

MIRAI
Transportation
Planning & Engineering

11410 NE 122nd WAY
Suite 320
Kirkland, WA



City of Kirkland 
Transportation
Impact Fee Update

DRAFT
April 10, 2007

Introduction

This report provides an update to the Transportation Impact Fee Program for the City of Kirkland. The update was prepared for the following reasons:

- The Growth Management Act (GMA) requires regular updates to impact fee programs. The original Transportation Impact Fee program was adopted by the City in 1999.
- New projects have been added to the City's Capital Improvement Program (CIP), while projects on the original impact fee project list have been completed.
- The costs of projects on the impact fee project list have increased due to inflation and changing project scope since the initial program in 1999.
- The patterns of traffic growth, land use, and redevelopment have changed.

The remaining sections of the report describe the impact fee program methodology, the analyses performed, and the resulting recommendations.

2006 – 2022 Impact Fee Analysis

The impact fee structure for the City of Kirkland was designed to determine the fair share of improvement costs that may be charged for a new development. The GMA (passed in 1990) allows impact fees for system improvements that reasonably relate to the impacts of new development, and specifies that fees are not to exceed a proportionate share of the costs of improvements. The following key points summarize the impact fee structure:

- A 16-year transportation facility list (2006 – 2022) oriented to future growth is developed.
- Existing deficiencies are identified and separated from future trips on the roadway system.
- Future trips are allocated to geographic areas inside and outside the City using a traffic-forecasting model.
- A citywide fee system is established.
- A land use-based fee schedule is developed.

In calculating impact fees, the following components are included:

- Cost of public facilities necessitated by development;
- Adjustment to the cost for past or future payments by developer (user fees, debt service payments, taxes, other);

- Availability of other funds;
- Cost of existing facilities improvements;
- Methods by which existing facilities were financed;
- Credit for the value of any dedication of land to facilities identified in the CIP and required as a condition of approval;
- Adjustment for unusual circumstances, and,
- Consideration of studies and data submitted by the developer.

A sound accounting system is therefore important to ensure that the impact fees collected are assigned to the appropriate improvement projects.

Methodology

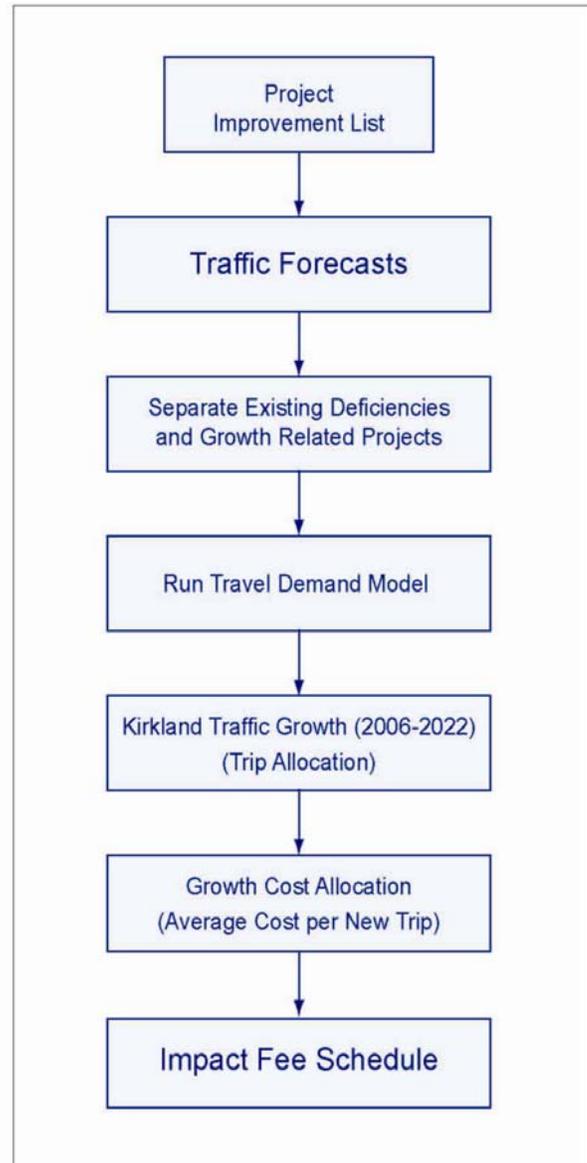
The flow of steps involved in the Kirkland impact fee process is shown in **Figure 1**. The key steps include: establishing traffic forecasts and trip patterns (based on land use data and the future transportation network); identifying growth-related road projects; identifying growth-related road project costs, and preparing the fee schedule.

To begin the process, the City compiled the existing impact fee project list and selected other eligible traffic capacity projects from the Capital Improvement Plan (CIP) and the long-range transportation plan.

In the next step in the process, the project costs were allocated. Eligible project costs were distributed either within the City or to external areas. The City’s traffic model provided traffic and land use data.

This process produced a “cost per trip”, which was calculated by dividing the total project costs by the number of new trips in the study area. In the final step the “cost

Figure 1. Impact Fee Process



per trip” was converted into an impact fee schedule that showed fees as dollars per unit of development for different land use categories.

Impact Fee Project List

Washington State law (RCW 82.02.050) specifies that Transportation Impact Fees are to be spent on “system improvements.” System improvements can include physical or operational changes to existing roadways, as well as new roadway connections that are built in one location to benefit projected needs at another location. These are generally projects that add capacity (new streets, additional lanes, widening, signalization, et al).

During the City's transportation planning process, the City has identified projects needed by 2022 to meet the adopted Level of Service (LOS) standards. These capital projects form the basis for the City's current impact fees and the 2022 concurrency project list. The City considered adding other capacity projects in the City's Comprehensive Plan 2022 Transportation Project list. However, the final impact project list includes only those projects needed to meet current concurrency requirements.

The resulting project list, shown in **Table 1**, includes thirteen (13) projects. These projects are also shown in **Figure 2**.

Table 1. List of Transportation Capacity Projects

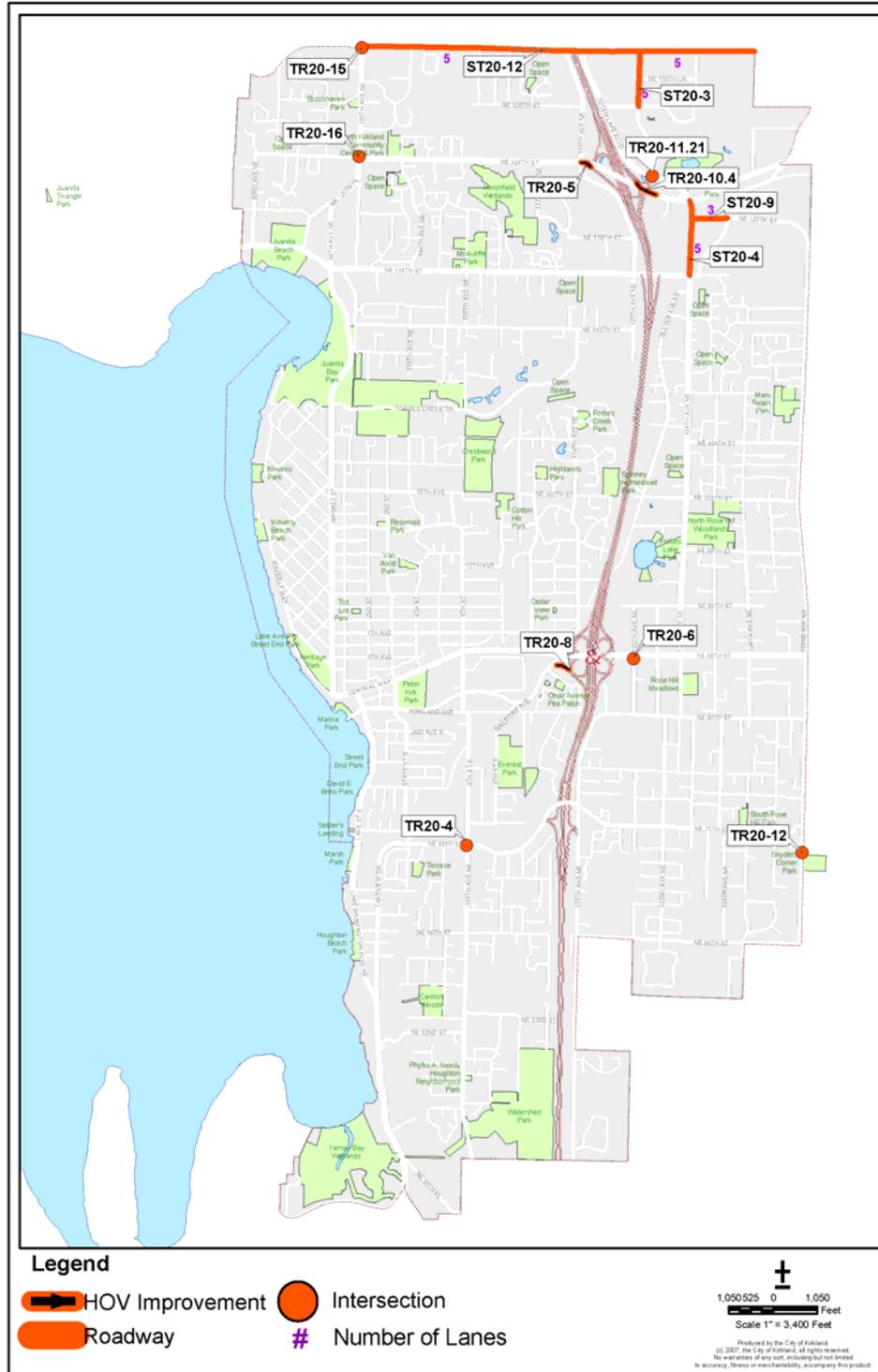
Group*	Comp Plan #	CIP#	Project Description	Total Cost Estimated
A	ST20-9	ST 0057	NE 120th Street Road Extension (east), Slater Ave NE to 124th Ave NE (3 lanes)	\$ 4,300,000
A	ST20-4	ST 0059	124th Ave NE Road Improvement, NE 116th Street to NE 124th Street (5 lanes)	\$ 3,400,000
B	ST20-3	ST 0063	120th Ave NE Road Improvement, NE 128th Street to NE 132 Street (5 lanes)	\$ 5,500,000
B	TR 20-11.21		Totem Lake Boulevard/120th Ave NE	\$ 600,000
B	TR 20-10.4	TR 0075	NE 124th Street / I-405 queue by-pass WB to NB	\$ 700,000
C	ST20-12	ST 0058	NE 132nd Street Road Improvement, 100th Ave NE to 132nd Ave NE (5 lanes TOTAL COST))	\$ 27,500,000
C	TR20-15	TR 0083	100th Ave NE/NE 132nd Street Intersection Improvements	\$ 900,000
D	TR20-5	TR 0057	NE 124th Street/I-405 queue by-pass @ I-405, EB to SB	\$ 1,000,000
D	TR20-16	TR 0084	100th Ave NE/NE 124th Street Intersection Improvements	\$ 1,200,000
G	TR20-4	TR 0085	NE 68th Street/108th Ave NE Intersection Improvements	\$ 800,000
H	TR20-12	TR 0086	NE 70th Street/132nd Ave NE Intersection Improvements	\$ 1,300,000
I	TR20-8	TR 0056	NE 85th Street HOV/I-405 queue by-pass @ I-405, EB to SB	\$ 500,000
I	TR20-6	TR 0088	NE 85th Street/120th Ave NE Intersection Improvements	\$ 600,000
Capital Facilities Project TOTAL				\$ 48,300,000

* Project Groupings: Projects are organized into geographic groups for traffic modeling purposes.

See **Appendix A** for cost breakdowns for various geographic groups.

Project Group A	North Rose Hill – 124th and 132nd Avenues NE	\$ 7,700,000
Project Group B	Totem Lake	\$ 6,800,000
Project Group C	NE 132nd Street Corridor	\$ 28,400,000
Project Group D	NE 124th Street Corridor	\$ 2,200,000
Project Group E	Not Used	\$ 0
Project Group F	Not Used	\$ 0
Project Group G	108th Avenue NE	\$800,000
Project Group H	Bridle Trails	\$1,300,000
Project Group I	NE 85th Street Corridor	\$1,100,000
CFP Total		\$ 48,300,000

Figure 2. Transportation Impact Fee Projects



Land Use Growth

For the impact fee analysis, a 16year land use growth estimate was used. **Table 2** shows Kirkland land uses in terms of housing (single family and multi-family) and employment (retail, office, and industrial) units for the years 2006 and 2022.

Table 2. Kirkland Land Use Growth

Land Use Category	Unit of Measure	2006*	2022**	Growth
Single Family Housing	Dwelling Units	10,489	11,954	1,465
Multi-Family Housing	Dwelling Units	12,450	14,872	2,422
Office	Square Feet	5,384,847	6,161,605	777,000
Retail	Square Feet	3,765,355	3,974,210	209,000
Industrial	Square Feet	2,668,361	2,551,561	(117,000)

*Includes land uses which have been approved in the city's permit process.

** 2022 Total land use represents projected growth from 2006 – 2022

Source: City of Kirkland

Cost Allocation

The City uses an impact fee analysis based on a methodology that distinguishes between facility improvements that address existing deficiencies and those that are needed to serve new growth. For growth-related projects, this method assumes that traffic generated by future development (inside and outside of the City) is the reason for the improvement project(s).

TRANSPORTATION DEFICIENCIES

The Growth Management Act requires cities to establish specified levels of service (LOS) for vehicular traffic. For Kirkland, the City is divided into four geographic subareas. Within each subarea the analysis of LOS implements Policy T-5.3 of the City's Comprehensive Plan by ensuring that new development projects meet the two adopted standards for peak-hour level of service. The City forecasts future traffic volumes to the year of the adopted level of service for concurrency testing. The concurrency test consists of the following two parts:

Part 1. The average level of service (using a volume/capacity (V/C) ratio) of the impacted sub-area(s) is estimated and then compared to the adopted level of service standard from the Comprehensive Plan.

Part 2. All system intersections must have a V/C ratio of 1.4 or better.

Table 3 shows the LOS standards within each subarea and the existing LOS. The existing LOS includes the effects of traffic volumes from all proposed development projects that have received a passing concurrency test.

Table 3. Level of Service Standard Analysis

Subarea	LOS Standards		Existing LOS		Concurrency Test	
	Maximum Intersection LOS	Average 2007 V/C	Intersections Exceeding 1.4 V/C	Average V/C	Maximum Intersection LOS	Average V/C
Southwest	1.4	0.90	0	0.82	yes	yes
Northwest	1.4	0.90	0	0.87	yes	yes
Northeast	1.4	0.88	0	0.85	yes	yes
East	1.4	1.05	0	0.99	yes	yes

Average Volume/Capacity (V/C) Ratio of Signalized Intersections
 Source: City of Kirkland

The analysis showed that all of the facilities on which the projects are proposed currently are within the City’s adopted LOS standard. In other words, the projects have no current transportation deficiencies.

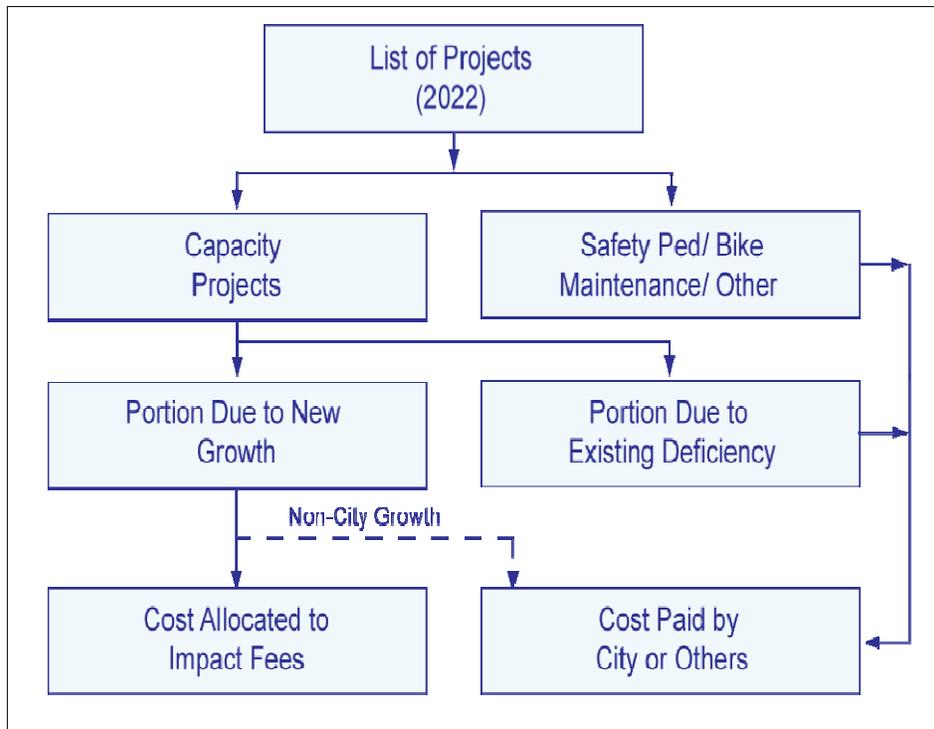
TRAVEL GROWTH

The City’s travel demand model was used in this study to prepare traffic forecasts. The model generates “PM peak hour” vehicle trips based on housing and employment data. Then the model distributes the trips between different zones within the region. Finally, the model assigns the trips to the roadway network to predict traffic volumes. For the impact fee study 2006 and 2022 trip tables were developed. A “select link” assignment procedure provided the origin and destination information for each vehicle trip traveling through a particular improvement project group. The grouping of projects for the select link assignments is shown in the first column of Table 1.

Determination of “Through” Traffic

The cost allocation process distributes the growth costs for each project based upon the travel patterns between the different geographic areas within and outside the City limits. Trips that pass through Kirkland, but do not have any origins or destinations internal to Kirkland, were not allocated to Kirkland growth. That is, development in Kirkland would not be charged for impacts by growth in trips passing "through" the City. This “through traffic” amount will need to be covered by other revenues (other revenues include grant funding, gas tax, sales tax, and real estate excise tax). **Figure 3** shows the cost allocation concept.

Figure 3. Impact Fee Cost Allocation Concept

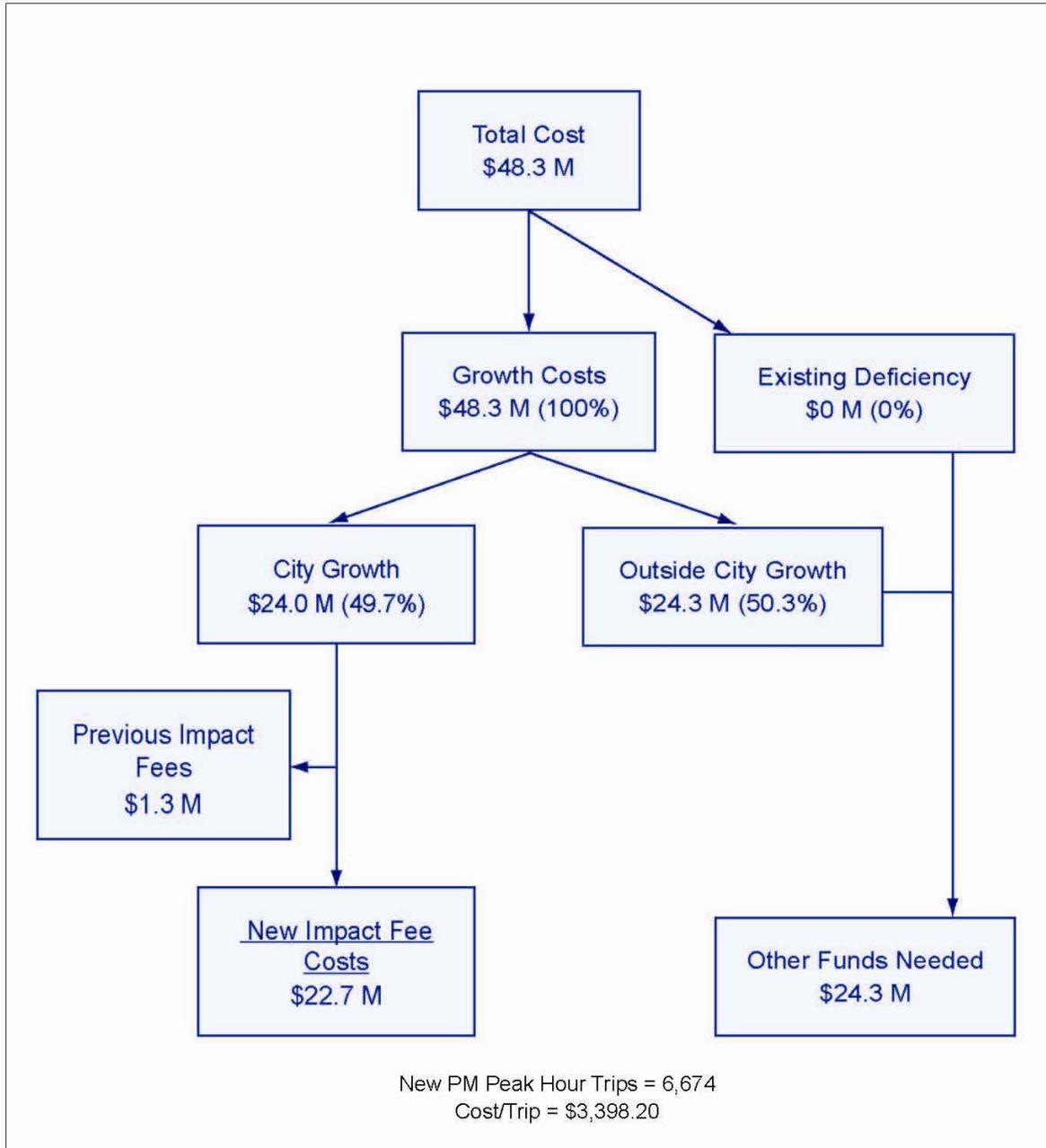


COST ALLOCATION RESULTS

For discussion purposes, the dollar amounts shown in the following figures and text descriptions are approximate values expressed in million dollars. The actual amounts used in the calculations are accurate to a single dollar.

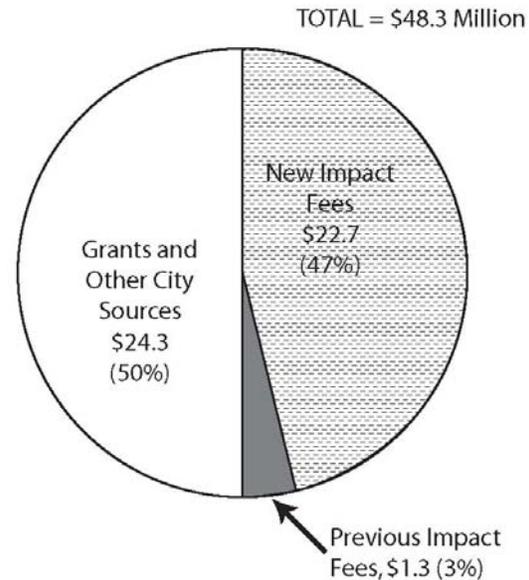
The total cost of the projects on the capacity project list is \$48.3 million as shown in **Figure 4**. The \$48.3 million was then split into ‘city growth’ and ‘outside city growth’ components using the City’s traffic model data. The details of this calculation are shown in **Appendix A**. Using these data, the average percent of city growth responsibility equaled 49.7 percent. The city growth percentage, applied to the \$48.3 million needed funds, yielded an amount equal to \$24.0 million. Of this amount, \$1.3 million has already been collected as impact fee payments and applied towards the projects. Removing the previously collected impact fees leaves a total of \$22.7 million remaining to be funded using impact fees. The remaining \$24.3 million would be expected to be obtained from new grant proposals or other sources of revenue to cover the cost of growth occurring outside of the City.

Figure 4. Impact Fee Cost Allocation (2006 – 2022)



As shown in Figure 5, the new impact fees contribute 47 percent of the total \$48 million cost of the improvement projects. Previous impact fees collected contribute 3 percent. City matching funds, new grants, and other sources would contribute the remaining 50 percent of the total project costs. Of this amount, city staff estimates an average annual grant revenue of \$0.8 million per year, or \$12.7 million collected over the 16-year period (2006-2022).

Figure 5. Impact Fee Program Funding Sources



The final step in the cost allocation process dealt with calculating the "cost per new trip end" within Kirkland, derived by dividing the total eligible project cost by the total number of new PM peak hour trip ends based in Kirkland. A total of 6,672 new PM peak hour vehicle trip ends¹ are estimated to occur within the City between 2006 and 2022.

The analysis produced the following results.

Impact fee costs	\$ 22,680,436
Divided by:	
New PM peak hour trip ends	<u>÷ 6,674</u>
Equals:	
Cost per new trip end	\$3,398.20

¹ A vehicle trip travels between an origin and a destination. Each vehicle trip has two trip ends, one each at the origin and destination. Trip ends represent the traffic coming to and from a given land use. The trip ends were calculated using an average of results obtained from trip generation formulas used by the Institute of Transportation Engineers and the City's travel demand model.

Impact Fee Schedule

The impact fee schedule was developed by adjusting the "cost per trip end" information to reflect differences in trip-making characteristics for a variety of land use types within the study area. The fee schedule is a table where fees are represented as dollars per unit for each land use category. **Table 4** shows the various components of the fee schedule (trip generation rates, new trip percentages, trip lengths, and trip length adjustment for each land use). Certain land uses were modified, added, or removed from the current fee schedule to reflect recent development trends within the City and changes to the national trip generation database.

TRIP GENERATION

Trip generation rates for each land use type are derived from the Institute of Transportation Engineers (ITE) *Trip Generation* (7th Edition). The rates are expressed as vehicle trips entering and leaving a property during the PM peak hour.

PASS-BY TRIP ADJUSTMENT

The trip generation rates represent total traffic entering and leaving a property at the driveway points. For certain land uses (e.g., retail), a substantial amount of this traffic is already passing by the property and merely turns into and out of the driveway. These pass-by trips do not significantly impact the surrounding street system and therefore are subtracted out prior to calculating the impact fee. The resulting trips are considered "new" to the street system and are therefore subject to the impact fee calculation. The "new" trip percentages are derived partially from ITE data and from available surveys conducted around the country.

Table 4. Impact Fee Schedule

Land Uses	Unit of Measure	ITE Land USE Code	Basic Trip Rate	New Trip %	New Trip Rate	Trip Length (miles)	Trip Length Adjustment	Fee Per Unit
Cost per Trip End >								\$3,398.20
Residential								
Detached Housing	dwelling	210	1.01	100%	1.01	3.5	1.00	\$3,432
Attached and Stacked Housing	dwelling	220,221,230,233	0.56	100%	0.56	3.7	1.06	\$2,012
Senior Housing	dwelling	See note 4	0.28	100%	0.28	2.8	0.80	\$761
Nursing Home	bed	620	0.22	100%	0.22	2.8	0.80	\$598
Congregate Care/ Assisted Living	dwelling	253,254	0.17	100%	0.17	2.8	0.80	\$462
Commercial - Services								
Drive-in Bank	sq ft/GFA	912	45.74	60%	27.44	1.5	0.43	\$39.97
Walk-in Bank	sq ft/GFA	911	33.15	80%	26.52	1.5	0.43	\$38.62
Day Care Center	sq ft/GFA	565	13.18	75%	9.89	2.0	0.57	\$19.20
Library	sq ft/GFA	590	7.09	75%	5.32	1.7	0.49	\$8.78
Post Office	sq ft/GFA	732	10.89	75%	8.17	1.7	0.49	\$13.48
Hotel/Motel**	room	310	0.59	100%	0.59	4.0	1.14	\$2,291
Extended Stay Motel	room	311	0.40	100%	0.40	4.0	1.14	\$1,553
Service Station	VFP	944	13.86	40%	5.54	1.7	0.49	\$9,151
Service Station/Minimart	VFP	945	13.38	30%	4.01	1.7	0.49	\$6,625
Service Station/Minimart/Car Wash	VFP	946	13.33	45%	6.00	1.7	0.49	\$9,901
Carwash	stall	947	5.54	65%	3.60	1.6	0.46	\$5,594
Movie Theater	seats	445	0.29	85%	0.25	2.3	0.66	\$550
Health Club	sq ft/GFA	492	4.05	75%	3.04	3.1	0.89	\$9.14
Racquet Club	sq ft/GFA	491	0.84	75%	1.37	3.1	0.89	\$4.12
Marina	Berth	420	0.19	90%	0.17	3.1	0.89	\$512
Commercial - Institutional								
Elementary School/Jr. High School	student	520	0.28	80%	0.22	2.0	0.57	\$435
High School	student	530	0.15	90%	0.14	2.0	0.57	\$272
University/College	student	550	0.21	90%	0.19	3.0	0.86	\$553
Church	sq ft/GFA	560	0.66	100%	0.66	3.7	1.06	\$2.37
Hospital	sq ft/GFA	610	1.18	80%	0.94	5.0	1.43	\$4.58
Commercial - Restaurant								
Restaurant	sq ft/GFA	931	7.49	80%	5.99	3.4	0.97	\$19.78
Fast Food Restaurant w/o drive thru	sq ft/GFA	933	26.15	50%	13.08	2.0	0.57	\$25.39
Fast Food Restaurant w drive thru	sq ft/GFA	934	34.64	50%	17.32	2.0	0.57	\$33.63
Tavern	sq ft/GFA	936	11.34	65%	7.37	2.7	0.77	\$19.32
Industrial								
Light Industry/High Technology	sq ft/GFA	110	0.98	100%	0.98	5.1	1.59	\$5.29
Industrial Park	sq ft/GFA	130	0.86	100%	0.86	5.1	1.59	\$4.64
Warehousing/Storage	sq ft/GFA	150	0.47	100%	0.47	5.1	1.59	\$2.54

Table 4 cont'd.

Land Uses	Unit of Measure	ITE Land USE Code	Basic Trip Rate	New Trip %	New Trip Rate	Trip Length (miles)	Trip Length Adjustment	Fee Per Unit
Commercial - Retail								
Shopping Center	sq ft/GLA	820	3.75	65%	2.44	1.7	0.49	\$4.02
Auto Parts Sales	sq ft/GFA	943	4.46	70%	3.12	1.7	0.49	\$5.15
Auto Care Center	sq ft/GLA	942	3.38	70%	2.37	1.7	0.49	\$3.91
Car Sales - New/Used	sq ft/GFA	841	2.64	80%	2.11	4.6	1.31	\$9.43
Convenience Market	sq ft/GFA	851	52.41	45%	23.58	1.3	0.37	\$29.77
Discount Club	sq ft/GFA	861	4.24	70%	2.97	4.0	1.14	\$11.53
Electronics Superstore	sq ft/GFA	863	4.50	70%	3.15	2.1	0.60	\$6.42
Free Standing Discount Store	sq ft/GFA	815	5.06	70%	3.54	2.1	0.60	\$7.22
Furniture Store	sq ft/GFA	890	0.46	60%	0.28	1.7	0.49	\$0.46
Hardware/Paint Store	sq ft/GFA	816	4.84	70%	3.39	1.7	0.49	\$5.59
Home Improvement Superstore	sq ft/GFA	862	2.45	70%	1.72	2.1	0.60	\$3.50
Other Retail Sales	sq ft/GFA	814	2.71	70%	1.90	1.7	0.49	\$3.13
Nursery/Garden Center	sq ft/GFA	817	3.80	70%	2.66	1.7	0.49	\$4.39
Pharmacy(with Drive Through)	sq ft/GFA	881	8.62	50%	4.31	1.7	0.49	\$7.11
Quick Lubrication Vehicle Shop	Service Bay	941	5.19	40%	2.08	1.7	0.49	\$3,427
Video Rental	sq ft/GFA	896	13.60	45%	6.12	1.3	0.37	\$7.72
Supermarket	sq ft/GFA	850	10.45	75%	7.84	2.1	0.60	\$15.98
Tire Store	Service Bay	849	3.79	70%	2.65	1.7	0.49	\$4,379
Commercial - Office								
General Office Building	sq ft/GFA	710	1.49	90%	1.34	5.1	1.46	\$6.64
Medical Office/Clinic	sq ft/GFA	720	3.72	75%	2.79	4.8	1.37	\$13.00

VFP= Vehicle Fueling Positions (Maximum number of vehicles that can be fueled simultaneously)

GLA= Gross Leasible Area

GFA= Gross Floor Area

* For uses with Unit of Measure in sq ft, trip rate is given as trips per 1000 sq ft

** Hotel/Motel: Assumes 83% room occupancy (per ITE)

*** New Trip % and Trip Lengths for selected uses are based upon characteristics of similar land use types

Primary sources for PM Peak Hour Trip Rates, Percent New Trips, & Average Trip Length:

1. ITE's "Trip Generation, 7th Edition" Report
2. Pinellas County Impact Fee Study
3. City of Tampa Transportation Impact Fee Update
4. Senior Housing rate is 1/2 of Attached and Stacked Housing rate

TRIP LENGTH ADJUSTMENT

Another variable that affects traffic impacts is the length of the trip generated by a particular land use. The “cost per trip” calculated in the impact fee program represents an average for all new trips generated within Kirkland. Being an average, there will be certain land uses that generate trips of different lengths. If a given trip length is shorter than the average, then its relative traffic impacts on the street system will be lower than average. Conversely, longer trips will impact a larger proportion of the transportation network. In order to reflect these differences, the method includes an adjustment factor, which is calculated as the ratio between the trip length for a particular land use type and the "average" trip length for the City. Trip length data were estimated using limited national survey results. Since the adjustment uses a ratio, the relative trip lengths are more important than the actual trip length. The average new trip length estimated for Kirkland was 3.5 miles based upon the 2022 mix of land use types within the study area.

SCHEDULE OF RATES

The impact fee schedule of rates is shown in the last column in Table 4. In the fee schedule, fees are shown as dollars per unit of development for various land use categories, as defined in **Appendix B**. The impact fee program is flexible in that if a use does not fit into one of the categories, an impact fee can be calculated based on the development’s projected trip generation.

Table 5 provides two examples (residential and office) of the calculation.

Table 5. Example Calculations of Impact Fee Rate

PM Peak Hour Trip Generation (per unit) Source: ITE Trip Generation		Residential: Detached	Office: General Office
		1.01	1.49
x	Percent New Trips	100%	90%
x	Trip Length Adjustment		
	Trip Length (unit)	3.50	5.10
	÷	÷	÷
	Average Trip Length	3.5	3.5
x	Average Cost per Trip End	\$3,398	\$3,398
÷	Divide by 1000 for rate per square foot	NA	1000
=	Impact Fee Rate (per unit)	\$3,432/dwelling	\$6.64/sq ft

Appendix C shows a comparative table of impact fee rates throughout the Puget Sound Region.

Conclusions

The City of Kirkland Transportation Impact Fee Program was adopted in 1999. The proposed impact fees have increased to be consistent with current construction and regulatory costs and to account for the addition of new roadway projects to the impact fee list. The impact fee rate schedule (Table 4) lists the impact fees to be charged to a variety of land use types. Since the impact fee system was originally established several new land uses have been added to reflect the mix of businesses within the City.

The rates reflect changes in the average “cost per trip” as well as updates to trip generation rates and categories from the Institute of Transportation Engineers. The proposed City impact fee rates are anticipated to generate \$22.7 million over the next 16 years (2006 - 2022), representing approximately 47 percent of total funding needs for the projects on the impact fee list.

Appendix A – Cost Allocation Results

The cost allocation results are summarized in **Exhibit A**. Exhibit A illustrates how the impact fee project costs (shown in Table 1) were divided into growth-related costs attributable to the City. In order to determine this proportion, the City's travel demand model was used to identify the portion of trip-making associated with existing and growth-related traffic. A technique called "select-link" analysis was used to isolate the vehicle trips using each of the impact fee projects. The first column of Exhibit A shows several "project groups", which represent the grouping of impact fee projects used in the select link traffic forecasts. Each project group includes one or more impact fee projects that are located within close proximity to each other, representing similar traffic patterns. The grouping of projects is shown at the bottom of Exhibit A.

Exhibit A. Cost Allocation by Project Group

Project Group #	Project Costs (Total)	Existing Deficiency Portion	Project Costs minus Deficiencies and Committed Funding	Percent of New Project Traffic due to Growth within City	Project Costs Allowable for Impact Fees
A	\$7,700,000	\$0	\$7,700,000	32.0%	\$2,463,679
B	\$6,800,000	\$0	\$6,800,000	60.2%	\$4,093,072
C	\$28,400,000	\$0	\$28,400,000	54.0%	\$15,336,812
D	\$2,200,000	\$0	\$2,200,000	46.4%	\$1,021,625
E	\$0	\$0	\$0	64.2%	\$0
F	\$0	\$0	\$0	60.0%	\$0
G	\$800,000	\$0	\$800,000	42.8%	\$342,541
H	\$1,300,000	\$0	\$1,300,000	27.9%	\$362,455
I	\$1,100,000	\$0	\$1,100,000	33.8%	\$371,387
Total	\$48,300,000	\$0	\$48,300,000	49.7%	\$23,991,571
Growth-Related Committed Funding					\$1,311,135
Costs Remaining for Impact Fees					\$22,680,436
Trip End Growth Cost/Trip End					6674
					\$3,398.20

Project Group Definitions (used for grouping capacity projects for travel modeling)

A	North Rose Hill – 124th and 132nd Avenues NE
B	Totem Lake
C	NE 132nd Street Corridor
D	NE 124th Street Corridor
E	Not Used
F	Not Used
G	108th Avenue NE
H	Bridle Trails
I	NE 85th Street Corridor

Appendix B – Land Use Definitions

The following land use definitions are derived from the ITE *Trip Generation* (7th Edition). They have been modified as appropriate for the City of Kirkland.

Residential

Detached Housing: Once or more detached housing units located on an individual lot. Includes accessory dwelling units. (ITE # 210)

Attached and Stacked Housing: A building or buildings designed to house two or more families living independently of each other. Includes apartments, condos, attached duplexes, P.U.D.'s, and attached townhouses. Includes single room occupancy if additional parking provided. (ITE # 220, 221, 230, 233)

Senior Housing: Residential units similar to apartments or condominiums restricted to senior citizens. (ITE # 220, 221, 230, 233; also 251, 255)

Nursing Home/Convalescent Center: A facility whose primary function is to provide chronic or convalescent care for persons who by reason of illness or infirmity are unable to care for themselves. Applies to rest homes, chronic care, and convalescent centers. (ITE # 620)

Congregate Care/Assisted Living Facility: One or more multi-unit buildings designed for those people who are unable to live independently due to physical or mental handicap. Facilities may contain dining rooms, medical facilities, and recreational facilities. (ITE # 253, 254)

Commercial-Services

Drive-in Bank: A free-standing building, with a drive-up window, for the custody or exchange of money, and for facilitating the transmission of funds. (ITE # 912)

Walk-in Bank: A free-standing bank building without drive-in windows. (ITE # 911)

Day Care Center: A facility for the care of infant and preschool age children during the daytime hours. Generally includes classrooms, offices, eating areas, and a playground. This also includes preschools. (Note: This does not apply to day care homes, family day care, mini-day care centers or mini-schools, rates for which must be separately calculated.) (ITE # 565)

Library: A public facility for the use, but not sale, of literary, musical, artistic, or reference materials. (ITE # 590)

Post Office: Houses service windows for mailing packages and letters, post office boxes, offices, vehicle storage areas, and sorting and distribution facilities for mail. (ITE # 732)

Hotel/Motel: A place of lodging providing sleeping accommodations. May include restaurants, cocktail lounges, meeting and banquet rooms or convention facilities. (ITE # 310)

Extended Stay Motel: Extended stay motels are places of lodging that provide sleeping accommodations, a small restaurant, and lounge and a small amount of meeting space. Each suite includes a sitting room and separate bedroom along with limited kitchen facilities provided. (ITE # 311)

Service Station w/o Minimart: A facility used for the sale of gasoline, oil, and lubricants. May include areas for servicing, repairing, and washing vehicles. (ITE # 944)

Service Station w/ Minimart: A facility, which combines elements of a convenience store and a gas station. Convenience food items are sold along with gasoline and other car products; gas pumps are primarily or completely self-service. (ITE # 945)

Service Station w/Minimart and Car Wash: A facility, which combines elements of a convenience store and a gas station, along with a car wash. Convenience food items are sold along with gasoline and other car products; gas pumps are primarily or completely self-service. The car wash may be purchases separately or in connection with other facility services. (ITE # 946)

Carwash: Manual operations where the driver parks and washes the vehicle in a stall, or an automated facility for the same purpose. (ITE # 947)

Movie Theater: Consists of audience seating, one or more screens and auditoriums, and a lobby and refreshment stand. Typically includes matinee showings. (ITE # 445)

Health Club: Health clubs are privately owned facilities that primarily focus on individual fitness or training. They generally offer exercise or dance classes, weightlifting, fitness and gymnastics equipments, spas, massage services, locker rooms and small restaurants or snack bars. These may also include ancillary facilities, such as swimming pools, whirlpools, saunas and tennis. (ITE # 492)

Racquet Club: Racquet clubs are privately owned facilities primarily catering to racquet sports, tennis, racquetball, or squash – indoor or outdoor. (ITE # 491)

Marina: A facility providing moorage for boats. (ITE # 420)

Commercial-Institutional

High School: High Schools serve students who have completed middle or junior high school. Both public and private high schools are included in this land use. (ITE # 530)

Elementary and Junior High School: These are facilities of education serving students attending kindergarten through students who have not yet entered high

school. These include public and private schools. Schools often provide bus services of varying length, depending upon the type of school and grade level. Elementary School and Junior high School are grouped together with common trip-making characteristics during the PM peak period. (ITE # 520)

University/College: Facilities of higher education including two-year, four-year and graduate-level institutions. (ITE # 550)

Church: A building providing public worship facilities. Generally houses as assembly hall or sanctuary, meeting rooms, classrooms, and occasionally dining facilities. (ITE # 560)

Hospital: A building or buildings designed for the medical, surgical diagnosis, treatment and housing of persons under the care of doctors and nurses. Rest homes, nursing homes, convalescent homes and clinics are not included. (ITE #610)

Commercial-Restaurant

Restaurant: An eating establishment, which sells prepared food or beverages and generally offers accommodations for consuming the food or beverage on the premises. Usually serves breakfast, lunch, and/or dinner; generally does not have a drive-up window. (ITE # 391)

Fast Food Restaurant: An eating establishment that offers quick food service and a limited menu of items. Food is generally served in disposable wrappings or containers, and may be consumed inside or outside the restaurant building. May have a drive-up window. (ITE # 933, 934)

Tavern: A tavern contains a bar where alcoholic beverages and snacks are served and possibly some type of entertainment such as music, television screens, video games, or pool tables. (ITE # 936)

Industrial

Light Industrial/High Technology: A facility where the primary activity is the conversion of raw materials or parts into finished products. Generally also have offices and associated functions. Typical uses are printing plants, material testing laboratories, bio-technology, medical instrumentation or supplies, communications and information technology, and computer hardware and software. (ITE # 110)

Industrial Park: Industrial parks are areas containing a number of industrial or related facilities. They are characterized by a mix of manufacturing, service and warehouse facilities with a wide variation in the proportion of each type of use from one location to another. Many industrial parks contain highly diversified facilities, some with a large number of small businesses and others with one or two dominant industries. Research centers are facilities or groups of facilities devoted nearly exclusively to research and development activities. While they may also contain offices and some light fabrication areas, the primary function is that of research and development. (ITE # 130)

Warehousing/Storage: Facilities that are primarily devoted to the storage of materials, including vehicles. They may also include office and maintenance areas. (ITE # 150)

Commercial-Retail

Shopping Center, general Retail: An integrated group of commercial establishments that is planned, developed, owned, or managed as a unit. On-site parking facilities are provided, and administrative office areas are usually included. (ITE # 820)

Automobile Parts Sales: A facility that specializes in the sale of automobile parts for do-it-yourself maintenance and repair. These facilities are not equipped for on-site vehicle repair. (ITE # 943)

Auto Care Center: An automobile care center houses numerous businesses that provide automobile-related services, such as repair and servicing, stereo installation and seat cover upholstery. (ITE # 942)

Car Sales (New and Used): Facilities are generally located as strip development along major arterial streets that already have a preponderance of commercial development. Generally included are auto services and parts sales along with a sometimes substantial used-car operation. Some dealerships also include leasing activities and truck sales and servicing. (ITE # 841)

Convenience Market: A use which combines retail food sales with fast foods or take-out food service; generally open long hours or 24 hours a day. (ITE # 851)

Discount Club: A store or warehouse where shoppers pay a membership fee in order to take advantage of discounted prices on a wide variety of items such as food, clothing, tires, and appliances; many items are sold in large quantities or bulk. (ITE # 861)

Electronics Superstore: A free-standing warehouse type facility with off-street parking. Generally offers a variety of customer services (televisions, compact disc and cassette tape players, compact discs and tapes, cameras, radios, videos, and general electronic accessories; possibly major home appliances) and centralized cashiering. (ITE # 863)

Free-Standing Discount Store: A free-standing store which offers a variety of customer services, centralized cashiering, and a wide range of products (not including groceries). They typically maintain long store hours seven days a week. (ITE # 815)

Furniture Store: Furniture stores specialize in the sale of furniture, and often, carpeting. The stores are generally large and include storage areas. (ITE # 890)

Hardware/Paint Store: A free-standing or attached store with off-street parking providing hardware and paints services. (ITE # 816)

Home Improvement Superstore: A free-standing ware house type facility (25,000-150,000 gsf) with off-street parking. Generally offers a variety of customer services (home improvements; lumber, tools, paint, lighting, wallpaper, kitchen and bathroom fixtures, lawn equipment, and garden equipment) and centralized cashiering. (ITE # 862)

Other Retail Sales: These developments are generally small strip shopping centers that contain a variety of retail shops and specialize in quality apparel, hard goods, and services, such as real estate offices, dance studios, florists, salons and small restaurants. (ITE # 814)

Nursery/Garden Center: A free-standing building with a yard of planting or landscape stock offered to the general public (i.e. not wholesale). May have greenhouses and offer landscaping services. Most have office, storage, and shipping facilities. (ITE # 817)

Pharmacy (with drive-through window): A pharmacy which sells prescriptions and non-prescription drugs, cosmetics, toiletries, medications, stationery, personal care products, limited food products, and general merchandise. Contain drive-through windows. (ITE # 881)

Quick Lubrication Vehicle Shop: A facility where the primary activity is to perform oil change services for vehicles. Automobile repair service is generally not provided. (ITE # 941)

Video Rental: A business specializing in the rental of home movies and video games. Typically maintain long store hours and are usually open seven days a week. (ITE # 896)

Supermarket: Retail store which sells a complete assortment of food, food preparation and wrapping materials, and household cleaning and servicing items. (ITE # 850)

Tire Store: A facility that provides sales and marketing of tires for automotive vehicles. Services typically include tire installation and repair, as well as other automotive maintenance or repair services and customer assistance. These stores generally do not contain large storage or warehouse areas. (ITE # 849)

Commercial-Office

General Office: An administrative office building houses one or more tenants and is the location where affairs of a business, commercial or industrial organization, professional person or firm are conducted. The building or buildings may be limited to one tenant, either the owner or lessee, or contain a mixture of tenants including professional services, insurance companies, investment brokers, and company headquarters. Services such as a bank or savings and loan, a restaurant or cafeteria, miscellaneous retail facilities, and fitness facilities for building tenants may also be included. (ITE # 710)

Medical Office/Clinic: A facility which provides diagnoses and outpatient care on a routine basis but which is unable to provide prolonged in-house medical/surgical care. A medical office is generally operated by either a single private physician/dentist or a group of doctors and/or dentist. (ITE # 720)

Appendix C. Traffic Impact Fee Rates and Assessments Comparisons with Cities and Counties

(updated 4/10/07)

Source: Mirai Associates, Inc.

Jurisdiction	Last Date Updated *	Cost per PM Peak Trip	Light Industry (75,000 SF)		Shopping Center (100,000 SF)		General Office (75,000 SF)		Single Family Home	
			Rate	Assessment	Rate	Assessment	Rate	Assessment	Rate	Assessment
(* currently being updated)										
Cities										
Kirkland-Current (50%)		\$877	\$1.37	\$102,750	\$1.52	\$152,000	\$2.73	\$204,750	\$966	\$966
Kirkland- Proposed		\$3,398	\$5.29	\$396,750	\$4.02	\$402,000	\$6.64	\$498,000	\$3,432	\$3,432
Auburn	Oct-06	\$2,663	\$4.87	\$365,250	\$4.89	\$489,000	\$6.07	\$455,250	\$3,138	\$3,138
Sumner	Oct-06	\$1,415	\$1.54	\$115,500	\$2.95	\$295,000	\$1.78	\$133,500	\$1,177	\$1,177
Puyallup	Jun-06	\$2,980		NS		NS		NS	\$3,038	\$3,038
Bonney Lake	NS	\$3,040		NS		NS		NS	\$3,100	\$3,100
Maple Valley	Oct-06 *	\$4,906	\$4.81	\$360,750	\$11.97	\$1,197,000	\$6.57	\$492,750	\$4,906	\$4,906
Bellevue - Low	Jan-05 *	\$329	\$0.47	\$35,250	\$0.57	\$57,000	\$0.74	\$55,500	\$332	\$332
Bellevue - High	Jan-05 *	\$507	\$0.72	\$54,000	\$0.87	\$87,000	\$1.33	\$99,750	\$512	\$512
Bothell	Jan-02 *	\$2,191	\$2.96	\$222,000	\$3.30	\$330,000	\$5.92	\$444,000	\$2,093	\$2,093
Buckley	NS	\$2,750		NS		NS		NS	\$2,093	\$2,093
Covington-Low	Dec-05	\$986		NS		NS		NS	\$1,100	\$1,100
Covington- High	Dec-05	\$6,812		NS		NS		NS	\$7,500	\$7,500
Edmonds	NS	NS		NS	\$0.93	\$93,000	\$1.81	\$135,750	\$841	\$841
Issaquah	Dec-06	\$4,839		NS	\$5.99	\$599,000	\$3.24	\$243,000	\$2,444	\$2,444
Kenmore	Jan-07 *	\$2,171	\$3.38	\$253,500	\$2.64	\$264,000	\$5.14	\$385,500	\$2,390	\$2,390
Olympia ^a	Jan-03	\$1,483	\$2.17	\$162,750	\$2.75	\$275,000	\$6.15	\$461,250	\$1,747	\$1,747
Redmond - Low	Aug-06 *	d	\$2.11	\$158,250	\$2.44	\$244,000	\$3.86	\$289,500	\$1,490	\$1,490
Redmond - High	Aug-06 *	d	\$7.82	\$586,500	\$9.03	\$903,000	\$14.35	\$1,076,250	\$5,525	\$5,525
Tukwila- Low	Jan-06	\$807	\$1.09	\$81,750	\$1.22	\$122,000	\$2.18	\$163,500	\$771	\$771.08
Tukwila-High	Jan-06	\$1,425	\$1.92	\$144,000	\$2.15	\$215,000	\$3.85	\$288,750	\$1,361	\$1,361.18
Woodinville- Low	Sep-04	d	\$1.29	\$96,750	\$2.97	\$297,000	\$2.23	\$167,250	\$1,489	\$1,489
Woodinville- High	Sep-04	d	\$2.44	\$183,000	\$4.25	\$425,000	\$4.22	\$316,500	\$3,098	\$3,098
Sammamish	Nov-06	\$ 14,707	\$17.58	\$1,318,500	\$23.71	\$2,371,000	\$26.73	\$2,004,750	\$14,854	\$14,854
Counties										
Pierce County - Low	Jan-07	\$36 ^c	\$0.00 to \$0.01 ^e	\$0 to \$750	\$0.04	\$4,000	\$0.04	\$3,000	\$34	\$34
Pierce County - Median	Jan-07	\$1,600 ^c	\$0.14 to \$0.21 ^e	\$10,500 to \$15,750	\$1.87	\$187,000	\$1.83	\$137,250	\$1,527	\$1,527
Pierce County - High	Jan-07	\$3,450 ^c	\$0.36 to \$0.54 ^e	\$27,000 to \$40,500	\$4.03	\$403,000	\$3.94	\$295,500	\$3,293	\$3,293
Clark County- Low		\$1,750	\$1.04	\$78,000	\$3.32	\$332,000	\$2.32	\$174,000	\$1,424	\$1,424
Clark County - High		\$3,280	\$1.94	\$145,500	\$6.23	\$623,000	\$4.35	\$326,250	\$2,668	\$2,668
King County	Jun-05	b	b	NS	b	NS	b	NS	Varies	
Kitsap County	Mar-05	\$520 ^c	\$0.36	\$27,000	\$1.84	\$184,000	\$0.66	\$49,500	\$520	\$520
Snohomish County^c										
Inside UGA - Low	Aug-06	\$1,290 ^c	\$1.11	\$83,250	\$3.39	\$339,000	\$1.73	\$129,750	\$1,535	\$1,535
Inside UGA - High	Aug-06	\$3,090 ^c	\$2.66	\$199,500	\$8.13	\$813,000	\$4.14	\$310,500	\$3,676	\$3,676
Outside UGA - Low	Aug-06	\$1,420 ^c	\$1.22	\$91,500	\$3.73	\$373,000	\$1.90	\$142,500	\$1,677	\$1,677
Outside UGA - High	Aug-06	\$3,430 ^c	\$2.95	\$221,250	\$9.02	\$902,000	\$4.60	\$345,000	\$4,010	\$4,010

NOTES:

- SF = square foot
- NS = not specified
- ^a Does not include downtown fee rates
- ^b Case-by-case analysis for commercial fees. No rate published.
- ^c Daily Rates multiplied by 10 to estimate peak hour rates
- ^d Cost is per VMT, not trips
- ^e Rates for 85% and 90% exemption adopted in Pierce County