

# Transportation Concurrency System Update

Prepared for:

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## Executive Summary

### OVERVIEW

The City of Redmond's new, Plan-Based Transportation Concurrency System is a tool to manage the pace of development while providing transportation improvements for all users, including bicyclists, pedestrians, drivers, and transit riders. This new concurrency system was developed through a multi-year planning process to update the Redmond Comprehensive Plan approved by the Redmond City Council in 2004. The Comprehensive Plan articulates the City's future vision and has development policy statements to guide Redmond's growth through the planning horizon year of 2022. The Comprehensive Plan contains plan-based concurrency policies that serve as the basis for the proposed concurrency regulations developed through the technical analysis provided by this report.

The following key characteristics and principles are at the core of the revised Plan-Based Transportation Concurrency System

#### Key Quality Characteristics of Concurrency

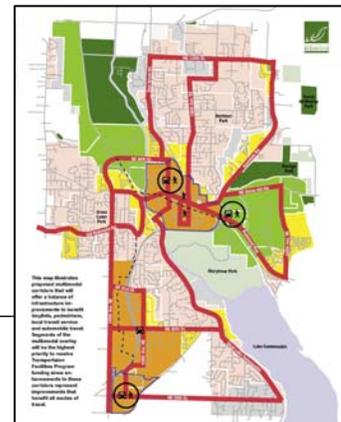
- Concurrency meets State Growth Management Act requirements
- Concurrency results in a multi-modal transportation system
- Concurrency simplifies development review

#### Concurrency Principles

- Concurrency results in the implementation of the Transportation Facilities Plan (TFP), as envisioned by the long-range Transportation Master Plan (TMP)
- Concurrency supports the "right" pace of development
- Concurrency tracks and regulates land use and implementation of the TFP to assure that they are roughly proportionate
- Concurrency is simple and predictable
- And, finally, the program asks the question "Can I explain concurrency to my neighbor?"

#### Transportation Master Plan

The first step in moving to plan-based rather than arterial/intersection based concurrency was to develop a plan. The Transportation Master Plan (TMP) adopted in 2004, includes a Transportation Facilities Plan (TFP) based on



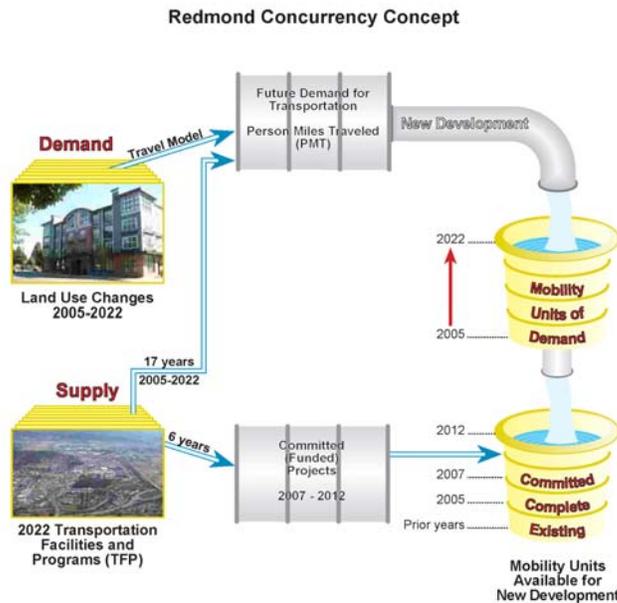
Redmond’s 2022 vision for land use/transportation balance. The TMP features a financial plan to fund improvements in the TFP and a system for performance monitoring and reporting. The TMP is updated every five years.

## FEATURES OF THE CONCURRENCY PROGRAM

### The Concept

The overall concept for the new plan-based concurrency system in Redmond stems from the TMP analysis of 2022 land uses (as contained in the Comprehensive Plan) and the 2022 TFP. The TMP concluded that in 2022, in the PM peak hour, the transportation system will be near capacity. Therefore, if growth in travel demand and implementation of the TFP occur as planned, the City will meet its TMP-stated targets and will be concurrent. To maintain concurrency, however, it will be necessary to appropriately pace land development with multi-modal transportation system improvements and strategies.

The overall concept for maintaining this critical balance of transportation concurrency in Redmond is shown in the figure below. The committed, complete and existing “bucket” in the bottom right illustrates the short-term capacity that will be available to new development based on progress made by the City in implementing transportation improvements and strategies.



**The Measures**

The key measure for concurrency is to show that growth in travel demand and transportation system completion are occurring at the same rates.

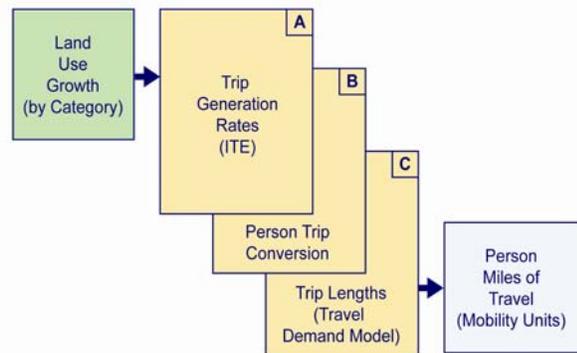
**Demand**

Measuring concurrency requires the creation of an apples-to-apples comparison between demand for and supply of transportation infrastructure. The starting point for this comparison is the development of a land use summary table. This table summarizes the total amount of new development, measured in the number of residential dwelling units and square feet of non-residential space in 2005 and the 2022 land uses forecasted by district. The growth in development is calculated as the difference in the 2022 and 2005 land uses.

Conventional planning practice determines transportation impacts by calculating the number of automobile trips that will be generated by forecasted land uses. Using a multi-modal approach, the new Plan-Based concurrency system relies on a mode-neutral measure known as the “mobility unit” (measured in terms of person miles traveled rather than vehicle miles traveled or automobile delay).

The calculation of mobility units used a combination of the City’s travel demand model and spreadsheet tools. The basic process is shown in the diagram to the right.

**Person Mile Calculator**



**Supply**

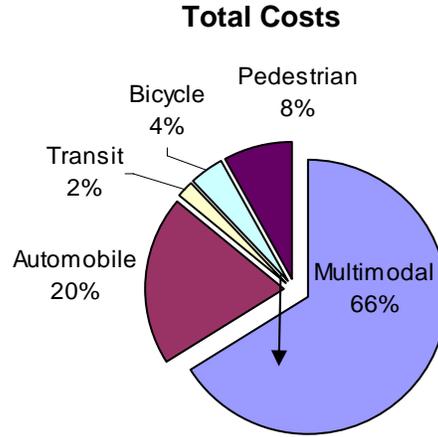
Based on the City’s adopted plans and policies, the list of transportation improvements and strategies to be implemented by 2022 is expected to be sufficient to meet the travel demand generated by new development. A key element of the plan-based concurrency system is disclosure of how much of the 2022 TFP is implemented within the six-year concurrency window.

In order to measure the amount of capacity available for each travel mode (e.g. bicyclists, motorists, pedestrians, and transit users), the City developed a measure called “system completion.”

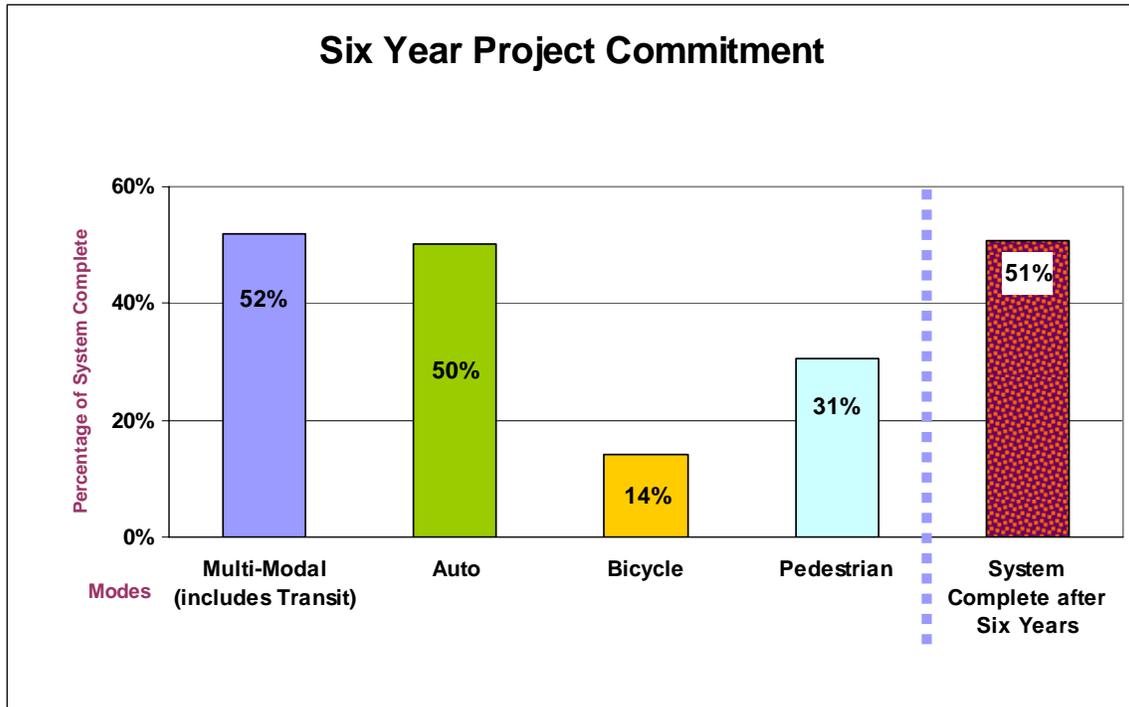
The analysis began with the full list of transportation improvements and strategies from the 2022 TFP with cost estimates for each.

# TRANSPORTATION CONCURRENCY SYSTEM UPDATE

The total cost of the transportation improvements and strategies in the 2022 TFP is approximately \$320 million. As shown in the pie chart to the right, roughly two-thirds of the projects fall into the multi-modal category benefiting multiple users.



Next the analysis evaluated their status by determining how many are fully or partially funded in the City's 6-Year Program (6-Year Transportation Improvement Program/Capital Investment Program). This analysis identified the percent of the TFP that is committed. The draft results of this analysis are shown below and will be finalized in 2008.



## **Determining How Much Room is Left in the Six-Year Bucket**

Using the calculations described in the previous section, concurrency is determined by comparing the available transportation mobility units against the demand for mobility units generated by new development. To manage the pace of development in the short-term, the concurrency test will focus on “how much room is left in the 6-Year Bucket?” This test entails a comparison of the available mobility units based on projects funded or constructed in the Six-Year Program time horizon, as required under the GMA. One important step in this process is to account for the mobility units that have been allocated for ‘pipeline’ development projects that have been approved by the City but not yet occupied.

### ***Available Mobility Units- Comparing Supply to Demand***

The available mobility units are calculated by comparing the available supply to the demand. As shown below, the supply of mobility units represents the proportion of the TFP that is committed to be built during the next six years. The current demand for mobility units is represented by the amount of pipeline development approved within the city. The result of this analysis will be finalized in 2008.

## **DEVELOPMENT REVIEW**

Under the proposed plan-based concurrency system, concurrency approval of a proposed development is based on the availability of mobility units within the mandated six-year timeframe. To manage the pace of development in the short-term, the concurrency test will focus on “how much room is left in the six-year bucket?” This test will entail a comparison of the available mobility units based on projects funded or completed in the six-year program time horizon, as required under the GMA.

As part of the concurrency review process, each development proposal would be analyzed to determine the number of mobility units expected to be generated by the development. This demand for mobility units would then be compared to the available mobility units within the City’s six-year program. If sufficient mobility units are available, then the development is considered to be concurrent.

If the development is deemed to be not concurrent, then the applicant would need to wait until additional mobility units become available or pay for additional mobility units to offset the impacts of the development. Mobility units become available as additional projects are funded and committed by the City within its Six-Year Program (e.g. Transportation Improvement Program and Capital Investment Program). Alternatively, an applicant could agree to accelerate the implementation of key infrastructure projects in order to provide sufficient transportation system

capacity. This process would be similar to the supplemental mitigation procedures currently used under the City's existing concurrency regulations.

Once concurrency is achieved, the proposed development would need to comply with SEPA requirements, applicable City zoning and building codes, and pay transportation impact fees.

## **CONCURRENCY RELATED RECOMMENDATIONS**

### **Mobility Report Card "Plus"**

The City produces an Annual Mobility Report Card which assesses the progress towards completing its transportation systems. The system completion calculations conducted as part of concurrency should be incorporated into the Report Card providing a simple metric of progress (for example: percent of the auto system complete).

### **Impact Fees**

One of the major goals in developing a plan-based concurrency plan was the desire to influence development. That is, the desire to create incentives for the "right" type of development. Ultimately the City and consultant staff determined that concurrency's role is to control the pace of development, not the quality or desirability of development. Impact fees, however, can be formulated to create incentives for development in the right places, by having lower fees within areas where the City would like to see development (Downtown and Overlake); and incentives for the right form of development, by having lower fees for developments that would generate fewer auto trips as a result of their density, land use mix, and design. Following adoption of plan-based concurrency, the City should consider updating its impact fees to reflect these incentives.

### **Travel Demand Forecasting**

In order to create the types of incentives for development in the right place and the right form of development (as described in the prior section), the City will need a travel demand model that quantifies the reduced auto trip making characteristics of these types of development.

Incorporating these sensitivities into travel models involves integrating a "4D's component". The 4D's - Density, Diversity (land use mix), Design and Destination (location within the city - infill versus edge) are generally incorporated into models via a process of modifying trip tables (projections of the number of trips between zone pairs) prior to assignment. The process is fairly simple provided that the information needed to compute the 4D's is available in a GIS format.

## Other Development Review Recommendations

### *Non-motorized Requirements*

#### **PEDESTRIAN CONNECTIONS**

As part of the development review process, the City of Redmond requires that developers consider the locations of nearby schools and evaluate the pedestrian connections to those schools. This is a progressive practice and is justified on the basis that school-age children from the new neighborhoods will likely walk to the nearby schools and it is the City's responsibility to assure that they have a safe and convenient means to do so. The same logic that allows the City to evaluate walking routes to schools can be applied to walking routes to transit. Transit stops within one-quarter mile of new developments could be mapped and walking connections to these stops inventoried as part of the environmental review process. To the extent that facilities are found to be deficient, developers could be required to improve them. Some of these improvements may aid the City in improving Pedestrian Intolerant areas to Pedestrian Tolerant (language from the TMP) and in these cases, it may be appropriate that the improvements should be in lieu of impact fees.

#### **BICYCLE PARKING ORDINANCE**

Many cities now have bicycle parking ordinances. These are similar to auto parking ordinances requiring that a development provide space for users commensurate with projected demand. For larger non-residential projects (typically more than 100,000 square feet), many cities also require shower and locker facilities to further facilitate human-powered travel. A model ordinance is attached in Appendix B for reference.

#### **DEVELOPER-FUNDED TRANSIT SERVICE**

The City of Redmond's TMP establishes goals for increasing pedestrian, bicycle and transit mode shares. Access to transit is a key component of providing a range of travel choices. As part of the development review process, the City could require developers to identify the nearby transit routes and stops and destinations served by those routes. To the extent that the routes are not served by transit routes (there are no transit stops within a quarter-mile of the site), the City could require developers to provide a transit subsidy (an on-going fee that would likely be financed in a fashion similar to an Irrigation and Lighting District) that would be passed on to the transit district in exchange for new service. It may be appropriate to limit this type of requirements to developments of a certain scale (such as those that generate 100 or more PM peak hour auto trips) and a step in the process should also be to coordinate with the transit district to assure that they would provide the service.

## CONCLUSIONS

Although the approach to concurrency described in this report is a departure from the typical concurrency system currently in place in Washington State, the proposed system meets the intent of concurrency as laid out in the Growth Management Act. This report recommends implementing a Plan-Based Transportation Concurrency Program using “mobility units” to track the system completion of the 2022 Transportation Facility Plan and approval of development consistent with 2022 Growth Targets. Once this system is in place it will be much more straight-forward to track concurrency in Redmond and make adjustments to ensure that the City meets its concurrency standards now and in the future.