply with federal, state and local clean water requirements. The amendments are consistent with this goal for the reasons cited in the findings for State Goal 6, Air, Water and Land Resource Quality, State Goal 11, Public Facilities and Services and Portland Comprehensive Plan Goal 8, Environment.
- 350. Policy 11.25, Stormwater Management**, calls for integrating master planning for stormwater management with other city activities to achieve adequate drainage and to minimize pollution and erosion problems. The amendments support this policy for the reasons cited in the findings for State Goal 6, Air, Water and Land Resource Quality, State Goal 11, Public Facilities and Services and Portland Comprehensive Plan Goal 8, Environment.
- 351. Policy 11.26, Impervious surfaces**, calls for limiting the increase of Portland's impervious surfaces without unduly limiting development in accordance with the *Comprehensive Plan*, when necessary. The amendments support this policy for the reasons cited in the findings for State Goal 6, Air, Water and Land Resource Quality, State Goal 11, Public Facilities and Services and Portland Comprehensive Plan Goal 8, Environment and because the plan supports incentive programs for the use of green building, eco-roof, and other low-impact techniques, such as on-site stormwater management, landscaping with native vegetation and porous pavements, in public and private development and redevelopment projects.
- 352. Goal 11 D, Solid Waste**, calls for provision of adequate solid waste disposal. The amendments are consistent with this goal for the reasons stated in the findings for State Goal 6, Air, Water and Land Resource Quality, State Goal 11, Public Facilities and Services and Portland Comprehensive Plan

Goal 8, Environment and because Objective E of Goal 11, Environment, encourages recycling and reduction of solid waste and litter.

353. **Goal 11 E, Water Service**, calls for an efficient, adequate, and self-sustaining water supply and delivery system which will meet the future needs of the community. The amendments are consistent with this goal for the reasons stated in the findings for State Goal 6, Air, Water and Land Resource Quality, State Goal 11, Public Facilities and Services and Portland Comprehensive Plan Goal 8, Environment.
354. **Policy 11.41, Energy Conservation**, calls for pursuing system improvements and efficiencies in operation and maintenance of facilities to reduce and conserve energy. The amendments support this policy for the reasons cited in the findings for State Goal 13, Energy Conservation and Portland Comprehensive Plan Goal 7, Energy.
355. **Goal 11 F, Parks and Recreation**, calls for maximizing the quality, safety and usability of parklands and facilities through the efficient maintenance and operation of park improvements, preservation of parks and open space, and equitable allocation of active and passive recreation opportunities for the citizens of Portland. The amendments are consistent with this goal for the reasons cited in the findings for State Goal 5, Open Space, Scenic and Historic Areas, and Natural Resources and Portland Comprehensive Plan Policy 2.6 Open Space.
356. **Policy 11.45, Improvements**, calls for prioritizing improvement and development of parklands based on documented needs and particular criteria. The amendments support this policy because the plan identifies open space and recreation needs in the district.
357. **Policy 11.46, New Parkland**, calls for increasing the supply of parkland, giving priority to particular areas. The amendments support this policy because the plan identifies open space and recreation needs in the district and redesignates more than three acres of land owned and administered by the Portland Parks and Recreation Bureau to Open Space (OS), thus preserving and protecting land for open space uses into the future
358. **Goal 11 G, Fire**, calls for the development and maintenance of facilities that adequately respond to the fire protection needs of Portland. The amendments are consistent with this goal because Objective C of Policy 16, Willamette Heights, calls for ensuring that emergency response vehicles have fast and clear routes into and out of this area. This is implemented by action item WH4 to structurally improve and preserve the Thurman Street Bridge as a safe access route.
359. **Policy 11.56, Emergency Access**, calls for requiring streets to be of high structural quality and sufficient width, and to be kept maintained to ensure emergency and service equipment access. amendments are consistent with this goal because Objective C of Policy 16, Willamette Heights, calls for ensuring that emergency response vehicles have fast and clear routes into and out of this area. This is implemented by action item WH4 to structurally improve and preserve the Thurman Street Bridge as a safe access route.
360. **Goal 11 H, Police**, calls for the development and maintenance of facilities that allow police personnel to respond to public safety needs as quickly and efficiently as possible. The amendments are consistent with this goal for the reasons below.
 - a. Policy 9, Public Safety, calls for increasing public safety by promoting measures that foster personal security.

- (1) Objective A encourages site and building designs that incorporate “Crime Prevention Through Environmental Design” principles.
 - (2) Objective B encourages projects that support active and passive spaces that focus toward the street.
 - (3) Objective C encourages and expands participation in community policing.
 - (4) Objective D calls for increased police visibility in the district.
 - (5) Objective E calls for improved security at parks in the district.
 - (6) Objective F calls for forging partnerships with adjacent neighborhoods to address common public safety issues and allocation of resources.
- 361. Policy 11.60, Crime Prevention**, calls for reducing citizen fear of and susceptibility to crime through increasing awareness of crime prevention methods and involving the entire community in crime prevention programs. The amendments support this policy for the reasons cited in the findings for Portland Comprehensive Plan Goal 11H, Police
- 362. Goal 11 I, Schools**, calls for the enhancement of educational opportunities of Portland’s citizens through assistance in planning educational facilities. The amendments are consistent with this goal because Policy 10, Quality of Life, calls for strengthening the sense of community and ensuring that cultural, educational and recreational resources continue to be a vital part of public life and because Objective C of Policy 2, Institutions calls for maintaining and augmenting facilities and programs that provide educational, recreational and cultural resources and opportunities.
- 363. Goal 12, Urban Design**, calls for the enhancement of Portland as a livable city, attractive in its setting and dynamic in its urban character by preserving its history and building a substantial legacy of quality private developments and public improvements for future generations. The amendments are consistent with this goal for the following reasons.
- a. The *Northwest District Plan* contains an Urban Design Concept that is a graphical representation of the community’s vision for the future, focusing on elements that define the desired urban form.
 - b. The *Northwest District Plan* describes characteristics and architectural traditions of the Northwest District that should be considered by developers and designers when undertaking new construction or renovations in the area.
 - c. Policy 7, Urban Design, calls for respecting the urban design principles and architectural qualities that define the district’s human-scaled, pedestrian-oriented character. Nine objectives and 11 actions implement this policy.
 - d. Policy 8, Historic Preservation, calls for identifying, preserving, and protecting historic resources and supporting development that enhances the historic qualities of the district. Four objectives and 13 action items implement this policy.
 - e. The Plan’s Zoning Code amendments, including its main street development standards, surface parking limitations and prohibition of drive-through land uses are designed to reinforce the

historic pedestrian orientation, transit-friendliness and traditional urban character of the district's streetscapes. Main street provisions include required windows above the ground floor, ground floor active uses, and restrictions on the location of parking and vehicle access.

- f. The *Northwest District Plan* extends the application of the Design 'd' Overlay Zone to all properties within the expanded Northwest Plan District. The Design Overlay Zone promotes the conservation, enhancement and continued vitality of areas with special scenic, architectural and cultural value, such as the Northwest District. Most new development in the zone will be required to go through design review, historic design review or comply with the Community Design Standards.
 - g. The *Northwest District Plan* includes revisions to the *Community Design* Guidelines that will help ensure the preservation the district's unique urban character and sense of place and identity. New "Desired Characteristics and Traditions" statements have been developed to assist in the application of Community Design Guideline P1, Plan Area Character.
 - h. Plan properties along W. Burnside Street that are brought in to the *Central City Plan* will have design review applied with specific central city and central city subarea design guidelines.
- 364. Policy 12.1, Portland's Character**, calls for enhancing and extending Portland's attractive identity by building on design elements, features and themes identified within the city. The *Northwest District Plan* includes revisions to the *Community Design* Guidelines that will help ensure the preservation the district's unique urban character and sense of place and identity. New "Desired Characteristics and Traditions" statements have been developed to assist in the application of Community Design Guideline P1, Plan Area Character.
- 365. Objective A:** Give form to the City and extend the intimate and human scale that typifies Portland. Preserve public access to light and air by managing and shaping the mass, height and bulk of new development. Retain the variety of alternative routes between locations that is produced by using a small block size. Focus new development at locations where necessary services already exist such as near light rail transit stations and along transit streets. The amendments support this objective in the following ways.
- a. Policy 7, Urban Design, calls for respecting the urban design principles and architectural qualities that define the district's human-scaled, pedestrian-oriented character. The following objectives implement this policy. Objective A calls for integrating new development with the existing urban fabric by acknowledging the scale, proportions, orientation, quality of construction and other architectural and site design elements of the building's immediate area. Objective B promotes a high level of design quality in mixed-use areas, including main streets, the Portland Streetcar line, and other areas where more intensive development is anticipated. Objective C calls for preserving and enhancing the distinct character of different parts of the Northwest District. Objective D calls for fostering a continuous frontage of buildings and active uses along main streets and the Portland Streetcar line.
 - b. Policy 13, Transition Subarea, calls for integrating the subarea into the pedestrian-oriented, architecturally diverse urban fabric to the south and west. Objective E calls for re-establishing key transportation system connections through the subarea. Objective F calls for implementing multi-modal transportation improvements that address circulation and safety needs.

- c. Objective B of Policy 3, Transportation, calls for maintaining, reinforcing, and re-establishing the historic street grid, for example, by re-establishing streets or pedestrian connections through existing superblocks.

366. Objective B: Preserve and enhance the character of Portland's neighborhoods. Encourage the development of attractive and unique characteristics which aid each neighborhood in developing its individual identity. The amendments support this objective in the following ways.

- a. The *Northwest District Plan* contains a Vision for the Northwest District in 2023, which reflects the community's aspirations for the future.
- b. The *Northwest District Plan* contains an Urban Design Concept that is a graphical representation of the community's vision for the future, focusing on elements that define the desired urban form.
- c. The *Northwest District Plan* describes characteristics and architectural traditions of the Northwest District that should be considered by developers and designers when undertaking new construction or renovations in the area.
- d. Policy 7, Urban Design, calls for respecting the urban design principles and architectural qualities that define the district's human-scaled, pedestrian-oriented character. Objective A calls for integrating new development with the existing urban fabric by acknowledging the scale, proportions, orientation, quality of construction and other architectural and site design elements of the building's immediate area. Objective C calls for preserving and enhancing the distinct character of different parts of the Northwest District.
- e. Objective I of Policy 6, Business and Economic Development, calls for building on the unique identity and economic strength provided by the district's main streets.

367. Objective C: Enhance the sense Portlanders have that they are living close to nature. Improve access to the City's rivers, lakes, creeks and sloughs. Establish a system of trails that connect Portland's urbanized areas with nearby woods, forests, meadows, wetlands and riparian areas. Increase the degree to which natural areas and public open spaces penetrate the City. Extend forest and water corridors and join them to provide a network of fish and wildlife habitat areas that mesh with the City's parks, open spaces and circulation system for pedestrians. Design new development to enhance the natural environment that is so much a part of Portland's character. The amendments support this objective for the following reasons.

- a. Policy 10, Quality of Life, contains several objectives that support this objective. Objective A calls for enhancing and protecting Forest Park as a natural resource area providing passive recreation activities. Objective B calls for maintaining, enhancing, and expanding current parks, open spaces, and recreational facilities. Objective D calls for improving public access to nearby parks, natural areas, and the Willamette River.
- b. Objective D of Policy 11, Environment, calls for improving environmental connections between existing and future parks, open spaces, and the Willamette River. Action E6 calls for connecting existing and future parks, open spaces and the Willamette River through the use of main and green streets that blend and transition the vegetation and natural features of the different places. Action E10 calls for supporting natural area restoration efforts, including, but not limited to, revegetation, day-lighting "buried" stream channels, restoring wildlife habitat and wetlands, and restoring Lower Macleay stream.

- c. Objective G of Policy 13, Transition Subarea, calls for improving connections through the subarea and to the Willamette River.
- d. Objective F of Policy 16, Willamette Heights Subarea, calls for protecting and enhancing Forest Park as a regionally significant natural and recreational resource while reducing negative impacts on livability that may be associated with park usage. Action WH1 calls for reconfiguring parking at the entrance of Forest Park to reduce negative impacts on nearby homes. Action WH3 calls for improving pedestrian connections through Willamette Heights to Forest Park. Action WH5 calls for considering the creation of another access into Forest Park that links to Leif Erickson and the Wildwood Trail. Action WH9 calls for seeking to acquire or otherwise preserving significant undeveloped natural areas, including those adjacent to the Willamette Heights Subarea, as additions to Forest Park.

368. Objective D: Expand the use of street furniture. As new street furniture is needed, incorporate Portland design themes into its design. Examples include the City's ornamental drinking fountains, street lighting standards and other features that are designed specifically for this City. Opportunities for the employment of such motifs include utility hole covers, water meter covers, bus shelters and street signs. The amendments support this objective for the reasons below.

- a. Policy 7, Urban Design, calls for respecting the urban design principles and architectural qualities that define the district's human-scaled, pedestrian-oriented character. The following objectives implement this policy. Objective A calls for integrating new development with the existing urban fabric by acknowledging the scale, proportions, orientation, quality of construction and other architectural and site design elements of the building's immediate area. Objective B promotes a high level of design quality in mixed-use areas, including main streets, the Portland Streetcar line, and other areas where more intensive development is anticipated. Objective C calls for preserving and enhancing the distinct character of different parts of the Northwest District. Objective D calls for fostering a continuous frontage of buildings and active uses along main streets and the Portland Streetcar line.
- b. Policy 3, Transportation, contains two actions that support this objective. T13 calls for creating safe and attractive passageways under the I-405 freeway through such means as public art, lighting, and improved pedestrian and bicycle facilities. T23 calls for developing a network of pedestrian and bicycle-oriented "Greenstreets", as identified in the Urban Design Concept, with elements such as special sidewalk furniture, public art, signage, street lighting, landscaping and crossing improvements.
- c. The *Northwest District Plan* amends Portland Personality Guideline, P1, of the Community Design Guidelines, by including examples of ways this guideline may be accomplished in the Northwest District. One example shows that the guideline could be accomplished "along main streets and the streetcar alignment by incorporating design elements that contribute to a vibrant and pedestrian-oriented streetscape. Development along these streets should include elements such as large storefront windows, awnings, outdoor space for dining and other activities, and building frontage and setbacks seamlessly integrated with the public realm."

369. Objective G: Extend urban linear features such as linear parks, park blocks and transit malls. Celebrate and enhance naturally occurring linear features such as rivers, creeks, sloughs and ridge-lines. Tie public attractions, destinations and open spaces together by locating them in proximity to

these linear features. Integrate the growing system of linear features into the City's transportation system, including routes and facilities for pedestrians, bicyclists and boaters.

- a. Objective C of Policy 14, Thurman-Vaughn Subarea, encourages development on the south side of NW Vaughn Street that includes a continuous frontage of commercial buildings, unifies the streetscape, and supports both the mixed-use area to the south and the industrial sanctuary to the north.
 - b. Revisions to the Central City Plan extend provisions along West Burnside Street to the western end of this street within the Northwest District.
 - c. Action TS2 of Policy 12, Transition Subarea, calls for reestablishing Thurman Street as a multimodal through-street connection from NW 23rd Avenue to NW Naito Parkway helping to link the Willamette Greenway to Forest Park.
 - d. Objective D of Policy 7, Urban Design, calls for fostering a continuous frontage of buildings and active uses along main streets and the Portland Streetcar line.
- 370. Objective H:** Preserve and enhance existing public viewpoints, scenic sites and scenic corridors. As new development occurs, take advantage of opportunities to create new views of Portland's rivers, bridges, the surrounding mountains and hills, and the Central City skyline. Action QL7 of Policy 10, Quality of Life, calls for considering the amendment of the *Scenic Resources Protection Plan* to include the panorama of wooded slopes on the west side of the plan area as seen from the east, including the slope above and below Willamette Heights and NW Westover Street.
- 371. Objective I:** Encourage the use of materials and a quality of finish work which reinforce the sense of this City as one that is built for beauty and to last. Reflect this desire in both public and private development projects. The *Northwest District Plan* extends design review to all properties within the expanded Northwest Plan District and includes a revision to the Community Design Guidelines to assist developers enhance the district's sense of place and identity. Action HP13 of Policy 8, Historic Preservation, calls for developing and adopting design guidelines for the Alphabet Historic District.
- 372. Policy 12.2, Enhancing Variety,** calls for promoting the development of areas of special identity and urban character. The Northwest District is a complex inner-urban area, with a rich diversity of land uses, people, businesses, infrastructure, services, and amenities. This plan proposes amendments that preserve and support the qualities unique to this area.
- a. The *Northwest District Plan* contains a Vision for the Northwest District in 2023, which reflects the community's aspirations for the future.
 - b. The *Northwest District Plan* contains an Urban Design Concept that is a graphical representation of the community's vision for the future, focusing on elements that define the desired urban form.
 - c. The *Northwest District Plan* describes characteristics and architectural traditions of the Northwest District that should be considered by developers and designers when undertaking new construction or renovations in the area.
 - d. The *Northwest District Plan* contains policies, objectives, and actions that will help achieve the vision and urban design concept.

- e. The *Northwest District Plan* proposes changes to the *Comprehensive Plan* and zoning maps to implement the policies and objectives.
- f. The *Northwest District Plan* extends design review to all properties in the *Northwest District Plan*. The plan amends Guideline P1 of the Community Design Guidelines to include examples of ways this guideline may be accomplished in the Northwest District.

373. Objective B: Enhance the residential scale of Portland's neighborhoods while accommodating the growth allowed by the City's *Comprehensive Plan*. Encourage the development of a distinct and attractive urban identity in each of Portland's neighborhoods. As each new community plan is created, give consideration to how it links to and coordinates with urban design elements of adjacent areas.

- a. Policy 1, Land Use, calls for participating in the growth of the metropolitan region in a manner that protects and enhances the quality of life in the Northwest District.
- b. Policy 7, Urban Design, calls for respecting the urban design principles and architectural qualities that define the district's human-scaled, pedestrian-oriented character. The following objectives implement this policy. Objective A calls for integrating new development with the existing urban fabric by acknowledging the scale, proportions, orientation, quality of construction and other architectural and site design elements of the building's immediate area. Objective C calls for preserving and enhancing the distinct character of different parts of the Northwest District.

374. Objective C: Foster the development of an attractive urban character along Portland's commercial streets and in its commercial districts. Accommodating pedestrians as shoppers and visitors in commercial areas is a major priority of development projects. Commercial areas should allow the development of a mixture of uses, including residential uses. Add new building types to established areas with care and respect for the context that past generations of builders have provided. The amendments support this objective for the following reasons.

- a. Policy 1, Land Use, contains two objectives that support this objective. Objective C calls for concentrating a mix of higher intensity residential and commercial development along main streets and the Portland Streetcar line in order to make efficient use of existing infrastructure. Objective D calls for reinforcing main streets and the Portland Streetcar line as the focus for retail activity in the district. LU4 encourages institutional and commercial developments to include mixed-use components, such as housing and neighborhood-serving commercial services. LU5 encourages the development of buildings that contain both commercial and residential uses in zones that allow a mixture of uses. LU11 and LU15 call for adopting changes to *Comprehensive Plan* map designations for selected sites to encourage an urban level of residential, commercial and mixed-use development in the Northwest District.
- b. The *Northwest District Plan* extends design review to all properties in the *Northwest District Plan* District and to those properties brought into the Central City Plan District.
- c. Amendments to the Central City Plan District clarify approval criteria for application of the residential height bonus option to ensure new development fits into the surrounding area.

- d. Objective E of Policy 5, Housing, encourages the development of mixed-use projects that include housing in all commercial and most employment zones.
- e. Objective F of Policy 6, Business and Economic Development, encourages live/work spaces and home occupations.

375. Policy 12.3, Historic Preservation, calls for enhancing the City's identity through the protection of Portland's significant historic resources. The amendments support this policy. Policy 8, Historic Preservation, calls for identifying, preserving, and protecting historic resources and supporting development that enhances the historic qualities of the district. The Plan implements this policy and its objectives with 13 action items.

376. Objective A: Preserve and accentuate historic resources as part of an urban environment that is being reshaped by new development projects. The amendments support this objective.

- a. Three objectives of Policy 8, Historic Preservation, are particularly supportive of this objective. Objective A promotes restorations and renovations of residential and commercial structures that maintain the historic style, quality, and character of the original building. Objective B encourages adaptive reuse of historic resources that maintain their historic character. Objective D encourages individual and multiple property listing in the National Register, including the development of additional historic districts outside of the Alphabet Historic District.
- b. Objective B of Policy 16, Willamette Heights Subarea, calls for preserving the subarea's stock of historically significant housing. Action WH2 calls for considering the nomination of properties in Willamette Heights, including the Thurman Street Bridge, in the National Register of Historic Places.
- c. Policy 13, Transition Subarea, contains objectives that call for preserving the historic industrial character of NW Upshur Street north of the freeway and reinforcing the role of St. Patrick's church as a district landmark.
- d. Action EE5 of Policy 14, Eastern Edge, encourages owners of historic properties to place their property on the National Register of Historic Places.

377. Objective B: Support the preservation of Portland's historic resources through public information, advocacy and leadership within the community as well as through the use of regulatory tools. The amendments support this objective. Objective C of Policy 8, Historic Preservation, calls for promoting awareness of the district's history and historic resources, which may include individual structures or groups of buildings, streetscapes, stairways, trees, gardens, parks, bridges, and natural areas.

378. Objective C: Maintain a process that creates opportunities for those interested in the preservation of Portland's significant historic resources to participate in the review of development projects that propose to alter or remove historic resources. The amendments support this objective because they do not propose to change the current process that creates contains opportunities for those interested in the preservation of Portland's significant historic resources to participate in the review of development projects that propose to alter or remove historic resources.

379. Objective E: Protect potentially significant historic structures from demolition until the City can determine the significance of the structure and explore alternatives to demolition. The amendments

support this objective because they do not propose to change the current process of demolition delay that allows the City time to determine the significance of the structure and explore alternatives to demolition.

380. Policy 12.4, Provide for Pedestrians, calls for providing a pleasant, rich and diverse experience for pedestrians which includes comfortable, safe and attractive pathways. Two objectives of Policy 3, Transportation support this policy. Objective F calls for maintaining, improving, and expanding pedestrian and bicycle connections within the district and to other parts of the city and minimize conflicts between motorized and non-motorized transportation. Objective G calls for enhancing main streets and the Portland Streetcar line as key pedestrian places. Thirteen actions implement these objectives.

381. Objective A: Providing for pedestrians should be a primary mode of transportation throughout the City. Ensure that the safety and convenience of pedestrians are not compromised by transportation improvements aimed at motor vehicle traffic. Movement patterns for pedestrians should contribute to Portland's sense of community and provide for connections between areas of the City.

- a. The following actions implementing Policy 3, Transportation, support this objective.
 - T10 calls for improving pedestrian crossings along main streets and near neighborhood attractions using measures such as curb extensions, improved markings and signage, and signalized intersections.
 - T11 calls for improving the pedestrian environment along NW 23rd Avenue between NW Thurman and NW Vaughn Streets through means such as wider sidewalks, street trees, and curb extensions.
 - T12 calls for improving pedestrian crossings and amenities along NW Vaughn Street.
 - T13 calls for creating safe and attractive passageways under the I-405 freeway through such means as public art, lighting, and improved pedestrian and bicycle facilities.
 - T16 calls for providing improved pedestrian connectivity on the NW 29th Avenue right-of-way between NW Thurman and NW Upshur Streets.
 - T26 calls for using education and outreach tools to alert drivers of pedestrian activity in the neighborhood.
 - T29 calls for creating and maintaining pedestrian, bicycle, and/or automobile connections and reinforcing the historic street grid by implementing the Northwest District Master Street Plan.
 - T31 calls for working with the neighborhood to make traffic control modifications that enhance the safety of children and other pedestrians in the vicinity of parks and high-activity areas.
 - T33 calls for supporting vigorous enforcement of traffic laws related to vehicle speed and pedestrian right of way in intersections.
- b. Amendments to Further Statement B of Policy 15, Goose Hollow, of the *Central City Plan*, calls for improving pedestrian and bicycle connections to light rail, across West Burnside Street, and throughout the neighborhoods.

382. Objective B: Enhance the environment occupied by Portland's pedestrians. Seek to enrich these places with designs that express the pleasure and hold the pleasant surprises of urban living. The amendments support this objective.

- a. Policy 7, Urban Design, calls for respecting the urban design principles and architectural qualities that define the district's human-scaled, pedestrian-oriented character. Nine objectives and eleven action items implement this policy.
- b. Policy 10, Quality of Life, contains two actions that support this objective. QL8 calls for creating banners that can be used for seasonal events, to alert drivers to increased pedestrian activity, or for other special occasions. QL10 calls for examining the possibility of periodically closing portions of NW 23rd Avenue to automobile through-traffic to provide additional pedestrian space and opportunities for occasional street markets.

383. Objective C: Provide Portland's sidewalks with buffering from auto traffic and auto parking areas; provide trees that will shade sidewalks on hot days; provide sidewalks of adequate width to accommodate the pedestrians that future development is expected to generate; provide convenient connections from sidewalks to parks, developments, and attractions; and ensure that the pedestrian circulation system is safe and accessible to children, seniors and the disabled (including the blind). The amendments support this objective.

- a. Most of the Northwest District is already a pedestrian district. Action TS1 of Policy 13, Transition Subarea, calls for expanding the Northwest Pedestrian District to include the Transition Subarea. Sidewalks within pedestrian districts range between 15 feet for arterial streets and 12 feet for local streets.
- b. Action T23 calls for developing a network of pedestrian and bicycle-oriented "Greenstreets", as identified in the Urban Design Concept, with elements such as special sidewalk furniture, public art, signage, street lighting, landscaping and crossing improvements.

384. Objective D: Reinforce commercial areas that include a storefront character and/or are on transit streets by requiring development to be oriented to pedestrians. The following amendments support this objective.

- a. Action UD8 of Policy 7, Urban Design, calls for encouraging new development that contributes to the continuous frontage of buildings and active uses along main streets and the Portland Streetcar line by applying the following zoning code standards:
 - Require ground-level parking areas to locate behind an active use, with the exception of sites that are 10,000 square feet or less.
 - Restrict parking access and curb cuts.
 - Require a minimum floor area ratio (FAR) of 1.5:1.
- b. Action UD7 of Policy 7, Urban Design, calls for working with the Bureau of Development Services Code Compliance staff to enforce regulations in Chapter 33.266 pertaining to new vehicle areas between the fronts of existing buildings and streets, including those with two street faces.
- c. Action GH25 of Policy 15, Goose Hollow, of the *Central City Plan*, calls for creating wider pedestrian areas by including arcades along the frontage of new buildings along West Burnside Street.
- d. Action GH42 of Policy 15, Goose Hollow, of the *Central City Plan*, calls for exploring and applying as appropriate, as part of the next update to the Central City Plan, the following

development standards along West Burnside Street: Active Use Areas and Required Building Lines.

- e. The amendments to the Central City Plan extends the following provision to West Burnside Street within the Northwest District: “New motor vehicle access to any parking area or structure is not allowed on the streets shown on Map 510-9.” (includes the extended portion of West Burnside Street)

385. Objective E: Complete the 40-Mile Loop and Willamette Greenway trails and establish links between these trails and Portland’s residential neighborhoods and parks. Objective D of Policy 9, Quality of Life, which calls for improving public access to nearby parks, natural areas, and the Willamette River, supports this objective.

386. Policy 12.5, Promote the Arts, calls for humanizing the City through promotion of the arts and excellence in design. The amendments support this policy for the reasons below.

- a. Policy 7, Urban Design, contains two objectives that support this policy. Objective A calls for integrating new development with the existing urban fabric by acknowledging the scale, proportions, orientation, quality of construction and other architectural and site design elements of the building’s immediate area. Objective B promotes a high level of design quality in mixed-use areas, including main streets, the Portland Streetcar line, and other areas where more intensive development is anticipated.
- b. Policy 3, Transportation, contains two action items that support this policy. Action T13 calls for creating safe and attractive passageways under the I-405 freeway through such means as public art, lighting, and improved pedestrian and bicycle facilities. Action T23 calls for developing a network of pedestrian and bicycle-oriented “Greenstreets”, as identified in the Urban Design Concept, with elements such as special sidewalk furniture, public art, signage, street lighting, landscaping and crossing improvements.

387. Objective C: Emphasize important places, transitions and gateways within Portland by celebrating them with works of art. Use art to add interest to the experience of the City’s citizens and to accent locations such as transit stations, sidewalks, streets, parks and building lobbies that are visited by many people. The Urban Design Concept of the plan, which proposes the use of public art at the following locations, supports this objective.

- Gateway at NW 23rd Avenue and NW Vaughn Street
- Freeway passages under I-405
- Neighborhood Focal Points, particularly at the intersections of NW Glisan Street with both NW 21st and NW 23rd Avenues.

388. Policy 12.6, Preserve Neighborhoods, calls for preserving and supporting the qualities of individual neighborhoods that help to make them attractive places. The Northwest District is a complex inner-urban area, with a rich diversity of land uses, people, businesses, infrastructure, services, and amenities. This plan proposes amendments that preserve and support the qualities unique to the neighborhoods included within this plan: the Northwest District, Hillside, and Goose Hollow neighborhoods. In particular:

- a. The amendment proposed within the Hillside neighborhood eliminates split zoning on a property at the base of the hill at NW 24th. The Hillside neighborhood is primarily residential; this

amendment continues the residential zoning adjacent to the more urban property fronting Burnside.

- b. The amendment proposed within the Goose Hollow neighborhood extends the Central City Plan to properties along Burnside to the neighborhood's boundary with Forest Park. The parking access restrictions along Burnside as well as the extension of parking allowances and requirements to these sites continue the unique character of West Burnside through the neighborhood.
- c. The amendments proposed within the Northwest District neighborhood:
 - Provide standards through the Northwest Plan District that will ensure the desired residential, commercial, pedestrian and transit character will remain in the established parts of the neighborhood and that, as properties in the Transition Area evolve, they do so in keeping with the desired character;
 - Apply design review to all properties within the Northwest Plan District;
 - Encourage businesses to locate at the intersections along Thurman interspersed with residential, so as to eliminate the possibility of strip commercial development along this pedestrian-oriented street;
 - Provide a transition between industrial uses to the north of Vaughn and the mixed-use neighborhood to the south by applying a *Comprehensive Plan* designation of Mixed Employment to the current General Industrial zone with development standards that provide uniformity with the CS zone on the south side of Vaughn; and
 - Extend the Central City Plan to properties along Burnside to the neighborhood's western boundary. The parking access restrictions along Burnside as well as the extension of parking allowances and requirements to these sites continue the unique character of West Burnside through the neighborhood.

389. Objective A: Encourage new developments to respond to the positive qualities of the place where they are to be built and to enhance that place through their development. Developers should consider the character enhancing role played by the use of color and light. The amendments support this objective because design review is being applied throughout the entire Northwest Plan District. Guideline P1 of the Community Design Guidelines is being amended to include examples of ways this guideline may be accomplished in the Northwest District.

390. Objective B: Respect the fabric of established neighborhoods when undertaking infill development projects. The amendments support this objective.

- a. Policy 1, Land Use, calls for participating in the growth of the metropolitan region in a manner that protects and enhances the quality of life in the Northwest District.
- b. Objective A of Policy 16, Willamette Heights Subarea, calls for supporting infill development that can be accommodated by the subarea's constrained transportation access routes and that mitigates for potential impact on environmentally sensitive areas.

391. Objective C: While accommodating increased density build on the attractive qualities that distinguish the area. Add new building types to established area with care and respect for the context that past generations of builders have provided. The amendments support this objective.

- a. Policy 7, Urban Design, calls for respecting the urban design principles and architectural qualities that define the district's human-scaled, pedestrian-oriented character. The following

objectives implement this policy. Objective A calls for integrating new development with the existing urban fabric by acknowledging the scale, proportions, orientation, quality of construction and other architectural and site design elements of the building's immediate area. Objective C calls for preserving and enhancing the distinct character of different parts of the Northwest District.

- b. Policy 13, Transition Subarea, calls for integrating the subarea into the pedestrian-oriented, architecturally diverse urban fabric to the south and west.
- c. Objective A of Policy 14, Eastern Edge Subarea, supports the established mixed-use urban character of this subarea.
- d. Policy 15, Thurman-Vaughn Subarea, calls for enhancing this mixed-use subarea by emphasizing housing along NW Upshur and NW Thurman Streets and commercial uses on the south side of NW Vaughn Street and in nodes at intersections along NW Thurman Street. Objective C, which encourages development on the south side of NW Vaughn Street that includes a continuous frontage of commercial buildings, unifies the streetscape, and supports both the mixed-use area to the south and the industrial sanctuary to the north, implements this policy.
- e. Policy 16, Willamette Heights Subarea, calls for maintaining and protecting the residential character and environmental resources of the Willamette Heights Subarea.

392. Policy 12.7, Design Quality, calls for enhancing Portland's appearance and character through development of public and private projects that are models of innovation and leadership in the design of the built environment. The amendments support this objective.

- a. Design review is being applied throughout the entire Northwest Plan District. Guideline P1 of the Community Design Guidelines is being amended to include examples of ways this guideline may be accomplished in the Northwest District.
- b. Much of the Northwest District is already included within the Alphabet Historic District. The *Northwest District Plan* proposes no amendments that would threaten the historic character of the Alphabet Historic District.

393. Policy 12.8, Community Planning, calls for considering urban design issues as part of area plans. The *Northwest District Plan* is an area plan. The amendments support this policy.

- a. The plan proposes the Northwest Urban Design Concept, a graphical representation of the aspirations of the community for the future of the district. The concept focuses on elements that define the desired urban form of the district and serves as the basis for the plan's policies and implementation strategies.
- b. Policy 7, Urban Design, calls for respecting the urban design principles and architectural qualities that define the district's human-scaled, pedestrian-oriented character. The following objectives implement this policy. Nine objectives and 11 action items implement the policy.
- c. Design review will be applied within the Northwest Plan District.

394. Objective A: Consider as part of the development of community plans the following urban design issues: the need for new design zones; the protection of significant historical resources; the location of major and minor points of transition, gateways and focal points; the protection and enhancement of scenic resources; the location of existing public attractions; good locations for possible new attractions; the locations of trails, pedestrian paths and bicycle routes and paths; the location of existing open spaces; and the need for new public open spaces. The amendments support this objective because of the following.

- a. The plan proposes the Northwest Urban Design Concept, a graphical representation of the aspirations of the community for the future of the district. The following are identified on the Concept Plan: the location of major and minor points of transition, gateways, and focal points, the location of existing public attractions and good locations for possible new attractions, greenstreets (which are pedestrian and bicycle-oriented streets that have special elements such as special sidewalk furniture, public art, signage, street lighting, landscaping and crossing improvements), and the location of existing and proposed parks and open spaces.
- b. Design review will be applied within the Northwest Plan District.
- c. Policy 8, Historic Preservation, calls for identifying, preserving, and protecting historic resources and supporting development that enhances the historic qualities of the district. The Plan implements this policy and its objectives with 13 action items.

395. Objective B: Use urban design considerations to guide the evolution of the character of these areas. As each new community plan is created, give consideration to how it links to and coordinates with urban design elements of adjacent areas. The amendments support this objective.

- a. The plan expands the Central City Plan to properties along Burnside within both the Northwest District Neighborhood and the Goose Hollow Neighborhood. Design review will be applied to all these properties as will elements of the Central City Plan that will knit the two sides of Burnside into a coherently designed area.
- b. Design considerations such as wider sidewalks, street trees, public art, and lighting are found in the following action items: T11, which address the pedestrian environment along NW 23rd; T13, which addresses attractive passageways under the I-405 freeway, and T23, which addresses a network of greenstreets.

396. Objective C: Explore the potential for linkages between a community plan's urban design elements and other planning strategies that have been or are being created. Include consideration of open space, scenic, cultural and historic resources, and environmental areas. Other adopted planning strategies that are relevant to the Northwest District include the following: River District Plan, Goose Hollow Station Community Plan, Balch Creek Watershed Plan, Alphabet Historic District, and Kings Hill Historic District. Every effort has been made to coordinate with the Healthy Portland Streams and River Renaissance projects.

- a. The plan expands the Central City Plan to properties along Burnside within both the Northwest District Neighborhood and the Goose Hollow Neighborhood. Design review will be applied to all these properties as will elements of the Central City Plan that will knit the two sides of Burnside into a coherently designed area.

- b. Objective D of Policy 10, Quality of Life, calls for improving public access to nearby parks, natural areas, and the Willamette River. Objective D of Policy 11, Environment, calls for improving environmental connections between existing and future parks, open spaces, and the Willamette River. Action E6 calls for connecting existing and future parks, open spaces and the Willamette River through the use of main and green streets that blend and transition the vegetation and natural features of the different places.
 - c. Action E10 of Policy 11, Environment, calls for supporting natural area restoration efforts, including, but not limited to, revegetation, day-lighting “buried” stream channels, restoring wildlife habitat and wetlands, and restoring Lower Macleay stream.
 - d. QL3 of Policy 10, Quality of Life, calls for completing the wheelchair accessible trail in Lower Macleay Park and improving the entrance to the park.
 - e. No development standards or guidelines have been proposed that would detract from either the Alphabet or Kings Hill Historic Districts. Likewise, the proposed parking strategy will include specific provisions that will not create an unintended incentive to demolish historic buildings or housing.
397. **Objective E:** Use the creation of new design districts-and zoning standards to reduce the likelihood of conflicts between new and existing developments. Address problems that emerge when new infill development is at greater density than existing development. The *Northwest District Plan* extends design review to all properties within the expanded Northwest Plan District and
398. **Objective G:** Use the community and neighborhood planning processes to help establish, enhance and preserve the area’s character and identity and to foster the evaluation and protection of significant historic resources..
- g. The *Northwest District Plan* contains a Vision for the Northwest District in 2023, which reflects the community’s aspirations for the future.
 - h. The *Northwest District Plan* contains an Urban Design Concept that is a graphical representation of the community’s vision for the future, focusing on elements that define the desired urban form.
 - i. The *Northwest District Plan* describes characteristics and architectural traditions of the Northwest District that should be considered by developers and designers when undertaking new construction or renovations in the area.
 - j. The *Northwest District Plan* contains policies, objectives, and actions that will help achieve the vision and urban design concept.
 - k. The *Northwest District Plan* proposes changes to the *Comprehensive Plan* and zoning maps to implement the policies and objectives.
 - l. The *Northwest District Plan* expands the Northwest Plan District beyond its current boundaries and includes provisions to provide for an urban level of mixed-use development including commercial, office, housing and employment.

- m. The *Northwest District Plan* extends design review to all properties in the *Northwest District Plan*. The plan amends Guideline P1 of the Community Design Guidelines to include examples of ways this guideline may be accomplished in the Northwest District.
- n. Much of the Northwest District is already included within the Alphabet Historic District. The *Northwest District Plan* proposes no amendments that would threaten the historic character of the Alphabet Historic District.

Central City Plan Findings

Portland City Council adopted the *Central City Plan* in 1988 and portions of the plan have been updated since that time.

- 399.** The *Northwest District Plan* amendments to the Central City Plan are limited in scope. The plan extends the boundary of the Central City Plan area and plan district west along both sides of West Burnside from NW 21st Avenue to NW 24th Place. This area is rezoned to CXd (when not already CXd) and added to the Goose Hollow Subdistrict. Some minor amendments are made to the Goose Hollow Policy and action charts. A portion of the Uptown Shopping Center on the north side of West Burnside is made eligible for the bonus height option for housing only and is added to the “residential bonus target area.” The Central City Plan District Bonus Height Option for Housing is amended to clearly state that the review body has the ability to determine the appropriate height, shape, and configuration of a project using this provision and that the increased height is consistent with the purposes stated in 33.510.205 (Height).
- 400. Policy 1, Economic Development,** calls for building upon the Central City as the economic heart of the region and guiding the Central City’s growth to foster the city’s prosperity and livability. The amendments are consistent with this policy because they extend the Central City Plan and plan district area and apply the CX zoning designation which is the city’s most intense commercial zone, allowing high employment density and a broad array of commercial uses.
- 401. Policy 3, Housing,** calls for maintaining the Central City’s status as Oregon’s principal high density housing area by keeping housing production in pace with new job creation. The amendments support this policy for the reasons below.
- a. The plan supports more intensive development along West Burnside Street by extending Central Commercial (CX) zoning and extending the Central City Plan District west to NW 24th Avenue. CX zoning allows both residential and commercial land uses. Housing development is encouraged on a portion of this area by the application of the “Area Eligible for Housing Height Bonus Only” and the Residential Bonus Target Area as shown on maps 510-3 and 510-4. These provisions ensure that a portion of any earned bonus building bulk and/or height will be dedicated to housing.
 - b. The plan amends Policy 15, Goose Hollow, of the Central City Plan by adding a provision to Further Statement A to encourage the retention of existing housing.
- 402. Policy 4, Transportation,** calls for improving accessibility to the Central City from the rest of the region, and to extend the Central City’s ability to accommodate growth. This policy also calls for extending the light rail system, as well as actions that will maintain and improve other forms of transit and the street and highway system, while preserving and enhancing the city’s livability. The amendments support this policy for the reasons below.
- a. The *Northwest District Plan* extends the Central City Plan and plan district area and applies the CX zoning designation which is the city’s most intense commercial zone, allowing high employment and residential density in close proximity to light rail and other transit options.
 - b. The plan amends Policy 15, Goose Hollow, of the Central City Plan by adding a provision to Further Statement B that calls for improving pedestrian and bicycle connections to light rail and across West Burnside Street.

- c. An action item is added to the Goose Hollow action chart calling for wider pedestrian areas along West Burnside by providing arcades on new building frontages.
403. **Policy 6, Public Safety**, calls for the protection of all citizens and their property and creation of an environment in which people feel safe. The amendments are consistent with this policy because they create opportunities for urban-scale mixed-use development that includes office, retail, and residential uses, thus increasing the presence of people in the area.
404. **Policy 7, Natural Environment**, calls for improving the Central City's environment by reducing pollution, keeping the Central City clean and green, and providing opportunities to enjoy nature. The amendments are consistent with this policy because the increase in development potential in the area added to the Central City Plan and designated CX facilitates increased population and employment density in the core of the metropolitan region, close to jobs, services and amenities and well served by transit, thus reducing the need for automobile use and its concomitant pollution.
405. **Policy 8, Parks and Open Spaces**, calls for building a park and open space system of linked facilities that tie the Central City districts together and to the surrounding community. The amendments are consistent with this policy because they amend Further Statement B of Policy 15, Goose Hollow to include reference to improving pedestrian and bicycle connections across West Burnside Street, which will provide better access to the adjacent Washington Park.
406. **Policy 11, Historic Preservation**, calls for preserving and enhancing the historically and architecturally important buildings and places and promoting the creation of our own legacy of the future. The amendments are consistent with this policy for the reasons below.
- a. The plan amends Policy 15, Goose Hollow, of the Central City Plan by adding a provision to Further Statement A to encourage the retention of existing housing, thereby facilitating retention of the existing stock of buildings in the subdistrict, many of which are historically and architecturally important.
 - b. The Central City Plan District Bonus Height Option for Housing is amended to clearly state that the review body has the ability to reconfigure the proposed building, including reducing its height, and that it may approve all, some or none of the requested bonus height. Approving the increased height must also be consistent with the purposes stated in 33.510.205 (Height) which include such goals as protecting views, limiting shadows on residential neighborhoods and ensuring height compatibility and step downs to historic districts.
 - c. A portion of the Uptown Shopping Center site is made eligible for the Bonus Height Option for Housing only, which must be approved through the design review process and is subject to design guidelines and approval criteria for obtaining additional building height beyond the base zone maximum. This area is not made eligible for the general height bonuses that are granted as a part of earning FAR bonuses. The intent of this provision is to allow the review body to determine the appropriateness of all additional bonus height above the base zone allowed 75 feet (Central Commercial zone) for this site, which is located next to a historic district and a mix of uses and scales of development. Together, these amendments (including those described in b, above) allow increased development potential for infill residential and mixed-use development in this important Central City gateway area, while providing design review bodies the means for ensuring that the new development will respect its urban context, including proximity to historic districts.

407. Policy 12, Urban Design, calls for enhancing the Central City as a livable, walkable area that focuses on the Willamette River and captures the glitter and excitement of city living. The amendments are consistent with this policy for the reasons below.

- a. The *Northwest District Plan* extends the Central City Plan and plan district area and applies the CX zoning designation, which is one of the city's most intense urban zones, allowing high employment and residential density and supporting the Central City as the region's urban core.
- b. The plan amends Policy 15, Goose Hollow, of the Central City Plan by adding a provision to Further Statement C that calls for improving pedestrian and bicycle connections to light rail and across West Burnside Street.
- c. An action item is added to the Goose Hollow action chart calling for wider pedestrian areas along West Burnside by providing arcades on new building frontages.
- d. An action item is added to the Goose Hollow action chart calling for consideration of the application of active use area and required building line provisions along West Burnside as part of the next update of the Central City Plan.
- e. The Central City Plan District Bonus Height Option for Housing is amended to clearly state that the review body has the ability to reconfigure the proposed building, including reducing its height, and that it may approve all, some or none of the requested bonus height. Approving the increased height must also be consistent with the purposes stated in 33.510.205 (Height) which include such goals as protecting views, limiting shadows on residential neighborhoods and ensuring height compatibility and step downs to historic districts.
- f. A portion of the Uptown Shopping Center site is made eligible for the Bonus Height Option for Housing only, which must be approved through the design review process. This area is not made eligible for the general height bonuses that are granted as a part of earning FAR bonuses. The intent of this provision is to allow the review body to determine the appropriateness of all additional bonus height above the base zone allowed 75 feet (Central Commercial zone) for this site, which is located next to a historic district and a mix of uses and scales of development. Together, these amendments (including those described in e, above) allow increased development potential for infill residential and mixed-use development in this important Central City gateway area, while providing design review bodies the means for ensuring that the new development will respect its urban context.

408. Policy 13, Plan Review, calls for periodically reviewing the progress of the *Central City Plan*. The amendments support this policy because the *Northwest District Plan* process included a review of selected elements of the Central City Plan and recommended revisions where appropriate.

409. Policy 15, Goose Hollow, calls for protecting and enhancing the character of Goose Hollow by encouraging new housing, commercial and mixed use development which retains or enhances a sense of community while improving infrastructure. The amendments support this policy for the reasons below.

- a. The *Northwest District Plan* extends the Central City Plan, plan district and Goose Hollow Subdistrict areas and applies the CX zoning designation which is one of the city's most intense urban zones, allowing high employment and residential density and mixed-use development and supporting the Central City as the region's urban core.

- b. The plan amends Policy 15, Goose Hollow, of the Central City Plan by adding a provision to Further Statement C that calls for improving pedestrian and bicycle connections to light rail and across West Burnside Street.
 - c. An action item is added to the Goose Hollow action chart calling for wider pedestrian areas along West Burnside by providing arcades on new building frontages.
 - d. An action item is added to the Goose Hollow action chart calling for consideration of the application of active use area and required building line provisions along West Burnside as part of the next update of the Central City Plan.
410. **Central City Transportation Management Plan.** Portland City Council adopted the *Central City Transportation Management Plan (CCTMP)*, in September 1995 to promote economic vitality, livability, and environmental quality in the Central City. The CCTMP boundary has not been updated since initial adoption and will not apply to the areas added to the Central City Plan area by the *Northwest District Plan*.

Guild's Lake Industrial Sanctuary Plan Findings

411. The Jobs and Economic Development Policy and its objectives call for maintaining and expanding industrial business and employment opportunities and for stimulating investment in the area's infrastructure and industrial facilities. The amendments support this policy and its objectives for the following reasons.
- a. The *Northwest District Plan (NWDP)* is the final piece of a two-part comprehensive land use planning effort for Northwest Portland from the St. Johns Bridge to West Burnside. The first part, the *Guild's Lake Industrial Sanctuary Plan*, was adopted on 2001 and provides a policy framework to preserve and protect industrial sanctuary lands north of NW Vaughn for manufacturing and other industrial uses. The *Northwest District Plan* provides the framework for preserving and enhancing residential and mixed-use areas south of NW Vaughn. The *NWDP* also provides for a broader mix of uses, including commercial and residential, in the Transition Subarea, where a transition from an industrial emphasis has been found to be appropriate, given long-term economic and land use trends, the large number of existing non-industrial uses, and extensive stakeholder input.
 - b. In 1996, the City Council recommended that the four northwest neighborhood associations with industrial zoning agree on issues relating to long-term industrial land use. A joint working group was formed, the Northwest Industrial Sanctuary Working Group (SWG). In 1999, the SWG coalition reached consensus and recommended the creation of an industrial plan district, bounded on the south by NW Vaughn. The group also recommended that land south of NW Vaughn was appropriate for a transition out of industrial use and that the neighborhoods should continue to work on defining "buffer zones." Taken together, the *Northwest District Plan* and the *Guild's Lake Industrial Sanctuary Plan* implement these recommendations and are intended to facilitate the continuing evolution of Northwest Portland south of Vaughn Street into a diverse urban neighborhood, while further strengthening protections to the industrial land north of Vaughn Street.
 - c. At the time of the adoption of the *Guild's Lake Industrial Sanctuary Plan (GLISP)* in 2001, City Council directed staff to address issues pertaining to the interface between industrial and nonindustrial lands along NW Vaughn Street as part of the *Northwest District Plan* process, and to refine as needed GLISP policies and regulations (see GLISP action item L10).
 - d. The *Northwest District Plan* supports higher employment densities in a limited area on the north side of NW Vaughn Street by creating a new Subdistrict B in the Guild's Lake Industrial Plan District. This area is redesignated Mixed Employment (ME) on the Comprehensive Plan Map. When rezoned to an EG designation, office uses will be allowed up to 1.85:1 FAR (2:1 in a landmark). Applicants for office FAR above 1:1 will contribute to a NW Transportation Fund to help the City implement transportation system improvements. This area is also intended to serve as a transition from the heavily industrialized Guild's Lake Industrial Sanctuary to the north to the mixed use and residential areas to the south, thereby reducing the likelihood of land use conflicts that can negatively impact residents and restrict the ability of industrial firms to operate efficiently. In Subdistrict B, retail sales and service uses are limited in an EG zone to 10,000 square feet. Other incompatible uses are prohibited in subdistrict B, including: residential, quick vehicle service, commercial outdoor recreation and major event entertainment.
 - e. Policy 13, Transition Subarea of the *Northwest District Plan*, encourages a mix of housing, commercial, institutional, open space, and light industrial uses. Objective K calls for protecting

the Guild's Lake Industrial Sanctuary by locating activities and uses that are compatible with industry at the northern edge of the subarea.

- f. Within a portion of the Northwest Plan District north of US 30 and I-405, a few blocks south of the Guild's Lake Industrial Sanctuary, residential uses are limited in the EX zone to 20 percent of the net building area. This provision would apply to other properties if they received a Comprehensive Plan map redesignation and rezoning to EX in the future.
- 412.** The Transportation Policy and its objectives call for maintaining and improving the intermodal and multimodal transportation system to provide for the smooth movement of goods and employees. The amendments support this policy for the reasons below and for the reasons cited in the findings for the *Guild's Lake Industrial Sanctuary Plan* Jobs and Economic Development Policy.
- a. IG1 zoning is retained in GLIS Plan District Subdistrict B in part to provide a mechanism for evaluating the adequacy of the transportation system as property is rezoned in conformance with the ME Comprehensive Plan Map designation.
 - b. Retail uses are limited to 10,000 square feet per site in Subdistrict B (once rezoned to an EG designation) to ensure that large, region-serving retail does not locate here and compromise the transportation system for industrial uses.
 - c. Certain land uses such as household and group living, quick vehicle servicing, commercial outdoor recreation and major event entertainment are prohibited in Subdistrict B (once rezoned to an EG designation) because these uses can generate high levels of traffic that can interfere with nearby industrial uses.
 - d. Drive-through facilities are prohibited in the subdistrict (once rezoned to an EG designation) in order to limit impacts from the high levels of traffic these use can attract.
 - e. In Subdistrict B (once rezoned to an EG designation), motor vehicle access to a vehicle area or structure is not allowed from NW Vaughn Street in order to reduce traffic conflicts and create a safer pedestrian environment on this busy street.
 - f. The amendments include a Master Street Plan that identifies the existing and preferred future street layout for the study area. The Master Street Plan will be incorporated into the Transportation System Plan and, as it is implemented, will provide increased connectivity by establishing new street connections and extending the historic street grid. Additional street connectivity is identified for the NW Wilson Street alignment between NW 24th Ave and NW 25th Ave and on the NW 27th Ave alignment between NW Wilson and NW Nicolai.
 - g. Properties in GLIS Subdistrict B must meet adequacy of facilities criterion as part of rezoning to an EG zone. Applications for projects under the EG zone with an office FAR of greater than 1:1 will contribute to a NW Transportation Fund to help the City implement transportation system improvements in this area.
- 413.** The Land Use Policy and its objectives call for preserving and protecting land primarily for industrial uses, and minimize land use conflicts in the Guild's Lake Industrial Sanctuary while allowing compatible nonindustrial uses within the GLIS that provide retail and business services primarily to support industrial employees and businesses. The amendments support this policy for the

reasons below and for the reasons cited in the findings for the *Guild's Lake Industrial Sanctuary Plan* Jobs and Economic Development and Transportation Policies.

- a. The plan creates a new Subdistrict B in the Guild's Lake Industrial Plan District. This area is redesignated Mixed Employment (ME) on the Comprehensive Plan Map. This area is intended to serve as a transition from the heavily industrialized Guild's Lake Industrial Sanctuary to the north to the mixed use and residential areas to the south, thereby reducing the likelihood of land use conflicts that can negatively impact residents and restrict the ability of industrial firms to operate efficiently. In Subdistrict B, retail sales and service uses are limited and certain incompatible uses are prohibited.
 - b. IG1 zoning is retained in Subdistrict B in part to provide a mechanism for evaluating the adequacy of the public services as property is rezoned in conformance with the ME Comprehensive Plan Map designation.
 - c. Retail uses are limited to 10,000 square feet in Subdistrict B (once rezoned to an EG designation) to ensure that large, region-serving retail does not locate here and compromise the transportation system for industrial uses.
 - d. The following land uses are prohibited in Subdistrict B (once rezoned to an EG designation): household and group living quick vehicle servicing, commercial outdoor recreation and major event entertainment because these uses can generate high levels of traffic and other impacts that can interfere with nearby industrial uses.
 - e. Drive-through facilities are prohibited in the subdistrict (once rezoned to an EG designation) in order to limit impacts from the high levels of traffic these use can attract.
 - f. In Subdistrict B (once rezoned to an EG designation) motor vehicle access to a vehicle area or structure is not allowed from NW Vaughn Street in order to reduce traffic conflicts.
 - g. A new Land Use Objective 11 is created to provide clear policy support for the new Subdistrict B.
 - h. Most industrial land uses are allowed in the EG zones, allowing continued industrial operations and employment in the new subdistrict.
 - i. Subdistrict B regulations acknowledge that this area is within an industrial area and that new office development should continue an industrial focus. The regulations facilitate office development that supports nearby industrial operations.
- 414.** Objective 1: Preserve the overall industrial character of the Guild's Lake Industrial Sanctuary. The amendments are not inconsistent with this objective for the reasons below.
- a. Most industrial land uses are allowed in the EG zones, allowing continued industrial operations and employment in the new subdistrict.
 - b. Subdistrict B, at less than 17 acres, constitutes approximately 1 percent of the total *Guild's Lake Industrial Sanctuary Plan* District area.
 - c. A significant portion of the existing land uses in Subdistrict B are nonindustrial, including a motel, a restaurant and other commercial operations.

- d. Subdistrict B regulations acknowledge that this area is within an industrial sanctuary and that new office development should continue an industrial focus. The regulations facilitate office development that supports nearby industrial operations.
- 415. Objective 2: Preserve the physical continuity of the area designated as Industrial Sanctuary within the Guild's Lake Industrial Sanctuary. The amendments are consistent with this objective because the new Subdistrict B is located on the very southern edge of the Guild's Lake Industrial Sanctuary and does not isolate any IS designated lands.
- 416. Objective 3: Minimize conflicts between industrial and nonindustrial land uses. The amendments support this objective because the new Subdistrict B is intended to serve as a transition from the heavily industrialized Guild's Lake Industrial Sanctuary to the north to the mixed use and residential areas to the south, thereby reducing the likelihood of land use conflicts that can negatively impact residents and restrict the ability of industrial firms to operate efficiently. In Subdistrict B, retail sales and service uses are limited in an EG zone to 10,000 square feet. Other incompatible uses are prohibited in Subdistrict B, including: residential, quick vehicle service, commercial outdoor recreation and major event entertainment.
- 417. Objective 4: Prohibit new residential uses within the GLIS. The amendments support this objective because household and group living are prohibited uses in the new subdistrict.
- 418. Objective 5: Allow the provision of support services to employees and businesses in the GLIS to reduce trips outside of the GLIS. The amendments support this objective because limited allowances are made for both office and retail uses in the subdistrict.
- 419. Objective 6: Encourage industrial businesses to locate their accessory offices and showrooms along NW Vaughn Street. The amendments support this objective because they create more flexibility for these kinds of uses and would allow accessory offices and showrooms from industrial firms whose industrial operations are located in parts of the GLIS not abutting land along NW Vaughn.
- 420. Objective 10: Contribute to the maintenance and enhancement of all of Northwest Portland as a diverse urban environment that includes opportunities for housing, commercial services, and industrial employment in relatively close proximity. The amendments support this objective because the new subdistrict creates a transition from the heavily industrialized Guild's Lake Industrial Sanctuary to the north to the mixed use and residential areas to the south, thereby reducing the likelihood of land use conflicts while fostering new employment opportunities close to dense residential neighborhoods.