



MEMORANDUM

DATE: September 9, 2010
TO: Transportation Commission
FROM: Drew Redman, Associate Planner
Transportation Department
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SUBJECT: Citywide Transportation Demand Management Plan (memo only)

Staff have completed a draft Citywide Transportation Demand Management (TDM) Plan. Preliminary analyses and findings of existing TDM-related conditions and trends were discussed with the Transportation Commission on April 8. Work since that time has focused on,

- Additional analysis of conditions and trends
- Public involvement
- Identification of potential 2020 non-drive alone targets and TDM strategies

A draft of the Citywide TDM plan can be accessed at:

http://www.bellevuewa.gov/pdf/Transportation/tdm_plan_draft.pdf. Commissioners are welcome to submit comments by September 16.

Background and Additional Information

In 2007, concurrent with a sharp increase in downtown development, the City began development and implementation of a cohesive 4-year TDM plan for the downtown, under the framework of the Washington State Growth & Transportation Efficiency Center (GTEC) program. Since starting in late 2007, implementation of this "Connect Downtown" plan has helped establish:

- New or improved employee commute programs at 57 small businesses, through measures such as employer-provided ORCA passes, telework options and vanpool subsidies for more than 1300 employees.
- Employer-subsidized transit fares for downtown employees; these now extend to 31% of the downtown employee population.
- Outreach to commuters through efforts such as the ChooseYourWayBellevue.org website and commute planning at the Bellevue Transit Center.

Partially due to these successes, and a desire to guide proactive TDM activities, the City decided to develop a 10-year Citywide TDM plan for downtown and other areas throughout the city.

Attachment A includes analyses and findings of existing TDM-related conditions and trends (much of this was discussed with the Transportation Commission on April 8). Attachment B details methods and sources used to engage stakeholders and provide insight into effective program offerings. A range of potential scenarios with proposed 2020 non-drive alone mode share targets and associated TDM strategies to meet those targets are discussed in Attachment C.

Next Steps

At this point in the City's budget development process (Budget One), City funding for continued TDM program activities in the 2011-2012 biennium is uncertain and activity may be severely curtailed. The draft Citywide TDM Plan identifies a range of potential target levels for non-drive alone mode share in the key activity center MMAs (Attachment C), with the appropriate target linked to the level of TDM program activities (more TDM implementation yielding higher levels of non-drive alone commuting). Staff will continue to monitor operating uncertainties and, in a future staff report, recommend non-

drive alone targets, It is anticipated the updated targets will be proposed as a part of the 2011 Comprehensive Plan amendment process.

Attachments

- A. Analyses and findings of existing conditions and trends
- B. Stakeholder engagement
- C. Potential 2020 non-drive alone targets and TDM strategies

ATTACHMENT A - Analyses and findings of existing conditions and trends

This attachment provides an overview of the City’s current TDM activities, existing and forecast land use and parking conditions, and characteristics of transportation trips and employment.

Current TDM Activities

There are a number of TDM activities that the City currently implements. The primary guide leading these activities is the Connect Downtown plan. The table below summarizes current TDM practices in Bellevue.

Current Bellevue TDM Practice	Description	Primary Audience	*Cost per Biennium	Results (to date)
Connect Downtown Plan	2008-2011 TDM plan for large and small employer and individual outreach efforts in Downtown. Includes Commute Advantage, telework, rideshare, and individual outreach.	Employers; Property Managers; Employees; Residents; Visitors;	\$700K (Figure includes costs shown in italics below)	31% of downtown employees with access to transit subsidy (ORCA Passport).
Commute Advantage	Connect Downtown small employer outreach program. Includes consultations, assistance, employee incentive matching assistance, and periodic Community Leader recognition program.	Small Employers	\$200K	57 employers increased commute benefits for over 1300 employees
ChooseYourWay Bellevue.org	One-stop online transportation resource. Promotional items and events encourage site visits.	Employers; Property Managers; Employees; Residents; Visitors;	\$100K (launch) \$30K (ongoing)	Over 2000 average monthly website hits
Commuter Connection Store	Connect Downtown program providing physical “storefront” for commute planning assistance and secure bicycle parking adjacent to Downtown transit center.	Employees; Residents; Visitors	\$110K	175 commuters assisted per month. 12 average monthly bike parking members.
In Motion	King County Metro/Connect Downtown program. Residents receive incentives for logging non-drive-alone commute behavior. Individual neighborhoods targeted on limited-term basis.	Residents	\$30K	Average 420 VMT, 21 gallons of gas, and 407 lbs. of CO ₂ conserved per participant
Pedestrian Guide	Downtown map displaying pedestrian destinations, access, and transportation networks/resources.	Employees; Residents; Visitors	\$20K	Over 10,000 distributed
Commute Trip Reduction (CTR)	State-mandated TDM program for employers with 100 or more employees arriving during peak morning commute.	Large employers	\$260K	Drive alone rates decreased by 2%, and VMT rates by 6% since 2007
Transportation Management Programs (TMPs)	City-mandated TDM program for large buildings. Includes physical features such as preferential rideshare parking, program requirements such as rideshare parking incentives, and performance conditions to reduce drive-alone travel onsite.	Property Owners; Developers; Property Managers	\$65K	29% average building drive alone reduction over 10 years. Compared to counterparts in non-TMP buildings, small employers average 4% lower drive alone rates.

*Program costs are covered by Federal and State grants and local funds.

Every 2-3 years the City conducts employee commute surveys in major employment areas to provide a metric indicating progress towards adopted 2005 non-drive alone targets. The table below shows a comparison of recent “mode share” survey results in relation to 2005 targets.

Mobility Management Area (MMA)	Non-Drive Alone Mode Shares			
	2002	2005	2008	2005 Target
Downtown Bellevue	32%	29%	39%	40%
Bel-Red / Northrup	20%	26%	19%	25%
Crossroads	19%	17%	15%	25%
Eastgate	26%	23%	27%	35%
Factoria	15%	21%	31%	20%
New Bel-Red MMA			15%	
New Wilburton MMA			23%	

Land Use

Bellevue has a mix of urban and suburban land uses, with single family and multi-family neighborhoods, shopping centers, and a large proportion of office space, making the city a major regional employment destination.

With little vacant land, the vast majority of future development and growth in the city will occur through redevelopment and infill. Much of this redevelopment and infill will be targeted to Downtown, Wilburton, Bel-Red, Crossroads, Eastgate, and Factoria. The table below shows existing (2008) and forecast (2020) land uses for each of these areas. Most notable changes occur in Downtown, Bel-Red, and Eastgate.

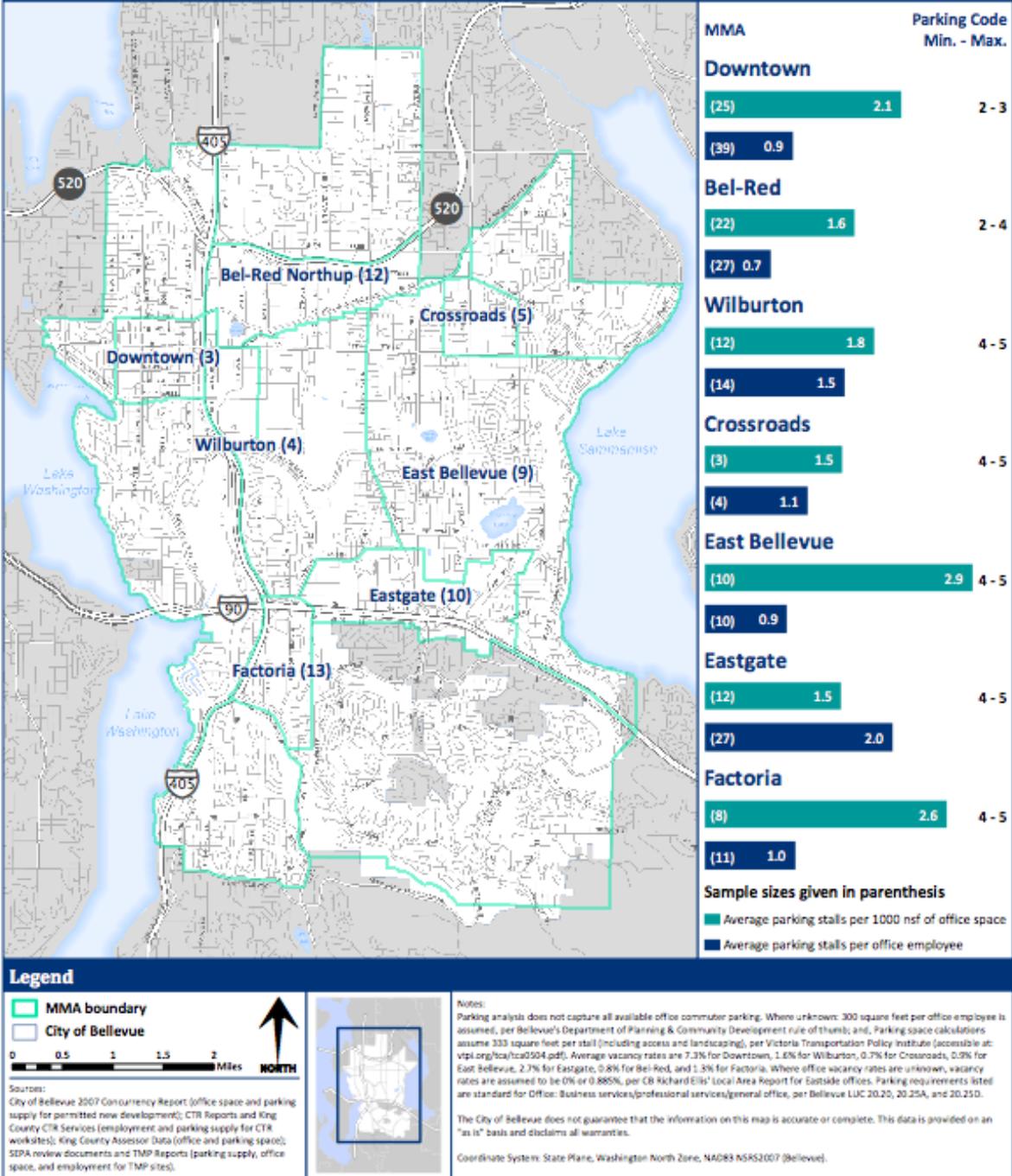
EXISTING (2008) AND FORECAST (2020) LAND USES IN BELLEVUE COMMERCIAL AREAS									
AREA	YEAR	Square Footage					Dwelling Units		
		OFFICE	RETAIL	INDUSTRIAL	INSTITUTIONAL (Gov+Hosp+Edu)	HOTEL	Single Family	Multi- Family	HOTEL Rooms
Downtown	2008	8,062,863	3,927,538	80,987	569,426	791,691	8	4,331	1,430
	2020	13,552,198	5,186,789	43,985	1,238,776	1,510,599	0	11,576	2,828
Wilburton	2008	1,396,781	510,586	113,567	1,262,197	164,812	68	598	342
	2020	1,396,781	757,975	113,567	1,262,197	164,812	68	626	592
Bel-Red	2008	3,267,886	2,240,017	4,006,508	112,560	0	60	70	0
	2020	6,512,138	2,706,416	2,004,888	197,560	200,000	60	3,270	400
Crossroads	2008	136,785	861,300	58,120	108,312	0	24	3,317	0
	2020	146,424	911,300	58,120	108,312	100,000	24	3,757	200
Eastgate	2008	3,496,311	430,509	1,737,842	1,044,912	298,753	219	818	529
	2020	4,124,201	466,009	1,737,842	1,110,468	615,316	249	918	849
Factoria	2008	1,427,820	930,868	76,258	452,716	0	329	1,120	0
	2020	1,438,919	971,918	76,258	452,716	0	340	1,797	0

Parking

Commuter parking supply and demand was analyzed by Mobility Management Areas (MMAs) to determine the influence of parking on commute patterns in Bellevue. The figure below shows that in most instances, the amount of required parking in Bellevue exceeds the demand, bringing into question the appropriateness of existing parking code requirements.

Parking Analysis by Selected Mobility Management Areas

June 2010



File Name: I:\TransDemandMgmt\Citywide TDM Plan\Existing Conditions\Parking\JS Parking Map June 2010\Parking_8.5x11.mxd

Plot Date: 7/8/2010

Transportation Dept

Parking for many end users in Bellevue is “free,” particularly outside of downtown. Many building occupants can overlook the cost of building and operating a parking space. Property owners and

managers may bundle the costs of parking into tenants' lease agreements and even when costs are explicit to tenants as in Downtown Bellevue, many of them choose to cover the costs of parking for their employees. By one estimate, employers subsidize driving over transit by a margin of six-to-one (The Pew Charitable Trusts). Even when parking has a cost to the end-user, employers may subsidize a majority of the price. In downtown, employers were found to cover 75% of employee parking costs (City of Bellevue, 2008).

Trip Characteristics

The traditional focus of TDM in the City has been commute trips due to Bellevue's status as a regional employment destination and because the peak commute hours are when the transportation network is the most congested and the associated impacts on local air quality are most significant. To validate this operating framework and determine the focus of future TDM efforts, the City undertook a transportation modeling analysis of existing (2008) and forecast (2020) travel characteristics.

Trip location

- Over half of all trips in 2008 and 2020 have origins and/or destinations in the Downtown, Bel-Red, Eastgate, or East Bellevue Mobility Management Areas (MMAs).
- East Bellevue shows up as a new area of consideration for employee-related TDM efforts (predominantly due to its size and associated number of commute trips), and Crossroads may warrant less employee-related TDM efforts due to the small amount of commute trips.
- When only factoring work trip destinations, Wilburton is the 4th major MMA receiving trips (likely due to the presence of Overlake Hospital and Group Health Medical Centers).

Trip purpose

- Commute trips represent the largest single type of trips during the AM peak period
- This indicates that commute trips are likely to remain a key target for TDM efforts.
- Trips to or from home such as for commuting, shopping, entertainment, and/or running errands represent the largest single type of trips during the Non-Peak and PM peak periods.
- School trips represent a small proportion of overall and peak trips.
- Even though there is an overall increase in trips (except for Bridle Trails MMA), there is little to no change in the distribution of trip purposes in each MMA.

Trip time of day

- In 2020, both peak and non-peak trips show an increase, with non-peak trips constituting the majority of trips in 2008, and a slightly larger proportion of total trips in 2020. Consequently, non-peak trips may warrant more TDM focus than has traditionally been the case as more attention is being paid to transportation-related greenhouse gas emissions (47% of Bellevue's emissions are from transportation) and degraded water quality due to stormwater runoff.

Trip mode

- Citywide, there is a decrease in the proportion of drive alone commuting during AM and PM peak hours (see table below)
- Citywide, there is an increase in the proportion of drive alone travel at peak hours for non-work purposes.
- During the non-peak, there is a lower proportion of driving alone for school and other trips, but a higher proportion of driving alone for work and non-home-based trips.

Modeling results indicate the following non-drive alone AM peak commute mode shares for commercial Mobility Management Areas (MMAs) in 2008 and 2020.

NON-DRIVE ALONE AM PEAK COMMUTE MODE SHARE		
MMA	2008 MODEL RESULTS	2020 MODEL RESULTS
Downtown	23%	38%
Wilburton	14%	30%
Crossroads	15%	21%
Eastgate	12%	18%
Bel-Red	14%	25%
Factoria	11%	24%

The modeling results were adjusted¹ to account for non-motorized trips and trips avoided through telework programs or other commute schedules which offset AM peak travel, such as compressed work weeks and telework. To validate these adjusted 2008 model results, a comparison was made with AM peak commute trips as measured in the 2008 Mode Share Survey². The table below shows the adjusted model results, the gap with the mode share survey, and the probable range of non-drive alone targets.

NON-DRIVE ALONE AM PEAK COMMUTE MODE SHARE					
MMA	2008 Adjusted Model Results	2008 Mode Share Survey Results	2008 Adjusted Model-Survey Gap	2020 Adjusted Model Results	2020 Probable Range ³
Downtown	29%	39%	10%	43%	38-47%
Wilburton	19%	23%	4%	35%	30-39%
Crossroads	20%	15%	-4%	26%	21-30%
Eastgate	25%	27%	2%	30%	25-34%
Bel-Red	21%	15%	-6%	31%	26-35%
Factoria	24%	31%	7%	34%	30-39%
		<i>Average</i>	<i>0%</i>		
		<i>Standard Deviation</i>	<i>4%</i>		

Employment Characteristics

As the trip analysis indicates, commute trips continue to be an important consideration for TDM efforts, so employment characteristics, such as business location, industry type, and number of employees are important to consider when determining potential strategies to meet proposed commute mode share targets. Data were analyzed for existing (2008) and estimated (2020) employment characteristics

¹ Adjustments assume a 19:1 ratio for AM peak motorized v. non-motorized trips per the City's "2007 BKR Model Enhancement Non-motorized trip generation and distribution report"; and, that "other" (e.g. telework) mode share is the same as measured in the 2008 mode share survey.

² Critical differences between model results and mode share survey results may be due to the exclusion of sole proprietors in the mode share survey. Also, the survey is an actual commute measurement that is statistically representative of employees in a MMA, whereas model results are estimated person trips based off of traffic counts.

³ Calculation: (2020 Adjusted Model Result) + (2008 Adjusted Model-Survey Gap *Average*) ± (2008 Adjusted Model-Survey Gap *Standard Deviation*)

General employment characteristics

- As of 2008, there were 145,340 employees working in Bellevue, with approximately 180,000 expected in 2020, based on land use forecasts.
- MMAs of predominantly residential character have a significant amount of employment (32,000 employees in 2008, 33,000 in 2020), which likely includes primarily neighborhood-oriented businesses and some offices (e.g., Bellefields office park, south of downtown). The percent of the workforce in these MMAs declines from 28% in 2008 to 23% in 2020, indicating that businesses will continue to concentrate in designated commercial MMAs. It should also be noted that residential MMAs cover vast portions of the city; therefore, any employee TDM activities would need to be widespread.

Employment locations

- Of the six commercial MMAs in Bellevue, Downtown is the one with the most employment for 2008 and 2020, comprising 28% of total employment in 2008 and 34% of total employment in 2020.
- Combined, Downtown and the adjacent Wilburton area on the east side of I-405 make up 35% of the City's workforce in 2008 and 40% in 2020.
- Eastgate and Factoria make up 20% of the City's workforce in 2008, and 18% in 2020.
- The Bel-Red MMA is forecast to receive a significant increase in employment, consistent with the vision for that corridor (from 19,000 employees and 1,200 businesses in 2008 to 28,000 employees and 1,800 businesses in 2020).
- Crossroads only makes up 2% of the workforce in 2008 and 2020 (less than 3,000 employees), indicating that implementing employer-based tdm activities there may not have much overall benefit.

Employment Sectors

- Finance, Investment, Real Estate, and Services (FIRES) is a dominant employment sector in all the commercial MMAs, representing 65% of employment in 2008 and 70% of employment in 2020. In 2008, FIRES represents 71% of businesses (79% in 2020), with a significant majority in Downtown and Bel-Red (over 80%) in 2020.
- Manufacturing jobs are projected to decline Citywide from 2008 to 2020 (particularly in Downtown and Bel-Red), but with a fair amount remaining in Eastgate (4,500 employees).

Employment Size

- Downtown and Bel-Red have the most businesses (41% Citywide in 2008, and 51% Citywide in 2020), the majority of which currently have small numbers of employees (over 75% of businesses in these MMAs have 19 or fewer employees).
- Over half of current employees in Downtown and almost two-thirds of the employees in Bel-Red, work at businesses with fewer than 100 employees. The implication for TDM activities in these areas is that small employer outreach and individualized messaging to employees, in conjunction with large employer outreach, may have the most benefit.
- Large businesses (over 100 employees) account for a significant amount of the current workforce in Eastgate (69% of employees), Factoria (57%), and Wilburton (62%), indicating that CTR-affected and other large employers might be a major focus of TDM activities in those locations. In Downtown, 46% of employees work at businesses with over 100 employees.

Attachment B - Stakeholder Engagement

To strengthen the framework of the plan and implementation efforts, input was sought from stakeholders starting at the initial stages of development and throughout the planning process. Existing information about community desires from employee and resident surveys was also supplemented with an employer survey to determine what kind of TDM-related programs, services, and facilities are desired.

2008 Employee Survey Results

Responses from mode share surveys give an overview of what influences employees to consider non-drive alone commute options. A financial incentive, an immediate ride home in case of emergency, more frequent bus service to the work site, an opportunity to work from home (telework), an employer-provided car for work-related trips during work hours and a more flexible work schedule to meet carpool, vanpool, the bus, etc. are the top methods that would encourage employees to try or continue using alternatives to driving alone to work.

2010 Employer Survey Results

61% of respondents already offer transportation programs or incentives to assist employee commutes.

- Most common offerings include bus pass subsidies (48%), Marketing and educational services on employee transportation options (35%), and pre-tax bus pass purchase option for employees and matching employees to form carpools/vanpools (both 25%).

The top three tools, services, or incentives employers are very likely to offer are marketing and educational services on employee transportation options (21%), bus pass subsidies and matching employees to form carpools/vanpools (both 16%). Employers also expressed interest in:

- Marketing and educational materials on employee transportation options (64%)
- Ridematching event for potential carpool/vanpool employees (47%)
- Consultation about employee commute-assistance programs (46%)
- Telework consultation (33%)

A third or more of respondents were familiar with all other programs, organizations, and facilities mentioned in the survey, except for the Greater Redmond TMA, meaning that market awareness for most services is good. The top three offerings the City could focus marketing on include telework consultations, Commute Advantage consultations, and the Commuter Connection newsletter.

2009 Property manager survey results

Property managers were asked on 2009 report forms how they would be willing to facilitate promotions of ChooseYourWayBellevue.org at their property. The most popular ways were through new tenant welcome packets, staffing tables in the lobby for periodic events, and providing a marketing piece for distribution. The least popular methods were providing a list of tenants to contact them directly with TDM information, and a putting up a banner in the building lobby.

2008 Residential survey results

Surveys conducted by the city consistently show that residents have a high level of interest in better transit service for reaching destinations within Bellevue as well as service connecting Bellevue to regional destinations. In the 2008 City survey of residents' priorities⁴, TDM scores very high as a strategy Bellevue residents want the City to pursue in dealing with Transportation:

- 86% cite "Encourage and Make it More Attractive for People to Choose Transportation Alternatives"

⁴ Accessible at: http://www.bellevuewa.gov/pdf/Finance/2008_Budget_Survey.pdf

Attachment C - Potential 2020 non-drive alone targets and TDM strategies

Establishing 2020 targets is largely dependent on the level of TDM activities in each designated MMA. A range of TDM scenarios, discussed in detail in the Plan document, were developed for each area to account for budget uncertainties. The table below selects a likely target for each scenario based on the lower and upper limits of the probable range, with 3% increment adjustments for each scenario.

2020 NON-DRIVE ALONE AM PEAK COMMUTE TARGETS					
MMA	Probable Range ⁵	Severely Reduced Resources Scenario	Reduced Resources Scenario	Existing Resources Scenario	Enhanced Resources Scenario
Downtown	38-47%	38%	41%	44%	47%
Wilburton	30-39%	30%	33%	36%	39%
Crossroads	21-30%	21%	24%	27%	30%
Eastgate	25-34%	25%	28%	31%	34%
Bel-Red	26-35%	26%	29%	32%	35%
Factoria	30-39%	30%	33%	36%	39%

One scenario involves a *severe reduction* in existing staff and funding resources, limiting activities to CTR oversight as required by the state. Another scenario involves *reduced* staff and funding, focusing activities on CTR oversight and Downtown. A third scenario assumes *existing resources* are unchanged, allowing for continued programming and some expanded services. Lastly, an *enhanced resources* scenario accounts for existing resources plus potential Urban Center state funding and I-405 construction mitigation funds. The Plan document identifies programs for implementation in each scenario by MMA, starting in 2011, and ending in 2020.

⁵ Based on standard deviation (±4%) for 2008 Bellevue-Kirkland-Redmond (BKR) model results and 2008 mode share survey results, applied to 2020 BKR model results.