# BRIEFING PAPER ON INTERIM TRANSPORTATION CONCURRENCY OPTIONS

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## INTRODUCTION

The State Growth Management Act requires jurisdictions to establish Level of Service (LOS) standards for their transportation systems and to prohibit development if it will cause the transportation LOS to decline below the adopted standard. The City Council established Issaquah's transportation LOS and transportation concurrency system in 1998 with the adoption of Ordinance No. 2184.

Except for brief periods in 1998 and again in 2000, Issaquah has not been able to achieve its adopted LOS. As a result, the amount of new development in the City (outside the Urban Villages) has been limited since 1998. The City is currently updating the Transportation Element of the Comprehensive Plan and a comprehensive review of our transportation concurrency system is scheduled for 2005-2006.

GMA and Policy T-10.6 of our Comprehensive Plan require the City to take appropriate actions to ensure the transportation level of service standards are met. The action may include: 1) changing the City's land use plan; 2) adjusting the level of service; 3) modifying the transportation concurrency system; 4) adding capacity by building new roads; and/or 5) limiting growth.

## PURPOSE

The purpose of the paper is to:



The interim measures, if any, selected by the City Council will depend on the Council's short-term transportation and land use goals.

**This Report can also be viewed at www.ci.issaquah.wa.us.**

## CONCLUSIONS

**GMA requires City's to establish transportation Levels of Service and to deny development if the adopted LOS is exceeded.**

**There are no state requirements regarding the transportation level of service. The level of service chosen will depend on a variety of factors, including the land use and transportation goals of the community.**

**The City's concurrency system is based on *planned capacity* of the roadway, rather than engineering capacity. Unless the road is built to City standards, the planned capacity of a roadway for concurrency purposes is less than its engineering capacity.**

# PART I
# GMA Requirements & Existing Level of Service

## GMA REQUIRES ADOPTION OF TRANSPORTATION LEVEL OF SERVICE STANDARDS (LOS)

**GMA REQUIREMENT**: ***GMA requires jurisdictions to establish Level of Service (LOS) standards for their transportation systems[1] and to prohibit development if it will cause the transportation level of service to decline below the adopted LOS unless transportation improvements and strategies are made to accommodate the development within six years[2].***

**What Transportation Level of Service is Required?**

State law leaves the implementation of transportation concurrency and the adoption of LOS standards to local discretion. The state provides little prescriptive guidance for how concurrency is to be implemented, how the level of service should be measured or what the level of service should be. As a result, the transportation level of service varies from jurisdiction to jurisdiction depending on community land use and transportation goals.

**How does Issaquah Measure Transportation LOS?**

On May 5, 1998 the City Council adopted Ordinance No. 2184 that established a two-step process for determining traffic concurrency (measuring LOS) in Issaquah.

The first step uses a transportation-forecasting model to estimate traffic volumes at 80 specific directional screenline roadway locations during the PM peak hour. The traffic model includes approved development in Issaquah and portions of Sammamish and King County. The transportation system in the model includes the existing road network and committed improvements in Issaquah, Sammamish and King County.

The second step uses a spreadsheet to compare the forecast PM peak hour traffic volume at each screenline to the planned capacity of the roadway at that location.

Planned capacity is different than engineering capacity. Engineering capacity measures the maximum number of vehicles that can move on each lane of road in one hour at the upper limit of level of service E. The presence or absence of sidewalks and bicycle lanes does not affect the engineering capacity of the roadway.

Planned Capacity (PC) begins with the engineering capacity of the roadway and subtracts capacity if sidewalks, bicycle lanes, roadway shoulders and certain other improvements are not provided[3]. Using planned capacity allows the provision of alternative transportation facilities (such as sidewalks and bike lanes) to achieve concurrency.

Unless the road is built to City standards, the planned capacity of a roadway for concurrency purposes is less than its engineering capacity (the maximum number of cars a road can carry in the peak hour). Engineering capacity and planned capacity will be the same for roads built to city standards.

The planned capacity in the spreadsheet is based on, and varies by, the functional classification of the roadway and the direction of traffic flow (i.e. in the peak or non-peak direction). The volume-to-planned capacity (V/PC) standard ranges from 1.0 for regional and principal arterials in the peak direction to 0.50 for collector streets in the non-peak direction (IMC 18.15.220(23)[4]. The City's goal for varying the planned capacity was a higher level of service (less congestion) on minor and collector streets and in the non-peak direction. The tradeoff is that some roadway capacity will need to remain unused during the PM peak hour in order to achieve the adopted level of service and meet concurrency.

**What is Issaquah's Adopted Level of Service?**

New development in Issaquah will pass concurrency when five or fewer of the 80 screenlines exceed their V/PC standard; and none of the screenline V/PC ratios exceed the standard by more than .30.

## CONCLUSIONS

**The City has met its 2022 GMA Housing Target of 3,993 dwelling units.**

**Our current land use plan anticipates additional growth over the next 20 years.**

**Even with concurrency in place, and limited growth outside the Urban Villages, our concurrency status has continued to decline, primarily due to new development *outside* the City.**

**Probable funding (97 million over 20 years) falls short of providing all the improvements necessary to accommodate future growth and achieve our adopted transportation LOS.**

# EVEN WITH CONCURRENCY, OUR TRANSPORTATION LOS HAS DECLINED DURING THE LAST SIX YEARS AND MORE GROWTH IS PLANNED

**GMA REQUIREMENT:** *GMA requires that the Transportation and Land Use Elements of the Comprehensive Plan be consistent*[5].

**Are We Achieving Our Adopted Transportation LOS?**

No. Rapid population growth on the Sammamish Plateau and along the Highway 18 corridor has significantly increased the amount of traffic passing through Issaquah to I-90 and other destinations. The City's transportation model shows that over 25 percent of the City's PM peak hour trips (not counting I-90 only trips) are "regional trips" passing through the City[6].

The City has met its 2022 housing target of 3,993 housing units if development that has been approved but not yet built is counted. A significant portion of this approved growth is in our two Urban Villages and the trips from this new development and related transportation improvements are incorporated into the City's transportation forecasting model.

Transportation concurrency certificates have been issued for 210 PM peak hour trips since 1998.

Increasing regional traffic, supplemented by moderate city growth, quickly surpassed our ability to add new roadway capacity. As a result, the City failed to meet its transportation LOS within a year of adoption and, as shown in Table 1 below, our transportation LOS has continued to decline over time.

**TABLE 1**

| Transportation Concurrency Status | # of Screenpoints Exceeding Baseline | # of Screenpoints Exceeding Baseline by More Than .30 |
|---|---|---|
| Adopted Concurrency Status in 1998[7] | 4 | 0 |
| Concurrency Status in 1999[8] | 10 | 1 |
| Concurrency Status in 2002[9] | 14 | 7 |
| Estimated Concurrency Status in 2022[10] | 32 | 11 |

The last transportation concurrency update, completed in January 2002, showed that the City's transportation system had 14 failing screenlines and 7 screenlines exceeding the standard by more than the allowable threshold. The number of concurrency failures will increase over the next 20 years, even with a 97 million dollar investment in the City's transportation system, if the growth anticipated by the Comprehensive Plan occurs.

Since the City's transportation system is not concurrent, new development may only be approved if enough capacity is added to the system so the adopted level of service is met.

However, the substantial cost to improve the City's transportation system to achieve the adopted level of service has essentially stopped new development in the City outside of the Urban Villages.

## GMA REQUIRES SPECIFIC ACTIONS IF THE ADOPTED TRANSPORTATION LOS CANNOT BE MET

**GMA REQUIREMENT:** *GMA requires the following actions if the adopted transportation LOS is not achieved, or if probable funding falls short of meeting identified needs:*

1. *Approve a plan to raise additional funding or reevaluate the land use plan to ensure that the LOS standards are met;*[11] *and,*
2. *Identify specific actions to bring those transportation facilities that are below an established LOS into compliance.*[12]

**CONCLUSIONS**

**The City has a work plan to identify specific actions to bring those transportation facilities that are below the adopted LOS into compliance.**

**However, the Transportation Financing Plan and a comprehensive review of our Transportation Concurrency System will not be complete until 2005-2006.**

**Have There Been Any Changes to Our Transportation Concurrency System Since 1998?**

Yes, the City's original Transportation Concurrency Ordinance has been amended nine times. In general, these amendments exempted minor new development from concurrency, increased the "cap" or limit on the number of trips added to the transportation system by these minor developments or reflected technical updates to the transportation concurrency spreadsheet and/or model.

The transportation concurrency model and spreadsheet were both updated in 1999 and again in 2000/2001 with most of the data for the last update obtained in 1999 and 2000.

Though the basic design of the City's model has not changed since 1997, these updates significantly refined the model by: expanding the model to include areas annexed by the City; incorporating new traffic information from the East Village EIS, the SR 900 Definition Study and other transportation studies; increasing the number of trips in the model to reflect new development both within and outside the city; and incorporating the recently adopted six-year TIPs of Issaquah, King County and Sammamish. Both updates also led to technical and policy changes to the Transportation Concurrency Spreadsheet.

**Do We Have A Plan for Achieving Transportation Concurrency?**

Both GMA and our Comprehensive Plan require specific actions to bring failing transportation facilities into compliance with the adopted level of service. Because transportation is one of the major planning issues facing Issaquah, the City has made a significant investment to amend the Transportation Element of the Comprehensive Plan and achieve this goal. The Planning Policy Commission (PPC) has been leading this effort and has:

- Analyzed existing traffic volumes, traffic operations and safety;
- Forecast and modeled 2022 traffic volumes;
- Updated the City's roadway classifications;
- Identified and modeled system improvement alternatives
- Recommended changes to the City's six-year Transportation Improvement Plan and 20 year road plan.

The PPC has also reevaluated our land use plan and related zoning map and made a preliminary recommendation not to make any significant changes in the plan or map at this time. This year the PPC will recommend non-motorized/transit improvements and update the City's trails plan.

Preparation of the Transportation Financing Plan and a comprehensive review of our transportation concurrency system are scheduled for 2005. The goal of both efforts is to identify specific actions to bring the city's transportation system into compliance with the City's adopted Level of Service – be that the current LOS established in 1998 or a revised LOS approved by the City Council.

A plan for achieving concurrency is not only required by GMA – but is also consistent with the following policy adopted in the City's Comprehensive Plan:

## CONCLUSIONS

**It is the City's policy to and remain concurrent by:**

**(1) funding transportation improvements that add capacity**

**(2) restricting new development;**

**modifying land use assumptions**

**(3) adjusting our level of service and/or,**

**(4) modifying our transportation concurrency system.**

***Policy T-10.6 Remaining Concurrent:*** *The City shall pursue resources to fund the six-year Transportation Improvement Program. However, if the City is unable to secure the required funding, appropriate measures, such as adjustment of LOS standards, modifications of land use assumptions and designations, or restriction of new development will be taken, as required by GMA, to remain concurrent.*

**Does Our Land Use Plan Anticipate Additional Growth Over the Next 20 Years?**

Even though we have met our 2022 Housing Targets, our current land use plan provides enough capacity for approximately 2,791 additional housing units and 1.7 million additional sq. ft. of commercial space. The number of PM peak hour trips would increase from approximately 43,000 trips today to 53,000 in 2022 with the anticipated buildout of the land use plan.

**Can We Build Our Way to Concurrency?**

There are two reasons why it is very unlikely that the City would be able to finance and/or build the transportation improvements necessary to accommodate planned future growth and achieve concurrency if the existing concurrency methodology and standards are maintained.

First, approximately 1 in every 4 vehicles on city streets during the PM peak hour is a "regional trip" passing through the City. This does not include regional trips on I-90 or trips that stop in Issaquah on their way through the City. Issaquah has little influence on the number or rate of growth of these regional trips because they originate from development outside the City limits.

Second, our existing concurrency methodology and standards require that a significant amount of our roadway capacity remain unused during the PM peak hour. As a result, the need for additional capacity is too great, and the financial and environmental costs too high, to achieve concurrency with the existing methodology and standards. This is especially true since, a portion of the added capacity – like the existing capacity – would need to remain unused during the PM peak hour in order to achieve concurrency.

**How is the Concurrency Capacity of the City's Road System Determined?**

The capacity of the City's transportation system for concurrency purposes begins with the engineering capacity of the roads. This capacity is then reduced to determine the base capacity of the road. The base capacity is further reduced if the road is not built to City standards. The result of this calculation is the roads planned capacity. Finally, the concurrency level of service standard, which varies by road classification and travel direction, established "limits" on the amount of planned capacity that can be used in the PM peak hour (i.e. the level of traffic congestion allowed).

## CONCLUSIONS

**Engineering capacity and base capacity are the same for principal arterials.**

**The base capacity for a minor arterial is 10% less than engineering capacity.**

**The base capacity for a minor collector is 35% less than existing capacity.**

**How are Engineering Capacity and Base Capacity Different?**

Engineering capacity is the number of vehicles per hour that a road can carry at the upper limit of level of service E. Base capacity is determined by reducing the engineering capacity for certain road classifications in order to assure the "desired function of each class of roadway." Policy T-6.1 in the Comprehensive Plan establishes the amount of capacity that will be subtracted from the engineering capacity to determine the base capacity. Table 2, below, compares the engineering and base capacity for Principal Arterials, Minor Arterial and Minor Collectors.

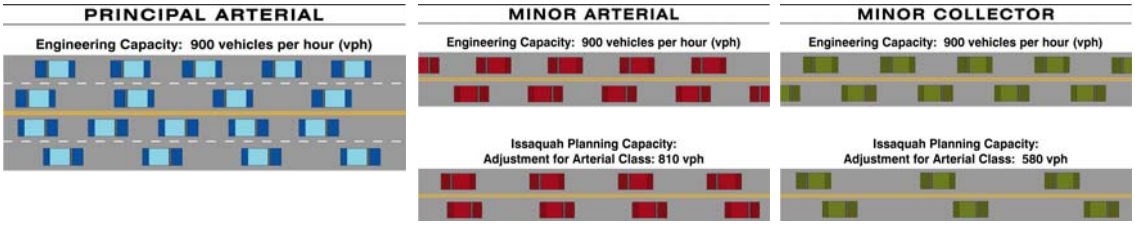
**TABLE 2**

| Capacity * | Principal Arterial | Minor Arterial | Minor Collector |
|---|---|---|---|
| Engineering Capacity | 900 | 900 | 900 |
| Base Capacity | 900 | 810 | 585 |

* Vehicles per Hour

As can be seen, for principal arterials the engineering capacity and base capacity of the road are the same. However, for minor arterials and collectors the base capacity is 10 to 35 percent less than engineering capacity. Graphic 1 shows the difference in engineering capacity and base capacity by the number of cars on each type of road.

**GRAPHIC 1**




**How are Base Capacity and Planned Capacity Different?**

Planned Capacity begins with the base capacity of the roadway (engineering capacity – the allowable volume LOS established in Policy T-6.1) and subtracts capacity if sidewalks, bicycle lanes, roadway shoulders and certain other improvements are not provided.

The City's transportation concurrency system uses planned capacity so that other transportation improvements (such as sidewalks and bike-lanes), in addition to new road lanes, can be used to achieve concurrency. The tradeoff is that, on average planned capacity is 33 percent <u>less</u> than base capacity (which itself is less than engineering capacity for Minor Arterials and Collectors).

Table 3 shows the effect of the average adjustment for planning capacity for three roadway classes compared to base capacity and engineering capacity.

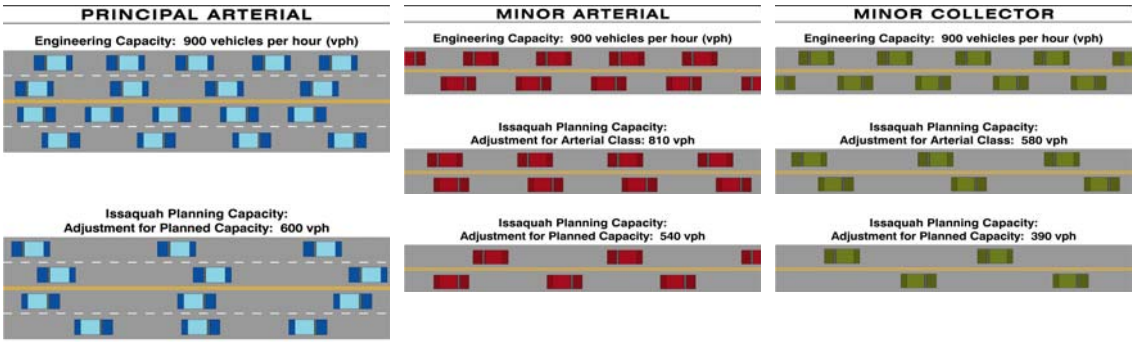
**TABLE 3**

| Capacity * | Principal Arterial | Minor Arterial | Minor Collector |
|---|---|---|---|
| Engineering Capacity | 900 | 900 | 900 |
| Base Capacity | 900 | 810 | 580 |
| Average Planning Capacity Adjustment | 600 | 540 | 390 |

* Vehicles per Hour

The difference between engineering capacity, base capacity and planned capacity is also shown in Graphic 2 below.

**GRAPHIC 2**




## CONCLUSIONS

The Planning Policy Commission has made a preliminary recommendation that, in the future, the City's transportation concurrency system be based on engineering capacity.

**The City's concurrency system uses planned capacity so non-motorized improvements can be used to achieve concurrency.**

**Does the Concurrency LOS Standard also "reduce capacity?"**

Yes. Each of the 80 transportation concurrency screenlines in the City has a V/PC standard. For roads built to City street standards, the V/PC is established by policy T-6.2 in the Comprehensive Plan and determined by road class and direction as follows in Table 4.

| TABLE 4 | | |
|---|---|---|
| Road Type | Peak Hour Direction | Non Peak Hour Direction |
| Regional Arterial | 1.00 | 0.85 |
| Principal Arterial | 1.00 | 0.85 |
| Minor Arterial | 0.85 | 0.65 |
| Collector | 0.75 | 0.50 |

**On Average, planned capacity reduces the base capacity of the road by 33%.**

A standard of 1.00 means that the maximum traffic volume allowed during the PM peak hour (in order to pass concurrency) is equal to the planned capacity of the roadway. A standard of 0.85 means that the maximum traffic volume allowed to pass concurrency is 85% of the planned capacity of the roadway (i.e. – the goal is for 15% of the planned capacity of the roadway to remain unused (reserved) during the PM peak hour.

A screenline passes concurrency if the traffic volume at the screenline during the PM peak hour is equal to or less than the adopted standard. For roads not built to City street standards, the V/PC standard is the existing (1998) V/PC rounded up to the nearest 0.05.

## CONCLUSIONS

**Existing concurrency methodology requires that a significant portion of our roadway capacity remain unused during the PM peak hour.**

**This methodology reflected the existing level of service when concurrency was adopted but did not anticipate the impact of regional traffic.**

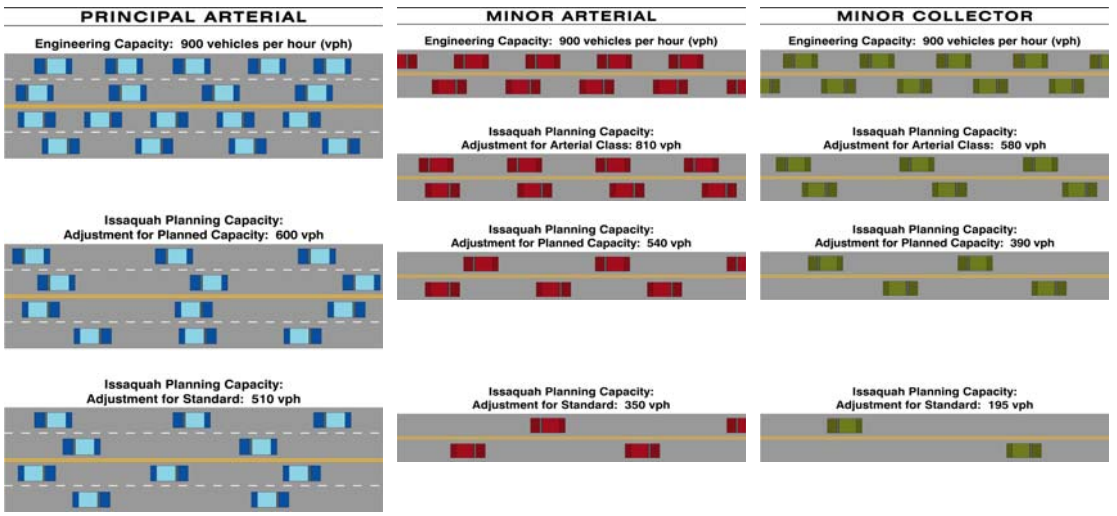
Table 5 shows the difference in engineering capacity, base capacity and planned capacity with the last adjustment for the level of service standard.

**TABLE 5**

| Capacity Per Lane* | Principal Arterial** | | Minor Arterial | | Minor Collector | |
|---|---|---|---|---|---|---|
| | Peak Direction | Non-Peak Direction | Peak Direction | Non-Peak Direction | Peak Direction | Non-Peak Direction |
| Engineering Capacity | 900 | | 900 | | 900 | |
| Base Capacity | 900 | | 810 | | 585 | |
| Planning Capacity | 600 | | 540 | | 390 | |
| Capacity Adjusted for V/PC Standard | 600 | 510 | 460 | 350 | 295 | 195 |

*Vehicles per hour (numbers are rounded)
**Principal Arterials include Regional Arterials

**GRAPHIC 3**




The existing transportation concurrency methodology requires that a significant portion of our road capacity remain unused during the PM peak hour. This methodology and level of service was established because it reflected the existing level of service when concurrency was adopted. The goal was to maintain this level of service as growth in the City occurred. However, the existing concurrency system did not anticipate the impact of regional traffic on City streets.

Footnotes, Part I:

[1] RCW 36.70A.070(6)(a)(iii)B
[2] RCW 36.70A.070(6)B
[3] See Comprehensive Plan Policy T-6.3
[4] Also See Comprehensive Plan Polices T-6.1 and T-6.2
[5] RCW 36.70A.070(6)
[6] Issaquah Transportation Forecasting model
[7] The adopted Level of Service was changed to 5 and 0 when additional screenlines were added in 2002.
[8] Based on Transportation Concurrency Update
[9] Based on 2000-2001 Transportation Concurrency Update. Ordinance amendments based on this update included the addition of 22 new screenlines and a related increase in the number of screenlines allowed to exceed the baseline from 4 to 5.
[10] Based on the construction of 20 year road improvements recommended by the Planning Policy Commission with a 20 year construction budget of $97 million and buidout of the City's adopted Land Use plan.
[11] RCW 36.70A.070(6)(a)(iv)C
[12] RCW 36.70A.070(6)(a)(iii)D

# PART II
# Interim Transportation Concurrency Options

## INTERIM CONCURRENCY MEASURES TO BRING FAILING TRANSPORTATION FACILITIES INTO COMPLIANCE

*There are interim measures the City Council may take while the Transportation Element Update is being completed that would achieve transportation concurrency or move the City's transportation system closer to concurrency. Interim measures are actions that could be made and approved by the City Council by the end of the year.*

**CONCLUSIONS**

**It will likely be at least 2 years before the City Council considers major changes to the City's Transportation Concurrency System.**

**There are different views about *when* the City must achieve concurrency.**

**There are interim steps the City can take to achieve concurrency or at least move closer to achieving concurrency.**

**Why Consider Interim Measures?**

Following are some reasons why it may be appropriate to update our transportation model and spreadsheet and take one or more interim actions to achieve transportation concurrency.

First, the extent that concurrency stops growth in the City, we may not be achieving certain development that our Plan anticipates and desires – for example, the revitalization of underdeveloped areas in the Olde Town Subarea.

Second, state law leaves the implementation of transportation concurrency to local discretion and provides little prescriptive guidance for how concurrency is to be implemented. As a result, there are differing views on some issues, including *when* a transportation system failing concurrency must be brought into compliance. Some believe concurrency must be achieved within six years of failure. There is another point of view that concurrency need not be achieved in six years if the City has met its adopted housing targets.

Our transportation system will fail to meet our adopted LOS for at least two more years if no action is taken until the Transportation Element Update is complete.

Whatever level of service is established, GMA requires that there be a plan in place to bring those transportation facilities that are below an established LOS into compliance.

Finally, some changes in transportation concurrency would complement the City's proposed Transfer of Development Rights Program.

**What Are the Interim Measures?**

Interim options for addressing transportation concurrency until the comprehensive concurrency review is complete include:

A. Making technical updates to the transportation model and/or spreadsheet.
B. Modifying existing transportation concurrency measures, standards and/or policies.
C. Modifying existing land use policies.

## CONCLUSIONS

**The data used to update the transportation model and concurrency spreadsheet are from 1999 and 2000.**

**The more current the model and spreadsheet, the more reliable the results.**

**Updating the model and spreadsheet is necessary if any interim changes in transportation concurrency are proposed.**

# A. UPDATE THE TRANSPORTATION FORECASTING MODEL & SPREADSHEET

*Our transportation forecasting model supports several transportation planning activities including the Transportation Element of the Comprehensive Plan, our transportation concurrency system and the 6-year TIP.*

**Why Update the Model and Spreadsheet?**

The model was last updated in May 2001 using transportation and land use data from 1999 and 2000. As a result, our model may be underestimating concurrency traffic. The spreadsheet was adopted in January 2002. The more current the model and spreadsheet, the more reliable the results.

Updating the model and spreadsheet is also consistent with the City's responsibility to monitor the cumulative impacts of new development on the transportation level of service.[13] Updating the model and spreadsheet is especially important if any interim transportation concurrency measures are proposed, so the effect of these choices on our transportation concurrency system can be measured before any amendments are approved by the City Council.

Exhibit A summarizes the pros and cons of updating the model and spreadsheet.

**What Does Updating the Transportation Concurrency Model Involve?**

Updating the transportation model includes: 1) updating the models calibration; 2) including land uses (and their trips) in Issaquah, Sammamish and King County approved since the last update; 3) updating estimates of traffic entering and exiting the model study area; and, 4) updating the assumed TIP network to include system improvements made since 1999-2000.

The first task, updating the model calibration, is the foundation of the other three tasks. Without this step, the concurrency scenario is resting on a 1999 *forecast* of 2004 conditions rather than an *observation* of 2004 conditions. The second task, updating land use, is needed so that the concurrency scenario includes proposed developments that have achieved concurrency within the model area (including parts of King County, Sammamish and Issaquah) in the past four years. The third task captures the effects of development found concurrent over the past four years, but located *outside* of the model study area. The fourth task, updating the models road network to reflect the most recent TIP, is vital to determining the number, location, and severity of concurrency screenline failures.

**What Changes are Needed in the Concurrency Spreadsheet?**

Several policy and technical changes were made in the Transportation Concurrency Spreadsheet during the first two concurrency updates. Many of these changes involved "working out the bugs" in a new system to make sure it worked as intended. The primary change needed in the concurrency spreadsheet now is to update the network assumptions including – using the most current TIP, revising projects in the model that were built different than initially planned (e.g. the SPAR) and planned projects that have changed (e.g. SR 900).

**What Would the Model and Spreadsheet Update Cost and How Will it be Funded?**

The estimated cost to update the transportation model and spreadsheet is $17,000.

If the Council chooses to update the model and spreadsheet, funding for the Transportation Element Update would be used. A $30,000 grant the City received for the State Department of Trade and Economic Development for GMA transportation planning will replace the "loss" of funding for the transportation element update.

**Option A1** Do not update the transportation forecasting model and concurrency spreadsheet.

**Option A2** Update the transportation forecasting model and concurrency spreadsheet.

# B. MODIFY ONE OR MORE TRANSPORTATION CONCURRENCY MEASURES, STANDARDS & POLICIES

*Following are several interim options for addressing transportation concurrency until the comprehensive concurrency review is complete. Options B1, B2, B3 and B5 would change the existing concurrency methodology and make the "concurrency capacity" of the City's arterial street system more closely reflect the roads' actual capacity.*

## Option B1 Increase the Base Capacity for Minor Arterials and Minor (Commercial) Collectors

**CONCLUSIONS**

**Option B1 would make the capacity for minor arterials and collectors in the transportation model more consistent with the actual roadway capacity.**

Under the existing methodology[14], the base capacity used in the concurrency spreadsheet to calculate planning capacity is lower for minor arterials and collectors than it is for major arterials. (See page 5.)

Increasing the base capacity for minor arterials from 90% to 100% and for collectors from 65% to 100% would more accurately reflect the actual capacity of the street system and would improve 5 of the 14 failing screenlines.

This option would require approximately 12 consultant hours and Comprehensive Plan Policy T-6-1 would need to be revised.

## Option B2 Increase the Volume to Capacity (V/C) for Regional Arterials (or V/PC)

**Option B2 would allow more congestion on all regional arterials.**

Currently, our concurrency system allows the planned capacity for regional arterials to be twenty percent higher than non-regional links.[15] The intent was to recognize that: (1) regional arterials carry a significant portion of the 25 percent of the PM peak hour trips passing through Issaquah; and, (2) there is little Issaquah can do to control the amount or timing of development outside the City limits. In fact, eight of the 14 screenline failures and 5 of the 7 screenlines failing by more than .30 are regional arterials.

This option would increase the V/C or V/PC for Regional Arterials from 1.0 to 1.5 (see page 6). If achieved, this change would reduce the number of concurrency failures by allowing more congestion (reducing the level of service) on regional arterials. Implementing this option:

a. Will reduce the impact of regional traffic on the timing of development within the City limits;
b. Allow additional congestion and increase travel time on the regional arterials during the PM peak hour. (This may reduce the rate of increase in the number regional trips passing through the City as drivers seek faster alternative routes); and,
c. Recognize that Issaquah does not have the financial resources to provide the capacity improvements necessary to accommodate regional traffic at the City's adopted Level of service.

This option would require approximately 12 consultant hours.

## CONCLUSIONS

**Option B3 would reduce "reserved" capacity during the PM peak hour.**

**Option B4 would change the concurrency failure threshold to allow more screenline failures.**

**Option B5 would substitute engineering capacity for base capacity.**

### Option B3 Increase the Volume / Capacity (V/C) Standards for all Arterials and Collectors

Increasing the volume to planned capacity standards, as shown in Table 6 below, would make 5 of the 14 failing screenpoints concurrent (using the existing transportation model spreadsheet).

Implementing this option would require approximately 8 hours of consultant assistance and Comprehensive Plan Policy T-6.2 would need to be revised.

**TABLE 6**

| Road Type | Peak Hour Direction | | Non Peak Hour Direction | |
|---|---|---|---|---|
| | Existing Std. | Proposed Std. | Existing Std. | Proposed Std. |
| Regional Arterial | 1.00 | 1.50 | 0.85 | 1.50 |
| Principal Arterial | 1.00 | No Change | 0.85 | 1.00 |
| Minor Arterial | 0.85 | 1.00 | 0.65 | 1.00 |
| Collector | 0.75 | 1.00 | 0.50 | 1.00 |

### Option B4 Change the Screenline Failure Threshold

New development passes concurrency when 5 or fewer of the 80 screenlines exceed their volume-to-planned capacity (V/PC) Level of Service (LOS) standard and no (0) screenline V/PC ratios exceed the standard by more than .30.[16]

This option would: (a) increase the screenline failures allowed from 5 to a number equal to or greater than the existing number of failing screenlines; and, (b) increase the second screenline standard from 0 to something equal to or greater than the number of screenlines that fail by more than .30. If current failure numbers were used, the new threshold would be 14 screenline failures with no more than 7 screenlines failing by .30.

The threshold (or new level of service) chosen, would depend on whether or not the transportation model and spreadsheet were updated and what other policy changes, if any, were made by the City Council. This option would be completed "in-house".

### Option B5 Convert Planning Capacity to Engineering Capacity

The City's transportation concurrency system uses planned capacity so that other transportation improvements (such as sidewalks and bike-lanes), in addition to new road lanes, can be used to achieve concurrency. The tradeoff is that, on average planned capacity is 33 percent less than base capacity (which itself is less than engineering capacity). Using engineering capacity for concurrency would more accurately reflect the "real" capacity of the city streets.

This option is a significant change to our concurrency system and would require amendments to the Comprehensive Plan, Concurrency Ordinance and concurrency spreadsheet. These changes would require approximately 80 hours of consultant time.

## Option B6 Increase the Maximum Number of Base Trips for Vacant Property from 3 to 10

Every parcel in the City is allowed a certain number of PM peak hour trips that are exempt from the transportation concurrency requirements (IMC18.15.240). The number of PM peak hour trips allowed for parcels with existing development is the number of trips generated by the use at the time the Transportation Concurrency Ordinance was adopted plus up to 10 additional trips. Vacant Parcels are allowed up to 3 PM peak hour trips.

This option would increase the base number of PM peak hour trips for vacant parcels from 3 to up to 10. The actual number of trips for any particular parcel would depend on the zoning of the property. However, a maximum of ten new PM peak hour trips would be permitted unless:

a. Transportation concurrency was met; or
b. The parcel was a designated receiving site and additional trips were purchased under the City's TDR program (see Option C3); or
c. The parcel was a designated TDR sending site, in which case the base number of trips would depend on the zoning of the property and may exceed the limit of ten new trips.

New development generating more than 10 PM peak hour trips and not meeting concurrency or participating in the City's TDR program could not be approved.

These trips would be added in the transportation model as approved trips and considered when a new screenline failure threshold was established (Option B4). This amendment would reduce the impact of concurrency on small property owners and make the number of new trips allowed on vacant and developed parcels consistent.

**CONCLUSIONS**

**Option B6 would increase the number of base trips for vacant parcels from 3 to 10.**

**Option B7 would continue to monitor the timing of development by "capping" new trips added to the transportation system.**

## Option B7 Establish an annual "cap" on the number of trips added to the City's transportation system

Currently the number of trips added by minor new development on vacant parcels (new development generating 3 or fewer PM peak hour trips) is "capped" at 125 PM peak hour trips[17] and the number of trips added by the change or expansion of existing uses is "capped" at 180 trips per year.[18] Both caps allow the City to manage the rate of increase in the number of trips generated by small projects.[19]

Since 1998, approximately 35 new trips a year have been added under the existing "caps."

The proposed amendment would replace these limits with a single *annual* cap on number of trips added by minor new development (including the expansion of existing uses or changes in use) in the City in any given year without having to test for concurrency. This "cap" would not apply to trips generated by new development passing concurrency.

Options for establishing this "annual cap" on the number of new PM peak hour trips include:

a. Allow a 1 percent increase in the number of trips using 2003 as the base year = 420 trips
b. Allow a 1 percent increase in the number of trips using 2003 as the base year and subtracting regional trips (approximately 33%) from the base = 275 trips
c. Allow 5 percent (1/20) of the number of trips expected to be added to the transportation system over the next 20 years in any given year = 500 trips
d. Allow more or less than a 1 percent increase in the number of base trips.

## CONCLUSIONS

**Option B8 would include trips from TDR sending sites in the transportation model.**

**Option B9 would be any combination of Options B1-B8.**

**Option B10 No Change. The City's transportation concurrency system LOS would remain in place until 2006.**

### Option B8 — Include the estimated number of PM peak hour trips from parcels designated by the City's TDR program as sending sites into the transportation model

Under this amendment, PM peak hour trips from designated TDR sending sites would be treated similar to "existing trips." TDR trips would be included in the transportation model and would not require further transportation concurrency review.

### Option B9 — Any combination of Options B1 - B8

Option B4, adjusting our overall level of service by changing the screenline failure threshold, is likely the only option that could "achieve concurrency". Option B5 would require substantial changes to the concurrency spreadsheet and the most consultant time. The other policy options would move the City toward concurrency and would be consistent with the following criteria established in Policy T-6.4:

*The City shall consider the following LOS program implementation policies in review and/or adoption of the LOS measure:*

- 6.4.1 *The LOS measure is documented and validated by professional transportation organizations.*
- *6.4.2 The LOS measure is easy to administer and understand.*
- *6.4.3 The LOS measure has been tested and is legally defensible.*

### Option B10 — No change in the City's existing transportation concurrency policies

If this option is selected, the existing transportation concurrency system and LOS would remain in place until changes were proposed as part of the Transportation Element Update in 2005 and presented for consideration by the City Council in early 2006.

## C. RE-EVALUATE THE LAND USE PLAN

*The third group of interim options would amend existing Land Use policies.*

### Option C1 — Downzone some or all of the 13 areas of the City that have capacity for additional housing units

**CONCLUSIONS**

**Option C1 would downzone approximately 723 acres in the City.**

Reducing the zoning (density) two zoning designations for these areas (See Exhibit 8 for a map of these areas) would reduce the number of new PM peak hour trips between now and 2022 by about 2 percent or 1,000 trips. The PPC has considered this option and made a preliminary recommendation not to make widespread changes in the City's land use plan and related zoning designations.

### Option C2 — Remove the Urban Village Designation for Park Pointe

**Option C2 would remove the Urban Village designation from Park Pointe.**

The PPC has considered this change and made a preliminary recommendation to remove the Urban Village designation. The PPC believes that additional urban village development is no longer necessary because the City has already met it's 2022 housing targets, primarily through the buildout of the Issaquah Highlands and Talus Urban Villages for Park Pointe in the Comprehensive Plan.

The Developer's preferred alternative for the Urban Village would add approximately 522 PM peak hour trips, or 255 more PM peak hour trips than the existing zoning—clustered subdivision alternative.

Removal of the Urban Village designation would not change the existing zoning of the property. The property would remain zoned Single-Family Small Lot (7.26 DU/Acre) and Single Family Suburban (4.5 DU/Acre).

### Option C3 — Transfer Development Rights (including trips) from designated sending sites (with significant critical areas) to designated receiving sites where development is encouraged

**Option C3 would assure consistency between the City's transportation and land use goals.**

The Administration is currently preparing, and will soon propose, an Ordinance authorizing the "transfer of development rights (TDR)". The purpose of the Ordinance is to maintain certain critical areas in permanent open space by transferring development rights from parcels with these critical areas to land more suited for urban development. Density, impervious surface and PM peak hour trips are the primary development rights that could be sold and transferred from one parcel to another.

Two concurrency changes would be required if PM peak hour trips were included in the development rights that could be transferred. First, Option B6 (increasing the number of base trips for vacant property) would need to be approved and second, IMC 18.15.270(F) would need to be revised to allow PM peak hour trips to be transferred from one site to another consistent with the provisions of the TDR Program.

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Footnotes, Part II:

[13] IMC 18.15.280A
[14] Comprehensive Plan Policy T-6.1
[15] IMC 18.15.250C(2)
[16] IMC 18.15.260(F)
[17] IMC 18.15.240C(2)
[18] IMC 18.15.240F(3)
[19] These "caps" do not apply to the Urban Villages or the area covered by the Mitigation Agreement related to LID

# PART III
# Administration's Recommendation

*The interim measures, if any, selected by the City Council will depend on the Council's short-term transportation & land use goals. Any interim changes to the City's transportation concurrency system should be preceded by an update of the City's transportation model and spreadsheet so the policy changes are based on latest transportation improvements and land use data.*

*Following are the Administration's recommendations.*

**Transportation Model & Spreadsheet**

Recommendation: Update the Transportation Forecasting Model & Concurrency Spreadsheet

- Update the model calibration
- Include approved development in parts of Sammamish and King County and Issaquah in the model.
- Update estimates of traffic entering and leaving the model study area.
- Update the assumed TIP network
- Update the concurrency spreadsheet to reflect network assumptions.

Benefits:

- Traffic from new development since the last update is on the streets - the update will include it in our transportation model.
- Updating the street system will improve the models representation of existing travel patterns.
- Model accuracy is improved
- Policy decisions are based on the most current information.

Cost & Funding Source: $17,000

The City received a $30,000 grant from the State Department of Trade and Economic Development to assist with the Transportation Element Update. No match is required for the grant. As a result, funding for the model and spreadsheet update is available from the Transportation Element Update should the City Council authorize the work.

**Transportation Concurrency Measures, Standards and Policies**

Recommendation: Make the following combination of interim changes to the City's transportation concurrency system (Option B9):

B 1 Increase the Base Capacity for Minor Arterials and Collectors to 1.0

B 2 Increase the Volume to Capacity (V/C) Standard for Regional Arterials in both the peak and non-peak direction from 1.0 to 1.5.

B 3 Increase the Volume to Capacity (V/C) Standards (or V/PC) for principal arterials, minor arterials and collectors as shown in Table 6, page 11.

B 4 Change the screenline failure threshold from 5 and 0 to reflect the existing level of service *after* (1) the transportation model and concurrency spreadsheet have been updated; and, (2) changes B1 to B3 are implemented.

B 6 Increase the "base number of trips" for vacant property from 3 to up to 10. The actual number of base trips for any particular parcel would depend on the zoning of the property and trip generation rate of the proposed use.

B 7 Manage the rate of increase in the number of trips generated by new development in the City (including the expansion of existing uses or changes in use) *without having to test for transportation concurrency* by establishing an "cap" on the number of base trips allowed each year. The Administration recommends that the annual "cap" be set initially at 275 PM peak hour trips, or approximately 1 percent of the existing number PM peak hour trips minus regional traffic.

B 8 Include the estimated number of PM peak hour trips from parcels designated by the City's TDR program as sending sites into the transportation model**.** These would be considered "existing" trips and therefore would not require further transportation concurrency review.

Benefits:

Interim changes B1, B2 and B3 would modify our concurrency system to more accurately reflect the *existing capacity* of our streets.[20] This interim measure recognizes existing capacity is being used. Revising the transportation concurrency system to recognize this capacity will move the City closer to concurrency without the fiscal or environmental cost of building new roads.

It is likely that, even with the above changes, the screenline failure threshold will need to be adjusted from 5 and 0 (interim change B4) if we are going to balance our transportation level of service and six year transportation plan with the amount of traffic using the system. Both actions are consistent with policy T-10.6 to consider adjustment in our adopted level of service if our transportation system falls out of concurrency.

Change B6 increases the maximum number of "exempt" or *base trips* for undeveloped lots for 3 to 10 depending on the zoning of the property. This makes the maximum number of base trips for new development consistent with the number of trips allowed for changes of use or expansion of existing uses without having to test for transportation concurrency. This amendment would also allow base trips to be transferred from one site to another through the City's TDR program.

Cost & Funding Source: $13,000

Funding is available from the Transportation Element Update.

**Interim Land Use Alternatives**

Recommendation: The Administration recommends Option C3 and will be presenting a proposed TDR program for Council consideration later this year.

Benefits: The proposed TDR Ordinance will help maintain certain critical areas in permanent open space by transferring development rights from parcels with these critical areas to land more suited for urban development. It will also encourage more density in areas served by transit.

Cost & Funding Source: $-0-

The TDR Ordinance is being prepared "in-house".

Footnotes, Part III:

[20] This goal is best achieved by Option B3 and is supported by the Administration if the Council believes that this change is consistent with the intent of these interim revisions.

# EXHIBITS AND REFERENCES

1. **March 24th letter regarding timing for Transportation Concurrency**

2. **AB #5178 for May 17, 2004 Council meeting**

3. **Matrix Comparing Alternatives for Updating the Transportation Model and Spreadsheet**

4. **Matrix Evaluating the Interim concurrency Options with Comprehensive Plan Policies and Other Criteria**

5. **Matrix Summarizing the Interim Concurrency Options and Administration Recommendation**

6. **Concurrency Provisions in the Revised Code of Washington and Washington Administrative Code**. *Prepared by the Puget Sound Regional Council, November 2002.*

7. **Concurrency Issues and Potential Actions for Discussion**. *Workshop Paper prepared by the Puget Sound Regional Council, November 13, 2002.*

8. **All About Transportation Concurrency.** *Prepared by Mark Hallenbeck—Washington State Transportation Research Center—in conjunction with the Eastside Transportation Concurrency Project, July 2003*

9. **Final 2001-2002 Concurrency Spreadsheet Update**

10. **Areas for Potential Downzones**