



2008 Mobility Report Card

Redmond's Transportation Performance Monitoring System



INTRODUCTION

The Mobility Report Card is the performance monitoring system used by the City to track implementation of the Transportation Master Plan (TMP). The City uses these reports to provide accurate information to the public about the City's progress implementing the TMP and the current condition of the transportation system. The reports also set the stage for future updates of the TMP.

This year's Mobility Report Card follows a similar format to *Redmond Community Indicators*, a document that serves a similar purpose for Redmond's Comprehensive Plan, and includes many of the measures found here.

UNDERSTANDING INDICATORS

Each indicator (also known as a measure) measures some aspect of transportation that is topically related to the Transportation Master Plan. For each indicator there is a *baseline* value, a current year *observed* value, and in many cases a target, or *objective*. Redmond's goal is to move toward achieving the objectives of all of the indicators included here, which would indicate successful implementation of the Transportation Master Plan.

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KEY FINDINGS & OBSERVATIONS



Provide convenient, safe and environmentally friendly transportation connections within Redmond, and between Redmond and other communities, for people and goods



No apparent overall positive or negative trend.



NE 116th Street in North Redmond features vehicle lanes, bike lanes, a sidewalk, a soft surface trail, and ample greenery.

Transit: Ridership on Metro routes increased by 13% in 2007, and has increased at about the same rate since 2003. Ridership on Sound Transit (ST) routes grew 3% in 2007. Service is improving, with 11 of 15 key local routes being served at least 18 hours each weekday; two of five local service frequency targets have been met. In 2008 Redmond began receiving *Transit Now* service, approved by voters in 2006, and increased midday service on the popular ST 545 to Downtown Seattle. Regional transit service is improving between the Overlake Transit Center and regional destinations.

Traffic: Peak hour traffic did not increase citywide between 2000 and 2006. Since 1996, average daily traffic has increased most significantly (10-20%) in Northeast and Southeast Redmond, while decreasing about 5% in Grass Lawn and remaining steady in Downtown.

Safety: After increasing in 2006, vehicle collisions and collisions involving pedestrians or bicyclists decreased in 2007.

Pedestrian & Bicycle Environments: Downtown features the most pedestrian-friendly environment in Redmond, while more extensive improvements will be required to bring the Overlake Village area up to Transportation Master Plan standards for pedestrian supportiveness. About half of the city's 2022 bicycle system priorities are constructed.

Mode Split: Approximately 31% percent of commuters chose an alternative to driving alone to work in 2007, versus 28% in 2005 and 25% in 2003.

GO figure

Numbers at your fingertips

How Much/Many?	Of What?	Trend
7,742	Students riding the bus to school	n/a
831	Traffic collisions	↔
24	Collisions involving pedestrians	↔
7.1%	Traffic growth for selected intersections since 1996 ('06)	↔
31%	AM commuters traveling by non-single occupancy vehicle	↑

Data for 2007 unless otherwise noted. Log on to www.redmond.gov/intheworks/redmond2022/implbenchmark.asp for more information about the above figures

Concurrency
City role: Significant

Ratio of transportation facility supply to transportation facility demand.

Baseline:	TBD	Trend: TBD
Observed:	TBD	
Objective:	1	

The City is currently developing a plan-based concurrency system. This means that the City will track funding for transportation facilities versus the pace of growth in Redmond.

The objective is to keep transportation facility funding and pace of growth in balance.

Source: Public Works and Planning Departments

Completion of 2022 Transportation Facilities Plan
City role: Direct

Percentage of dollars spent on projects in the 2022 Transportation Facilities Plan compared to total anticipated 2022 TFP project costs.

Baseline ('05):	5%	Trend: ↑
Observed ('07):	15%	
Objective ('22):	100%	

A functioning transportation system is critical to Redmond's quality of life and economic vitality. Investment in transportation in Redmond includes the obvious, such as lane paving and sidewalk extensions. It also includes unseen projects like signal synchronization and planning for the undergrounding of utilities.

This indicator helps determine the extent to which the Redmond is achieving the transportation network envisioned to exist in 2022. Projects are constructed by the City and also by developers. For example, the developer-funded improvements to 188th Avenue NE account for over 20% of the 2022 TFP dollars spent to date.

Source: Public Works Department

Mode Share During AM Commute

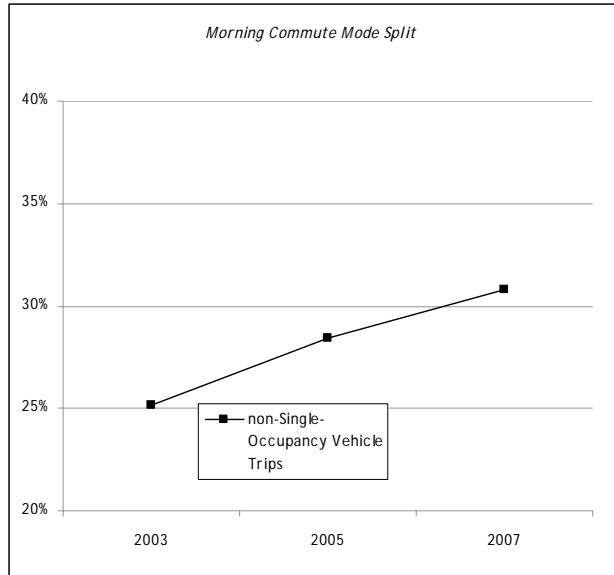
City role: Indirect

Percentage of "CTR-affected" (generally full-time, day shift employees in organizations with more than 100 employees) employees arriving to work by a method other than single-occupancy vehicle.

Baseline ('03): 25%	Trend: ↑
Observed ('07): 31%	
Objective ('22): 30%	

Redmond city government strives to provide mobility choices for people who live in, work in, and visit Redmond. The City achieves this by planning for multi-modal transportation infrastructure that complements the community's long-term land-use plan, and by partnering with agencies such as Metro and Sound Transit that provide public transit.

According to a survey conducted by the state Department of Transportation, 31% of "CTR-affected" (see definition in box above) employees arrived at work by a mode other than driving alone.



The graph does not capture "from work" commute trips. In addition, very large employers sample fewer employees and so are weighted less.

Source: Planning Department, State Department of Transportation

School Bus Ridership

City role: Indirect

Percentage of students riding school buses to school, based on Lake Washington School District survey.

Baseline: 42%	Trend: n/a
Observed: 32%	
Objective: --	

The Lake Washington School District reports in its 2007-08 bus ridership survey that 7,472 of 23,565 (32%) students ride the bus to school. In 2004-05 the District reported that approximately 10,000 of 23,714 (42%) students rode the bus to school. Since the City has only two data points, no trend information is provided.

Mobility options for students depend on a number of factors, including state funding for public school transportation, the local transportation network, and locations of schools, which in turn are influenced by the City's land use policies and regulations.

Note: LWSD encompasses Redmond, Kirkland, and portions of Sammamish and unincorporated King County. The cited survey is conducted annually for the purpose of state transportation fund allocation. Bus passenger counts during the survey period may not represent typical passenger counts.

Source: Lake Washington School District

4.3 Downtown Transit

City role: Indirect

Number of travel time and service frequency targets met for regional transit connections to/from Downtown

Travel Time Targets Met

Baseline ('03): 2	Trend: ↔
Observed ('07): 2	
Objective ('22): 4	

Service Frequency Targets Met

Baseline ('03): 1	Trend: ↔
Observed ('07): 1	
Objective ('22): 4	

Transit from Downtown to:				
	Downtown Seattle	Bellevue Transit Center	University District (Seattle)	Downtown Kirkland
Travel Time (fastest)	35	25	<i>25+</i>	<i>15</i>
Service Frequency (best)	10	25	10	<i>30</i>
Route #	545	220, 232	545*	248

**With one transfer or 1/2-mile walk*

Achieved targets are bolded and italicized.

Bus service from Downtown Redmond to key regional centers remained about the same during 2007. In early 2008, Sound Transit increased midday service frequency on the popular 545 route to/from Downtown Seattle. Also in early 2008 Sound Transit discontinued the 540 route between Redmond and Kirkland; Metro replaced that service with route 248, which serves the Avondale, Downtown Redmond, Rose Hill, and Downtown Kirkland areas.

Source: Metro Transit

4.4 Overlake Transit

City role: Indirect

Number of travel time and service frequency targets met for regional transit connections to/from the Overlake Transit Center.

Travel Time Targets Met

Baseline ('03): 1	Trend: ↑
Observed ('07): 3	
Objective ('22): 4	

Service Frequency Targets Met

Baseline ('03): 2	Trend: ↑
Observed ('07): 3	
Objective ('22): 4	

Transit from Overlake to:				
	Downtown Seattle	Bellevue Transit Center	University District (Seattle)	Downtown Kirkland
Travel Time (fastest)	<i>25</i>	<i>15</i>	<i>15+</i>	25
Service Frequency (best)	10	<i>10</i>	<i>10</i>	30
Route #	545	564/565	545*	245

**With one transfer or 1/2-mile walk*

Achieved targets are bolded and italicized.

Bus service from the Overlake Transit Center to key regional centers remained largely unchanged in 2007. As noted at left, Sound Transit increased midday service on the 545 to/from Downtown Seattle.

Source: Metro Transit

7.3: Metro & Sound Transit Route Ridership in Redmond

City role: Indirect

Average weekday boardings for Metro and Sound Transit service in Redmond.

Metro

Baseline ('03): 2,296
Observed ('07): 3,660
Objective ('22): 4,133

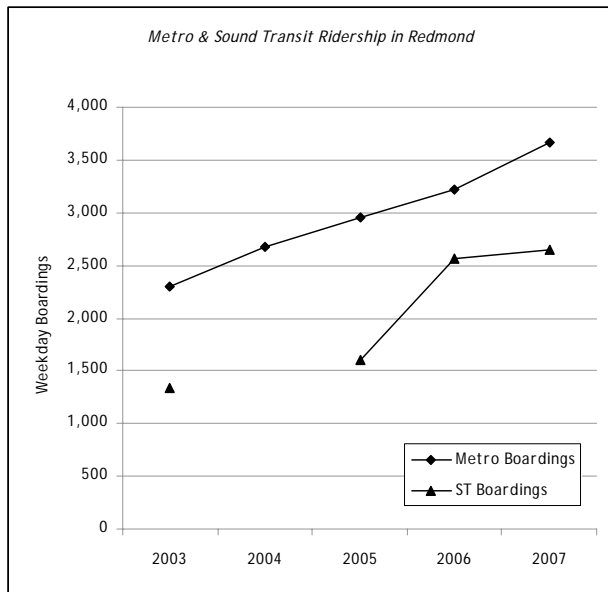
Trend: ↑

Sound Transit

Baseline ('03): 1,133
Observed ('07): 2,649
Objective ('22): 2,399

Trend: ↑

Ridership on Metro and Sound Transit in Redmond increased by 13.5% and 3.3%, respectively. Ridership has increased each year since 2003.



Source: Metro Transit

7.4: Service Hour Targets for Local Transit

City role: Indirect

Number of local service hour and connection frequency targets met.

Baseline ('04): 5
Observed ('07): 11
Objective ('22): 15

Trend: ↑

The inception of routes 221 (Education Hill to Eastgate) and 248 (Avondale to Kirkland) have increased service between the Northeast Redmond area and local destinations. Metro route 248 replaced the Redmond-Kirkland link formerly provided by Sound Transit route 540.

Service to and from the Overlake Park & Ride and Northeast Redmond is least developed; service between the two does not exist.

Local Destination Service Hours					
to/from:	Redmond Town Center	Northeast Redmond	Overlake Transit Center	Overlake Park & Ride	Bear Creek Park & Ride
Downtown Transit Center	19	18	19	18	19
Route #	545	248	545	253	545
Redmond Town Center	--	18	19	14	19
Route #	--	248	545	253	545
Northeast Redmond	--	--	16	0	0
Route #	--	--	221	--	--
Overlake Transit Center	--	--	--	12	19
Route #	--	--	--	249	545
Overlake Park & Ride	--	--	--	--	14
Route #	--	--	--	--	253

Target service hours = 18; bolded indicates target met
Routes 248 and 221 debuted in February 2008

7.5: Connection Frequency Targets for Local Transit

City role: Indirect

Number of local service hour and connection frequency targets met.

Baseline ('03): 0
Observed ('07): 2
Objective ('22): 5

Trend: ↑

Service frequency to/from Redmond's major transit centers to other areas in the city is improving. Service from the Overlake Park & Ride to/from the Overlake Transit center exists but does not meet target frequency and is somewhat circuitous. Better service exists for those willing to walk from transit stops on 156th Avenue NE to the Overlake Park & Ride area on 152nd Avenue NE.

Local Destination Service Frequency				
to/from:	Overlake Transit Center	Overlake Park & Ride	Northeast Redmond	Redmond Town Center
Downtown Transit Center	<i>10</i>	25	30	<i>10</i>
Route #	545	253	221	545
Overlake Transit Center	NS	30-60	NS	NS
Route #	--	249	--	--

Target frequency = 15 minutes; bold and italicized indicates target met. NS = no standard. Route 221 debuted in February 2008.

Source: Metro Transit

7.6 PM Peak Hour Vehicle Miles Traveled (VMT)

City role: Indirect

Number of vehicle miles traveled during the afternoon (PM) peak hour on Redmond arterials, based on computer modeling.

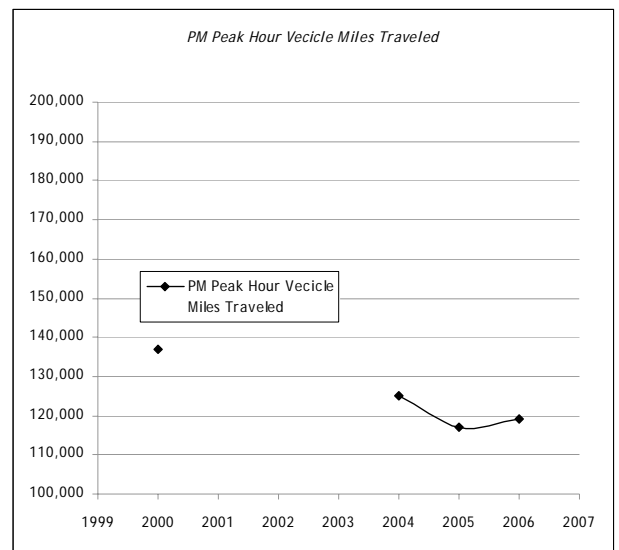
Baseline ('00): 137,000
Observed ('06): 119,000
Objective ('22): 176,000

Trend: ↔

One "vehicle mile of travel" (VMT) represents one vehicle traveling one mile within the City on the Redmond arterial street network (including state routes). This measure cannot be directly observed or counted and thus must be estimated from other data. The estimate is for an average PM peak hour. It is obtained most readily by running the most recent update of the Bellevue-Kirkland-Redmond (BKR) traffic model.

VMT is the best variable for measuring trends in the amount of vehicular traffic in Redmond. It is also utilized in estimating air pollution, congestion and other dependent variables.

Variation between the 2000 base and 2005 and 2006 data reflect variations in the street network included in the model. This measure was updated using the latest available model data which represents 2006 conditions.



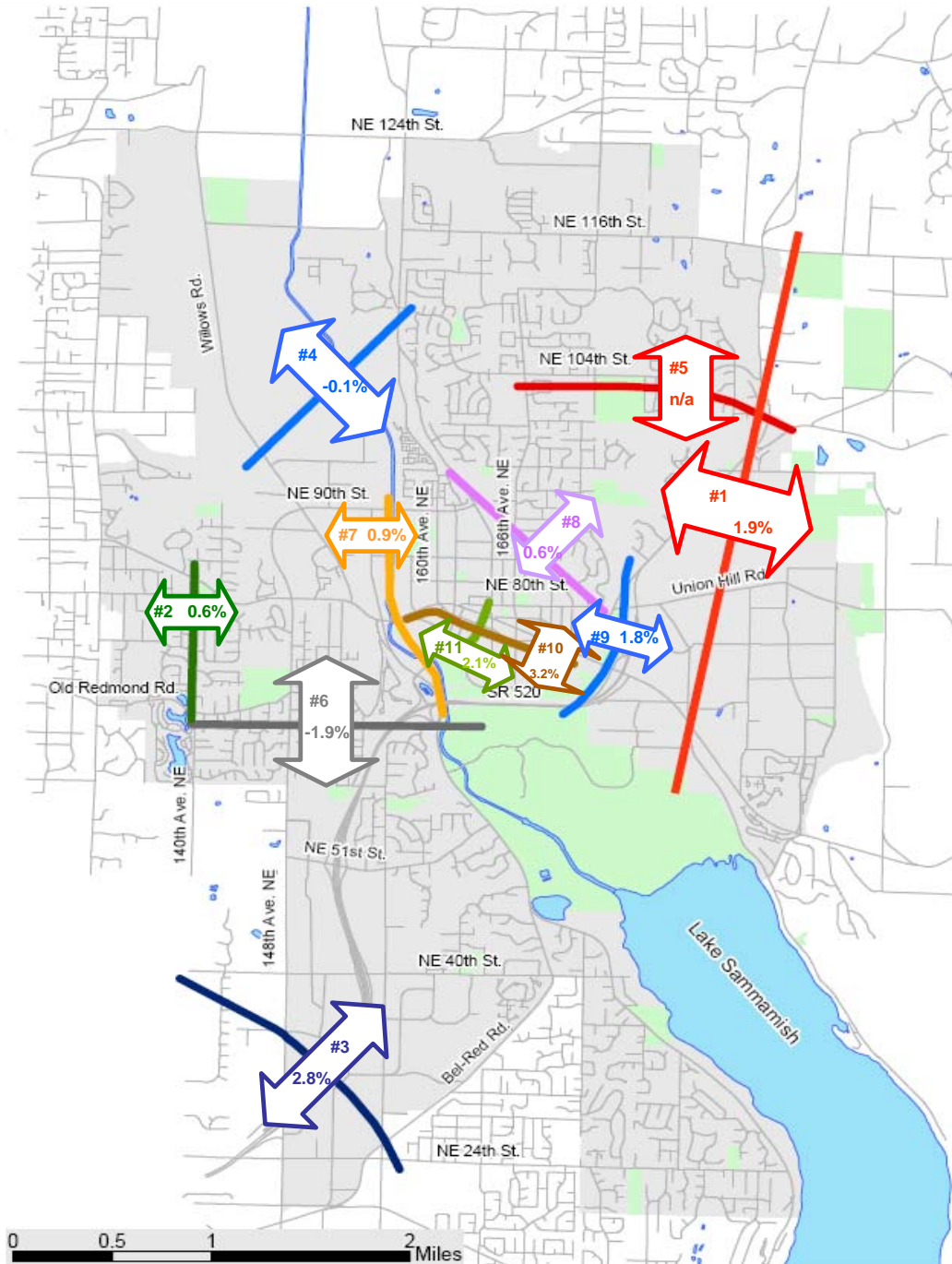
Source: Public Works Department

Annual Traffic Growth at Screenlines

City role: Indirect

Change in traffic volumes across key screenlines in Redmond, based on average daily weekday traffic counts. Updated biennially

The map below shows eleven screenlines utilized in the Transportation Master Plan. The same links will be counted each year, and reported every two years. These screenlines are also used to monitor the city's traffic volume-to-capacity ratios. Thus, this data helps provide context for interpreting changes in the screenline service levels.



Traffic volume changes are average annual change from 2001-02 to 2005-06.

Source: Public Works Department
Updated February 2008

Average Traffic Growth by TMD

City role: Indirect

Change in average daily weekday traffic volumes for transportation management districts (TMDs) and citywide, based on annual traffic counts. Updated biennially.

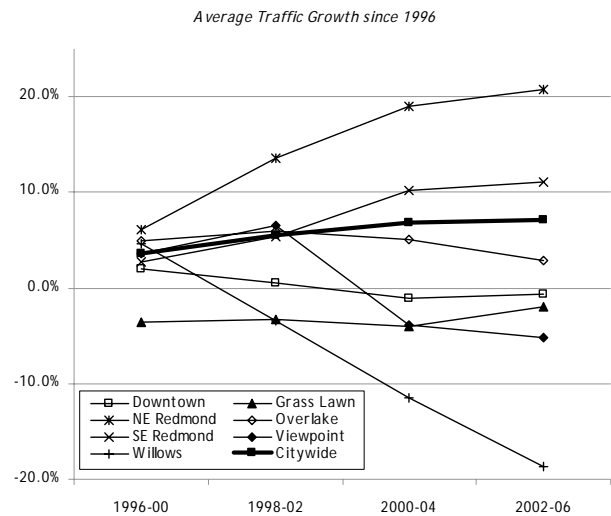
Citywide Traffic Volume Change

Baseline ('96):	0%	Trend:
Observed ('06):	7.1%	
Objective:	--	

This data is obtained from the City's annual traffic count program. Count locations are summed within Transportation Management Districts and compared to previous years. Data is for the arterials only; local streets are not included in this measure.

Occasionally, specific count locations are unavailable due to construction or for other reasons. Also, from time to time the City will revise count locations. When this occurs, the annual comparison is made using only data from count stations represented in both data sets.

This year's report measures average traffic growth from 1996 to 2006. Note that the Willows TMD calculation is based on one intersection since 1996, since only one intersection have been consistently monitored. Of note, traffic in the Downtown TMD in the 2002-2006 period was about the same as it was in 1996.



Source: Public Works Department

Updated February 2007

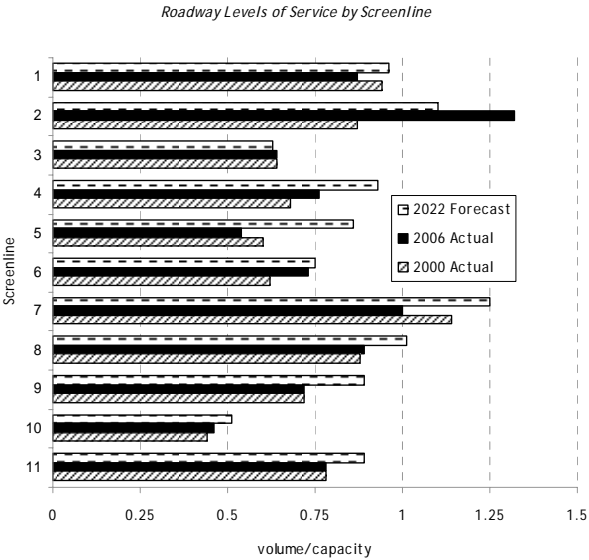
Roadway Level of Service by Screenline

City role: Indirect

Volume-to-capacity ratios along selected screenline, using data from annual traffic counts.

The City has set Level of service (LOS) objectives for Redmond's arterials. These are described in Chapter 4 of the Transportation Master Plan.

Most screenlines experienced higher V/C ratios in 2006 vs. 2005, all by 0.05 or less. Screenline one showed a decrease of 0.15 and screenline six was unchanged. Screenline two, in the Grass Lawn neighborhood, is above the V/C ratio forecasted for 2022.



Source: Public Works Department

7.7: Pedestrian Environment

City role: Direct

Percentage of pedestrian environment designed to "pedestrian supportive" standards along multimodal corridors, in Overlake Village, and Downtown.

Multimodal Corridors (% Supportive or Better)

Baseline ('07): 5%	Trend: n/a
Observed ('07): 5%	
Objective ('22): 100%	

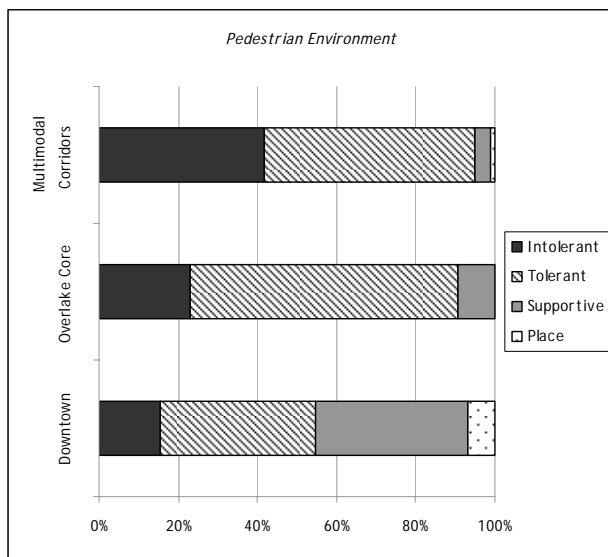
Overlake Village (% Supportive or Better)

Baseline ('07): 9%	Trend: n/a
Observed ('07): 9%	
Objective ('22): 100%	

Downtown (% Supportive or Better)

Baseline ('07): 45%	Trend: n/a
Observed ('07): 45%	
Objective ('22): 100%	

The City has set objectives for improvements in its pedestrian environment. The highest priorities are the two urban centers- Downtown and Overlake, and commercial portions of multi-modal corridors: pedestrian environments in these areas should be 100% "supportive" or "place" by 2022. Citywide the objective is to reach 100% "tolerant" or better pedestrian environments.



Source: Public Works Department

7.8: Bicycle Environment

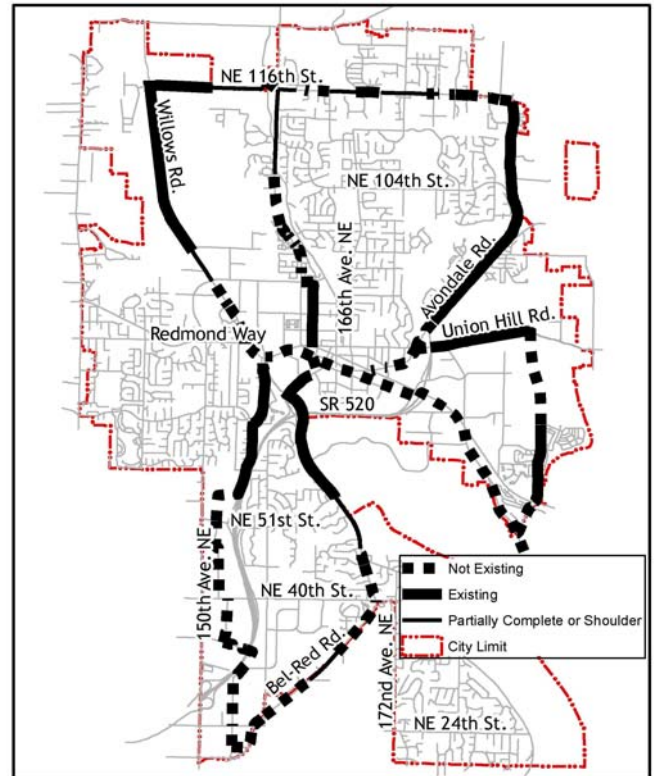
City role: Direct

Percentage of 2022 Bicycle System Priorities completed by mileage.

Baseline ('07): 51%	Trend: n/a
Observed ('07): 51%	
Objective ('22): 100%	

Redmond's Bicycle System Plan (chapter 5B of the Transportation Master Plan) identifies primary bicycle corridors, secondary bicycle corridors, and priorities for completion by 2022. Below is a map of the 2022 priority areas - 51% of bicycle system mileage targeted to be complete by 2022 is now complete.

In 2007 the City completed bicycle facilities along in Southeast Redmond along SR-202 and NE 65th St., in Overlake along 150th Ave. NE, and in Grass Lawn along Old Redmond Road.



Source: Public Works Department

Collisions

City role: Indirect

Annual number of vehicle collisions, and annual number of collisions involving a bicycle or pedestrian.

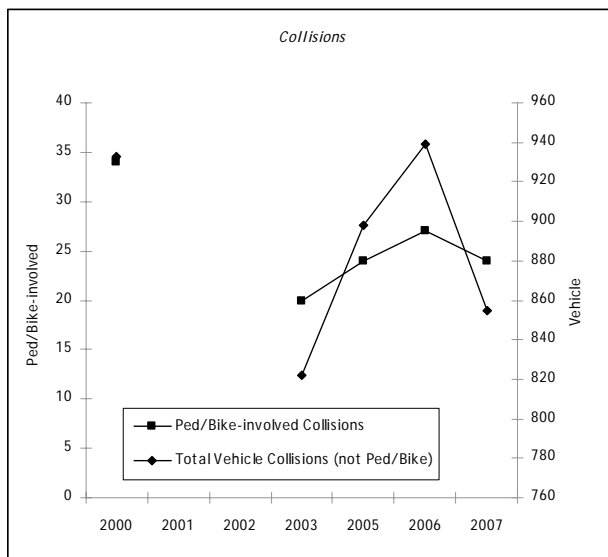
Vehicle Collisions not involving pedestrians or bicyclists

Baseline ('00): 899 Observed ('07): 831 Objective ('22): <900	Trend: ↔
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Vehicle collisions involving pedestrians or bicyclists

Baseline ('00): 34 Observed ('07): 24 Objective ('22): <20	Trend: ↔
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The primary objective of the City's Transportation Master Plan is to ensure the health and safety of users of the transportation system. These indicators reflect the extent to which the City is achieving that objective. Many projects and programs that improve pedestrian and bicycle safety will also encourage travel by those modes. Note that many bicycle and pedestrian "incidents" (minor collisions and near misses) go unreported. The number of collision may increase in the future because of the increase in the number of trips taking place in Redmond.



Source: Public Works Department

7.9: Status of Three-Year Priority Action Plan

City role: Direct

Status of actions scheduled to begin in 2005-07 (from Transportation Master Plan, chapter 9).

Complete:	18	53% of total
In Progress:	13	38% of total
Future:	3	9% of total

	Action	Status as of March 2008
1. ORDINANCE AND COUNCIL ACTIONS		
1.a	TMP Adoption/Update Transportation Element	Complete
1.b	Concurrency Management	<i>Study & Update Underway</i>
1.c	Business Tax Extension	Complete
1.d	Impact Fee Ordinance Update	2007 Update Complete, 2008 Update Underway
2. STUDIES AND PLANS		
2.a	Downtown HCT Corridor/Station	Complete
2.b	Impact Fee Update	<i>Update Underway</i>
2.c	Overlake Plan	Phase I Complete, Phase II Underway
2.d	Adequate Maintenance	<i>Update Underway</i>
2.e	Street Design Standards	<i>Update Underway</i>
2.f	Targeted Safety Program	Complete
Z.g	Union Hill/Novelty Hill Network	<u>Future (Starts 2008)</u>
Z.h	Local Transit Service Study	<u>Future (Starts 2008)</u>
2.i	2006 Mobility Report Card	Complete
Z.j	Freight and Goods Study	<i>Study Underway</i>
Z.k	North South Study - Willows North	<i>Study Underway</i>
3. DESIGN ONLY		
3.a	164 th Extension Across RR Right-of-Way	<i>Study Underway</i>
3.b	Design Downtown Couplet Conversion (Downtown East-West Corridor Study)	<i>Study Underway</i>
3.c	West Lake Sammamish Parkway	<i>In Design</i>

3.d	Red-Wood Road	Complete
3.e	BNSF Corridor	<i>Study Underway for Downtown Section</i>
3.f	172 nd Extension	Complete
4. CONSTRUCTION PROJECTS		
4.a	SR 520 Bikeway Connection to Sammamish River Regional Trail	Complete
4.b	156th Ave NE Sidewalk Improvements from NE 59th St to NE 61st St	Complete
4.c	Union Hill Rd Phase II from Avondale Rd to 178 th PI NE	<i>Construction Summer 2008</i>
4.d	NE 116th St Phase I	Complete
4.e	Redmond Way/NE 76 th St. Intersection Modifications	Complete
4.f	East Lake Sammamish Pkwy Intersection Improvements	<i>Construction Spring 2008</i>
4.g	NE 83rd St Improvements from 160th Ave NE to 161st Ave NE	Complete
4.h	Old Redmond Rd Improvements from 132 nd Ave. NE to 140 th Ave. NE	Complete
4.i	Redmond Intelligent Transportation System Phase I (Overlake)	Complete
4.j	Redmond Intelligent Transportation System Phase II (Redmond Way)	Complete
4.k	NE 85 th St. Re-channellization from 156 th Ave. NE to 164 th Ave. NE	Complete
4.l	164 th Ave NE Re-channelization from NE 80 th St to NE 87 th St	<u>Future</u>
4.m	Bear Creek Parkway Extension	<i>Construction Summer 2008</i>

Source: Public Works Department