Section V: Transportation Demand Management Elements

As the City of Kirkland continues to grow, both in residents and employees, any existing parking surplus is likely to disappear due to increased parking demand and redevelopment of surface parking lots. In future years, two primary strategies will present themselves to balance parking demand with supply: either build parking garages, or reduce parking demand. To understand when it is cost-effective to invest in reducing parking demand (and when it is not), it is helpful to begin by examining the full lifetime cost of adding to the downtown parking supply.

1. COST OF ADDING PARKING STALLS

Most demand-side measures that reduce parking demand (e.g., operating a shuttle service) have little or no capital cost, but do carry on-going annual operating costs. Parking garages have high initial capital costs, but typically last for an industry-standard lifetime of 35 to 40 years. To intelligently compare the cost of reducing demand by one space to the cost adding a new space, it is essential to translate the capital cost of a garage into an annual cost, spreading the cost of building and financing each space over its expected 40-year life span.

As shown in Tables 16 and 17, construction costs for a new parking garage in Downtown Kirkland are expected to be over $18,000 per new parking space, not including the value of the land the garage would occupy. Assuming a 5 percent interest rate, a 40-year life span, and costs spread out over this life span using a 40-year mortgage, each space will cost the community $112 per space per month.

Including the opportunity cost of the land, which, if no garage were built, could be sold for its current average estimated market value of $30 per square foot, each space costs approximately $23,000 to build. Including land value, each space has a cost of close to $140 per month per space, every month for the expected life span of the garage.

Table 16
Kirkland Parking Garage Construction Costs

Project	Land required[2] (sf)	Land value (per sf)	Total Land Value	# of spaces	Land value per space	Project cost per space[1], (excluding land)	Total project cost per space
Land valued at $0	48,885	$ 0	$ 0	280	$ 0	$18,311	$18,311
Land at market value	48,885	$ 30	$ 1,466,550	280	$ 5,238	$18,311	$23,549

1 Project cost from the consensus pro forma scenario. This includes taxes, site development, permits and street improvements, but does not include the value of land.

2 The consensus pro forma scenario calls for development of a 280-stall garage constructed on a 48,885 square foot development pad.

Table 17
Kirkland Parking Garage Annual Costs

Project	Project Cost per Space	Annual Costs per Space		Total Cost Per Space	
		Debt Service	Operating	Per Year	Per Month
Land Valued at $0	$18,311	$1,067	$274	$1,341	$112
Land Valued at $30 per sf	$23,549	$1,372	$274	$1,646	$137

An intermediate step, therefore, either before committing to the high cost of building a new parking structure, or in tandem with the construction of a new garage, is to implement transportation strategies that are capable of reducing parking demand for less than the price of $140 per space per month. This chapter presents a range of strategies applicable to the City of Kirkland.

2. PROSPECTS FOR REDUCING DEMAND

To evaluate the prospects for reducing parking demand, begin by separating downtown parking demand into its primary components:

(1) Customer parking demand.
(2) Employee parking demand.
(3) Resident parking demand.

The prospects for reducing parking demand among these different groups, and even within each group, is often very different. The potential for reducing customer demand is usually modest, since businesses do not wish to scare off customers with harsh measures, and positive incentives to use alternative transportation can be difficult to organize for business patrons. Moreover, if a downtown's parking fees are set high (e.g. 50 cents per hour) for short-term parking, and low for long-term parking (e.g. $25 per month), then short-stay customers will cover most of the cost of a parking space, while monthly employee permits run at a serious loss. However, certain approaches have been effective in shifting some customers to bicycling, walking and transit, including:

- Providing an excellent bicycle and pedestrian infrastructure;
- Housing more people in downtown;
- Providing and promoting good transit;
- Pricing parking; and
- Marketing these alternatives effectively.

Reducing employee parking demand is usually more fruitful and cost-effective. Among employees, of course, the effectiveness of demand management varies greatly: helping dishwashers and busboys to leave their cars (which they often have difficulty maintaining and insuring) at home is usually cheaper than buying high-powered lawyers and doctors out of their Mercedes. Based on the effectiveness of employee Transportation Demand Management (TDM) programs in comparable US cities, significant parking demand reduction among downtown Kirkland employees is certainly possible. As described in the TDM strategies outlined below,

many communities and employers in the US have seen reductions in parking demand of upwards of 30 percent from parking pricing strategies and other TDM packages. While the City of Kirkland is unique and requires strategies consistent with its own values and circumstances, experiences from other cities and employers suggest that demand reduction strategies could cost-effectively reduce employee parking demand in Kirkland by one-quarter to one-third.

A. Existing TDM Programs in Kirkland

To more carefully evaluate the potential to reduce parking demand through TDM strategies in Kirkland, it is useful to consider programs already in place. Employers in Kirkland area already offer many TDM incentives and options to employees and residents of the city. They are summarized below.

B. Commute Trip Reduction Employer Programs

There are 21 employers in the City of Kirkland subject to Commute Trip Reduction (CTR) Program laws imposed by the State of Washington. Employers that are subject to CTR are required to strive to bring 45 percent of their employees to work by non-drive-alone modes. All CTR employers in Kirkland provide some financial incentives for taking alternative modes, such as transit or carpool subsidies, and/or parking cash-out (paying cash to employees who do not use a parking space) for walking and biking. All the CTR employers offer bicycle amenities (i.e., such as clothes lockers, covered bike parking, and shower facilities), guaranteed ride home programs, and telecommuting options.

The City of Kirkland is one of the CTR employers. The City's TDM program includes participation in Seattle Metro's FlexPass program, which allows free use of area transit, a $65 per month subsidy for vanpoolers, and its Home Free Guarantee (also known as a Guaranteed Ride Home), offering up to eight emergency taxi rides home per employee per year. Employees also benefit from a parking cash-out program, and are eligible to receive up to $10 for every day that they don't drive, for up to three days (maximum $30 per week).

C. FlexCar

FlexCar, the local carsharing organization, has two cars located in Kirkland – one outside City Hall and one in downtown – to make day-time errands easy for those who leave their cars at home, and for residents who wish to own fewer cars, or avoid owning one altogether.

D. Discount Transit Passes for Employees

Metro offers discounted bus passes to Kirkland employers with at least 25 employees, in the form of the FlexPass, at a cost of $45 per employee per year for a first-year program, and $65 per year per employee thereafter. Metro and employers work together to design a FlexPass that can include any number of a wide range of incentives and benefits, including full access to Metro Transit, a Guaranteed Ride Home service, vanpool fare subsidies, carpool incentives, discounted carpool/vanpool parking, and customized ride-matching services. Costs vary depending upon the actual number of participants for each of these modes, and on the type of benefits the employer

wants in the package. There does not appear to be any restrictions on the number of employees a business must have in order to qualify for the FlexPass program.

E. Planning Policy

The City of Kirkland has several TDM policies already in place. The Planning Department (which currently allows lower parking ratios in downtown than the rest of the city) provides allowances for developers to lower the required parking further if they implement TDM programs. Covered bicycle parking is required throughout the city for all new development, with the exception of single-family residential uses. Several bike lanes exist in the downtown, and more are planned. City policy also favors pedestrian-friendly urban design. Numerous pedestrian improvements are underway or planned in downtown, including high-visibility flashing crosswalks, public art, streetscape amenities, and an integrated sidewalk and street network to facilitate easy and pleasant connections by foot. This commitment to bicycle and pedestrian infrastructure is buoyed by the City of Kirkland's Non-Motorized Transportation Plan adopted in 1995, and updated in 2001.

The city also has an in-lieu fee parking fee program in place. While not technically a demand management measure, this approach does help create common garages that can be more efficiently built and shared than small, private parking areas. The Municipal Garage at the Kirkland Library was partly financed with funds from downtown businesses and developments that chose not to supply their own parking. While free (if time regulated) parking is the norm in the city, visitor parking is priced at the Municipal Garage at $5 per day, some private parking lots charge, and 10 public spaces around the downtown are metered.

3. A MENU OF POSSIBLE DEMAND MANAGEMENT STRATEGIES

There is still substantial potential, however, to expand and improve Kirkland's existing demand management programs. Expanding transportation services to downtown's small and medium-sized employers may be particularly fruitful. Several potential strategies, as well as examples of programs implemented elsewhere in the US, are outlined below. They are categorized into two sections:

1) *Near-term TDM strategies* are ones that are likely to be feasible and cost-effective for Kirkland in the near term.
2) *Longer-term TDM strategies* are measures that are less likely to be cost-effective or easy to implement immediately, given the City's existing circumstances, but should be considered for the longer-term.

NEAR-TERM TDM STRATEGIES

A. Form a Transportation Improvement District

Small and mid-size businesses, such as downtown's many restaurants and shops, typically have difficulty organizing and operating their own transportation demand management programs. Implementing a Transportation Improvement District (TID) can be an effective way to overcome this organizational hurdle. An effective Transportation Improvement District for Kirkland would largely resemble simple programs already existing in Boulder, CO and Portland, OR, where downtown businesses pay fees to the district and in return benefit from centralized parking, free transit passes for employees, and other transportation demand management services. In Kirkland, such a district could best be formed as a Business Improvement Area, with responsibility for both the operation of downtown parking and the provision of transportation demand management programs.

In the case of Boulder, Colorado, all businesses within the Downtown Management Commission's (DMC) boundaries are required to pay fees to the DMC. These fees, supplemented by in-lieu parking fees and revenue from parking garages and meters (all managed by the DMC), are used to provide all employees with: benefits such as a free universal transit pass (similar to METRO's FlexPass, called an Eco-Pass in Boulder); Guaranteed Ride Home; ride-matching services; bicycle parking; and a number of other benefits. The District has successfully brought an extensive menu of transportation alternatives to all of the area's employers, ranging from small pizza parlors to major retail stores.[33]

Similarly, Portland's Lloyd District Transportation Management Association provides programs for improved public transit, ride sharing, alternative work hour programs and programs promoting parking management, bicycle and pedestrian measures. Overall, the Association's annual surveys have found, drive-alone employee commute trips decreased by 25% from 1997 (two year's after the Association's formation) to 2001, as increasing numbers joined its transit pass, bicycle and other programs. With 1,433 employee cars removed from the District, estimated savings on parking construction, at $20,000 per stall, are approximately $29 million.[34]

A Kirkland TID could emulate the Boulder and Portland programs, using parking revenue and/or business fees to provide and oversee TDM strategies, including:

- Parking cash-out benefits
- Parking charges in a managed parking supply
- In-lieu fees
- Universal transit passes
- A Guaranteed Ride Home
- Carpool and vanpool incentives and ride-matching services
- A Transit Resource Center
- Centralized provision of bicycle facilities

[33] Additional information on the Downtown Management Commission can be found at http://www.commuterchoice.gov/campaign/boulder.htm and http://www.gettingthere.com/index.html
[34] See http://www.ldtma.com/2001%20survey%20summary.pdf

Transportation Demand Management strategies are outlined in more detail in the subsequent sections.

1. Parking 'Cash-out' benefits for employees.

When one considers the "fringe" benefits for transportation at most worksites, the financial incentives are strongly skewed: free parking for employees who drive, and little or no help for those who don't. This provides little incentive for employees to seek alternatives to driving alone to work. In combination these factors result in continual increases in single-occupant vehicle commute trips and shortages in long-term parking supply. Free parking is also one of America's most beloved employee benefits and at some businesses its removal can have implications for employee attraction and retention. Therefore, the best method for many employers or districts attempting to curb increasing parking demand is to simply pay people not to drive. This provides employees a financial incentive to change their behavior, without taking parking benefits away.

In Kirkland, parking cash-out programs like the one in operation for the City of Kirkland employees and some other CTR Employers could be expanded to downtown's small and mid-size businesses In a parking cash-out program, employees are offered cash benefits for each day of the week that they do not drive. A Kirkland Transportation Improvement District could follow the City of Kirkland or Apple Computer model, where employees submit an extra slip with their worksheets marking the days where an alternative mode of transportation was taken to work. Parking cash-out programs have the advantage of being simple and flexible: they can be taken advantage of by the employee who takes transit one day, carpools another, and rides a bicycle when the weather permits. The daily cash-out value can be estimated by considering the costs of constructing additional parking. In Kirkland, a range of $7 to $10 for each day an employee does not drive (capped at $30 per week in the City of Kirkland program) has been typical.

Table 18 outlines key research on commuter responsiveness to financial incentive programs implemented throughout the US. The studies include both cases where employees were paid not to drive, as well as programs where parking fees were simply increased. They illustrate programs implemented in cities, colleges, and by individual employers, covering tens of thousands of employees and hundreds of firms. The findings show that, even in suburban locations with little or no transit, financial incentives can substantially reduce parking demand. On average, a financial incentive of $70 per month reduced parking demand by over one-quarter. At the University of Washington, a financial incentive of just $18 per month reduced parking demand by 24 percent.

Table 18
Effect of Financial Incentives on Parking Demand

Location	Scope of Study	Financial Incentive per Month (1995 $)	Decrease in parking Demand
Group A: Areas with little public transportation			
Century City, CA	3500 employees at 100+ firms	$81	15%
Cornell University, NY	9000 faculty and staff	$34	26%
San Fernando Valley, CA	1 large employer (850 employees)	$37	30%
Bellevue, WA	1 medium-size firm (430 empl)	$54	39%
Costa Mesa, CA	State Farm Insurance employees	$37	22%
Average		***$49***	***26%***
Group B: Areas with fair public transportation			
Los Angeles Civic Center	10,000+ employees, several firms	$125	36%
Mid-Wilshire Blvd, LA	1 mid-sized firm	$89	38%
Washington DC suburbs	5500 employees at 3 worksites	$68	26%
Downtown Los Angeles	5000 employees at 118 firms	$126	25%
Average		***$102***	***31%***
Group C: Areas with good public transportation			
University of Washington	50,000 faculty, staff and students	$18	24%
Downtown Ottowa	3500+ government staff	$72	18%
Average		***$102***	***31%***
Overall Average		***$67***	***27%***

Parking cash-out programs have proven effective for reducing employee parking demand. Good transit service, vanpool and carshare programs already in place in Kirkland provide the necessary infrastructure to help employees switch from driving alone. A further benefit is limited potential for 'spill-over parking' (i.e., the problem of non-residents' cars routinely filling up a neighborhood's on-street parking supply). Research on existing parking cash-out programs has shown that although it would be possible for someone to take the cash they get for not driving, park in a residential area and walk the last leg to work, in practice few employees cheat on parking cash-out programs. Cheating is fairly easy to spot, and few employees wish to risk their jobs over the relatively small amounts of money involved. Implementing a parking permit program in neighboring residential areas can also mitigate any spill-over problems should they arise.

2. Parking Charges

As Section 4 emphasizes, Kirkland should consider a strategy for future parking pricing. A cousin of parking cash-out programs, parking pricing also provide financial incentives for drivers to choose other modes. The difference in the two strategies is that charging for parking can apply not only to area employees, but to all parking uses, while simultaneously raising revenue for additional parking and transportation demand management programs. In Kirkland, the mix of free and pay parking lots is the best evidence of the impact parking pricing has on parking demand – the free parking lots in Kirkland are often operating at or near capacity while nearby pay lots have many empty spaces. To ensure the *availability* of

convenient short-term parking, which most retail experts find more important than price, parking pricing is one of the most effective methods; chargin higher rates for the most convenient parking (e.g. prime on-street spaces) works well to increase turn-over and to deter employees from occupying these spaces.

Parking charges can be structured so that the cost primarily deters drive-alone employee and business trips, but impinges less on local retail. Shoppers and diners can be accommodated in pay-for-parking garages by providing validated parking, or by setting up a rate structure based on the length of time one parks (e.g. free parking for the first hour) and/or the time of day (free parking at off-peak hours).[35]

Employee parking charges should be structured to reward employees for using alternative transportation whenever they can. Rather than monthly fees, which encourage employees to drive every day to "get their money's worth", modern fee-collection systems can be set to bill employees by the day or hour for parking, allowing them to save money every day that they choose an alternative mode.

3. <u>In-lieu fees</u>.

As Section 4 recommends, the City's current fee-in-lieu of parking option should be re-evaluated and refined. In-lieu parking fees are typically established by cities as an alternative to building the required on-site parking for a development. Implemented in cities such as Miami, San Francisco, Boulder, Colorado, and Portland, Oregon, in-lieu fees in the US usually range from $5,000 to over $50,000 per parking space. In Boulder, downtown developments, both commercial and residential, are strongly encouraged to contribute in-lieu fees toward the cost of common public garages, rather than building individual gated lots. Boulder has found that the in-lieu system is indeed valuable and has created win-win situations for all parties, including:

- **Reduced parking demand.** Boulder's in-lieu fees pay not only for parking construction but also for TDM alternatives, reducing the amount of new parking needed. The operating principle for Boulder's system is to fund the most cost-effective combination of new garages and demand management alternatives. They have, in effect, a transportation in-lieu fee, rather than a parking in-lieu fee.
- **More efficient garages.** The system facilitates shared parking by creating common public garages that are shared by many users and land uses. The variety of peak operating times from diverse uses (e.g. daytime employers, dining and entertainment in the evening, residents needing overnight parking) promotes high garage efficiency.
- **Better Urban Design.** Consolidation of parking into a few, city-run parking garages facilitates better urban design – fewer garages means more control over the building's relationship to the street (structures lined with retail, attention to street frontage), fewer curb cuts, and fewer inefficient, awkward surface parking areas on small building lots.

[35] The City of Boulder has discount parking programs where shoppers and clients are given tokens for meters and validations stamps for free parking in the parking structures. To participate in this program, downtown businesses and retailers must be within the Central Area General Improvement District (CAGID) and must pay property taxes to the district.

- **Cost-effective construction.** Fewer, but larger, parking garages also allow structures to be built more efficiently on a cost-per-space basis, by reducing costly, space-consuming ramps and inefficient lay-outs.
- **Spurred economic activity.** Garages can give local businesses a boost by being strategically placed away from major destinations, so that people walk past other shops before reaching their destinations.
- **One-stop shopping for parkers.** Consolidated parking lots are good for the consumer, too – with more spaces in fewer places, the likelihood of finding a parking spot with less searching is greater.

Overall, these are potential demand management goals and strategies that Kirkland should consider in refining its in-lieu fee system.

4. Universal transit passes for residents and employees.

In recent years, growing numbers of transit agencies have teamed with universities, employers, or residential neighborhoods to provide Universal transit passes similar to METRO's FlexPass. These passes typically provide unlimited rides on transit for low monthly or semester fees, often absorbed by the school or employer. Evidence from surveys conducted by Silicon Valley's Valley Transportation Authority (VTA) found a 19 percent decrease in parking demand at employers participating in its pass program. Metro notes that in downtown Bellevue, FlexPass is responsible in part for a 24 percent drop in drive alone commutes from 1990 to 2000 (81 percent to 57 percent). From 1993 to 2000, transit use in downtown Bellevue rose from 13 percent to 18 percent.[36]

Boulder's Downtown Management Commission provides a strong example of how a Transportation Improvement District can be used to provide a Universal transit pass for every employee in a district, overcoming both the organizational hurdles that small businesses experience in finding out about and joining these programs, and providing the bulk discount that a large district can often negotiate with a transit agency. To make a similar program work in Kirkland, negotiations with Metro will be needed to lift its normal requirement that participating employers have at least 25 employees (a requirement that Metro imposes in part to reduce the transactions costs of dealing with many small programs). However, at a normal FlexPass cost of $65 per year per employee for Kirkland employers, compared to a $1,646 per year cost to create an additional parking space, a transit pass program would need to free up relatively few parking spaces to justify its cost.

Transit subsidies can also be used for a wide range of residential developments. In the City of Boulder both residential building managers and entire neighborhoods (even typical single-family areas) can purchase EcoPasses for their residents. In the latter, neighborhood volunteers collect contributions on an annual basis, and once the minimum financial threshold is met, everyone living in the neighborhood is eligible for the transit pass. Alternatively, a neighborhood can elect to increase property taxes to purchase neighborhood-wide EcoPasses. In Santa Clara County, CA and Portland, OR, property managers can bulk-purchase transit passes for their residents at deeply discounted rates. In

[36] http://www.commuterchallenge.org/cc/newsmar01_flexpass.html

Portland, transit use among residents increased by between 79% and 250% in two different developments after transit passes were offered there.[37] Seattle Metro has also been testing residential FlexPasses in pilot projects. In 2001, Metro instituted a residential FlexPass at a transit-oriented development in downtown Renton[38], and a trial demonstration in Bellevue is making the benefits of a FlexPass available to residents of four downtown apartment complexes.[39]

The principle of employee or residential transit passes is similar to that of insurance – transit agencies can offer lower rates on passes on the basis that not all those offered the pass will actually use them regularly. The universal passes are beneficial to everyone involved. For transit agencies, universal transit passes provide a stable source of income, while helping them meet their ridership goals. Employers reduce the demand for parking on-site and are able to provide an additional benefit that helps recruit and retain employees. For commuters, the transit pass reduces the cost of getting to work and affords a hassle-free level of transit mobility, eliminating one of the largest barriers to transit use – the need to search for spare change with each trip. Residents also benefit from free or low-cost, hassle-free transit mobility, meaning they are less likely to own a vehicle. The ripple effect to developers can mean reduced parking requirements and consequently far lower construction costs. And neighbors of employees or residences that partake in the program don't have to worry – there is no potential for spill-over parking.

Metro Transit's FlexPasses can be designed to include not only free unlimited transit access, but also subsidies for carpools or vanpools, and a Guaranteed Ride Home Program. A Transportation Improvement District could provide all Kirkland employers and employees with FlexPasses, providing universal transit access.

5. Guaranteed Ride Home Program

Guaranteed Ride Home programs eliminate employees' worries that they will be stranded if they use an alternate mode (such as transit, carpool/vanpool, walking or biking) and end up working late. The program provides a free ride home (usually in a taxi or rental car) in the event of unexpected circumstances such as needing to work late, illness, or family emergency, or if the carpool or vanpool driver has a similar emergency. The free ride home is available only on days when the employee took other transportation besides driving alone.

If Metro FlexPasses are extended to all Kirkland employers through a Transportation Improvement District, a Guaranteed Ride Home Program (called the Home Free Guarantee by Metro) should be included in the program.

[37] Caltrans Special Report: Parking and TOD: Challenges and Opportunities, February, 2002
[38] http://www.wsdot.wa.gov/Transit/library/2001_summary/10-King.pdf
[39] http://www.metrokc.gov/kcdot/news/thisweekarch/tw020401_bellevue.htm

6. Carpool and Vanpool Incentives and Ride-Matching Services.

Another beneficial service that could be provided through the TID would be to give specific incentives for taking carpools and vanpools and assistance with ride-matching for employees. The $65 per month Vanpool subsidy offered as part of the FlexPass program is one example: other employers have offered incentives ranging from reserving prime parking spots for carpools, to reduced parking rates, to prize drawings. For many employers, however, a parking cash-out program has proven the simplest and most effective way to reward carpoolers. For ride-matching services, Rideshareonline.com is available for employees throughout the Puget Sound region looking to match single or regular commute trips with formal and informal van/carpools.

7. Centralized Transportation Resource Center

As in Boulder, the Transportation Improvement District could open a resource center in a central, easy-to-access location downtown, with information for visitors, employees, and residents on transportation alternatives and incentives. In Boulder, the Resource center provides the following resources for the community, which could be emulated in Kirkland as appropriate:

- Knowledgeable staff that help people find alternative modes to driving, including alterative commutes, transit and bike routes, etc.
- Bus schedules, maps, and posters
- Transit pass services (e.g. photos for transit passes)
- Information on how to use the bus schedules and ride transit
- Bicycle maps.
- Demonstration electric bikes
- Community bike program information and registration
- Community events calendar, Ride-matching board, event registration

8. Bike Facilities for Bicycle Commuters.

Bicycle commuting provides a door-to-door alternative for residents who live near their work, services, or entertainment. It is a particularly good mode choice for those living between one-quarter and three miles from their destination. When combined with transit, bicycling can serve even greater destinations – all bus routes in Kirkland currently provide bus racks.

If parking costs are unbundled from residential developments (see below) or cash-out programs are established with more employers, bicycle commuting can be expected to increase, and demand for good bicycle facilities with it. For longer distance bicycle commuters, who may wish to store their bicycle, take a shower, and perhaps change clothes, recommendations for infrastructure improvements are these: showers and clothes lockers (which some downtowns, such as Palo Alto, CA, have provided by providing access for bicycle commuters to local gyms), bicycle lockers (or other secured, fully-enclosed area), bike racks, information on safe biking and area maps. Under a

Transportation Improvement District, bicycle facilities could be provided for all downtown employees through TID fees.

9. Unbundle Parking Charges from Housing Costs.

The standard practice with many US housing developments is to provide free parking spaces to residents along with the cost of the apartment. At as much as $23,000 per space, each parking stall built in a Kirkland housing development significantly increases the rent the developer needs to break even. For those who can afford to purchase a vehicle, pay for maintenance, fuel, and insurance, the benefit of "free" parking is worth the rent costs. For those who cannot afford a car or choose not to own one, the extra benefit, for which they pay a hidden addition to their rent, goes unused. This has three major impacts. First, because parking is "free", residents are more likely to own a car. Secondly ,the increased parking demand leads to higher total costs for parking, since more spaces must be built. Finally, housing rents must be higher to cover the costs of providing parking.

With over 4,000 people currently residing in downtown Kirkland, and more housing and mixed-use projects in planning and development, unbundling residential parking costs could be an effective demand management tool. Paired with the extensive existing transit network, residential carsharing programs, and/or residential transit pass subsidies, the need for residents to own a car would be greatly reduced. If parking costs are unbundled from rent and bear the "true cost" of providing that space (annualized construction costs plus operating costs), the typical price tag for Kirkland of $140 per month makes owning a car even less attractive.

One potential drawback to this program is that many residents will be inclined to forgo the parking costs and use on-street spaces instead, creating spill-over parking problems. This can be easily mitigated, however, by implementing a residential parking permit (RPP) program that limits on-street parking to neighborhood residents only. An RPP program can keep residents in apartment complexes that charge for off-street parking from overwhelming the on-street parking by either limiting the number of on-street permits that complex residents are allowed to have, or precluding them from obtaining on-street permits altogether. For example, each apartment complex can be assigned a fixed number of permits equivalent to the number of on-street spaces in front of the building.

LONGER-TERM TDM STRATEGIES

1 . Parking Maximums and Transferable Parking Entitlements.

In comparison with generic parking minimums, implemented by most US cities, parking maximums set upper limits for allowable parking spaces that can be constructed. This is a strategy used in cities like San Francisco, CA, and Portland, Oregon. Portland restricts offices in the central business district to 0.7 parking spaces per 1,000 square feet and retail to 1.0 spaces per 1,000 square feet of net building area. For developments that are in historic buildings or those who desire more parking for particular reasons, one option to make the requirements more flexible is to introduce transferable parking entitlements. In

Portland the allowed number of parking spaces for a particular development can be "transferred" or sold to another development if they are unused. This allows the city to restrict overall parking supply in an area, while allowing developers to financially benefit. Projects requiring more parking can proceed, while those needing less parking profit from selling the rights. The original permit owner retains first priority to use the spaces constructed by the receiving developer, provided market rate is paid for each space. Parking maximums are a powerful tool for reducing the amount of traffic into a district. They are most often used by districts that wish to allow continued growth and development, without overwhelming the capacity of the area's roads with increased traffic.

2. Expand Car Sharing Program to Residential Developments or Large Employers.

FlexCar, Seattle's carsharing organization, currently has two cars in the City of Kirkland, with one car located at City Hall and another in downtown. With the addition of new housing developments, and/or the implementation of other TDM strategies such as unbundled parking charges or cash-out programs, carsharing as a transportation option becomes much more viable. Several housing developments in San Francisco – Rich Sorro Commons and the Van Ness and Turk Housing Development, for example – have developed deals with City CarShare, the local carshare organization, to provide cars in the complex for use by residents (and in Van Ness case, by the general public as well). By providing car-sharing vehicles (combined with unbundled parking costs) the Van Ness development was able to reduce parking requirements by almost 2/3, saving over $1.5 million in construction costs, passed on to residents in lower rents. When unbundled parking costs and reduced parking supply encourage lower vehicle ownership rates among residents, carsharing provides an added level of convenience for occasional car trips.

The viability of carsharing in residential developments or large employers depends directly on the price of parking (or the size of transportation allowances). If parking fees are set equal to the actual costs for the proposed parking garages, then participating in a carsharing program will be far less costly than the price of a parking space alone. City CarShare members, for example, spend on average just $70 per month, which includes all insurance costs, fuel, and the cost for the organization to buy the vehicle, while actual costs for a residential space are estimated at $140/month for Kirkland. If parking costs remain bundled into housing costs, or employee parking remains free with no cash-out program, then the prospects for successful car sharing use will be considerably diminished.

3. Develop Shuttles to Nearby Transit and Parking.

As mentioned in Section 4, Kirkland should evaluate the feasibility of a downtown circulator system to tie adjacent parking areas to the core. Ideally, a circulator would tie into existing transit service to leverage service and reduce costs, and could serve as a link not only to peripheral parking, but also to other destinations along the route.

However, Kirkland tried a shuttle service at one point, but the service generated low ridership and was eventually cancelled. To avoid repeating this experience, a downtown circulator shuttle should be considered only as a long-term strategy. Its feasibility should be evaluated afresh only after other strong transportation demand management measures

have been enacted. Most successful shuttles to peripheral parking areas rely on at least one of the following measures, to give patrons an incentive to park and wait for the shuttle:

- Severely overcrowded lots in the core area (a strategy we do not recommend);
- Parking charges in the core area, and free parking in the peripheral lots;
- A parking cash-out for employees who park in remote lots, rather than in the core;
- A ban on employee parking in the core area.

Once one or more of these incentives is in place to encourage ridership, a shuttle to under-used remote lots will have a greater chance of success, and its feasibility should be evaluated anew.

4. SUMMARY – NEXT STEPS FOR TDM IN KIRKLAND

As an overall guide for action, we recommend that the City adopt the principle that *Kirkland will seek to develop the most cost-effective mix of transportation modes for access to downtown, including both parking and transportation demand management strategies.*

To understand the costs and achievable benefits for the Transportation Demand Management strategies described in this section more precisely, so that the best mix of investment in TDM and new parking can be chosen, several questions should be answered.

1. Business license data shows that approximately 2000 employees work in Downtown Kirkland.
   a. How many are present at the peak hour?
   b. What is the current transportation mode split for these workers?
   c. How many parking spaces do they occupy at the peak hour, and where exactly are they parking?

2. What is the average vehicle ownership for downtown residents? How does this compare to current parking requirements? How can ownership rates be affected by "unbundling" parking charges, residential transit passes and other measures?

3. What is the current mode split among customers of downtown businesses? How will parking charges affect this? What other programs can be most effective in encouraging alternate transportation use among downtown customers?

By answering these questions, and engaging in careful cost-benefit analysis, Kirkland can determine the most cost-effective mix of investment in both new parking and other transportation modes. Such a strategy will allow Kirkland to grow gracefully, providing both essential access for employees, customers and visitors, and safeguarding its financial health, environment, and fine quality of life.