

City of Kent



Rate Study for
Transportation Impact Fees



May 2010



Prepared by:



FEHR & PEERS

11410 NE 122nd Way
Suite 320
Kirkland, WA 98034

and

Henderson,
Young &
Company

8060 165th Ave NE
Suite 220
Redmond, WA 98052

Rate Study for Transportation Impact Fees



Prepared for:
The City of Kent
Public Works Department

400 W Gowe Street
Kent, Washington

Prepared by:



11410 NE 122nd Way, Suite 320
Kirkland, Washington 98034-6927
(425) 820-0100
May 2010



INTRODUCTION

This report summarizes the policy and technical development of a Transportation Impact Fee program for the City of Kent, Washington. The following sections describe the impact fee program methodology, the analyses performed, and the resulting recommendations.

DEFINITION OF IMPACT FEES

Impact fees are a broad category of charges on new development assessed to pay for capital improvements necessitated by new development (e.g., parks, schools, streets and roads, etc.). Transportation impact fees are collected to fund improvements that add capacity to the transportation system to accommodate the travel demand added by new development. The Revised Code of Washington (RCW 82.02.050) defines the legislation as intended to ensure that adequate facilities are available to serve new growth; to establish standards by which new growth and development pay a proportionate share of the cost of new facilities needed to serve new growth and development; and to ensure that impact fees are imposed through established procedures and criteria so that specific developments do not pay arbitrary fees or duplicative fees for the same impact.

LEGAL BASIS

The primary enabling mechanism for imposing impact fees in Washington is the Growth Management Act (GMA). Prior to the passage of the GMA, local agencies primarily relied on the State Environmental Policy Act (SEPA) process to require developers to fund mitigation projects necessitated by new development.

The GMA, passed in 1990, modified the portion of RCW 82.05.050 regarding impact fees and specifically authorized the use of impact fees for areas planning under the Growth Management Act. The GMA 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 GMA allows impact fees for 'streets and roads'. For purposes of this rate study, the term 'transportation' means 'street and roads' as identified in the GMA.

For a city to impose GMA impact fees, the following specific provisions are required:

- The city must have an ordinance authorizing impact fees;
- Fees may apply only to improvements identified in a Capital Facilities Plan;
- The agency must establish one or more service areas for fees;



Rate Study for Transportation Impact Fees

- A formula or other method for calculating impact fees must be established;
- The fees cannot be used to finance the portion of improvements needed to pay for existing capacity deficiencies. (Note: the fees can be used to recoup the cost of improvements already made to address the needs of future development);
- The fees may not be arbitrary or duplicative;
- The fees must be earmarked specifically and be retained in special interest-bearing accounts;
- Fees may be paid under protest; and,
- Fees not expended within six years must be refunded with interest.

A sound accounting system is therefore important to ensure that the impact fees collected are assigned to the appropriate improvement projects and the developer is not charged twice for the same improvements.

GUIDING PRINCIPLES

A set of guiding principles provided consistent direction for development of the transportation impact fee program. The program should:

- Be legally and technically defensible (provide a nexus to impact);
- Be financially constrained;
- Be fair, consistent and predictable in its development and application;
- Have reasonable rates based on improvements necessary to accommodate new growth and development under the Comprehensive Plan;
- Be simple to administer and not preclude other requirements of SEPA such as safety issues, access improvements, etc.; and,
- Address multi-jurisdictional issues as much as practicable.

These guiding principles were used to test alternative ideas and select an appropriate method of calculating impact fees for the City and Annexation Areas.

IMPACT FEE ANALYSIS

The impact fee structure for the City of Kent was designed to determine the fair share of transportation improvement costs that may be charged to new developments.



Rate Study for Transportation Impact Fees

The flow of steps involved in the Kent impact fee process is shown in **Figure 1**. The starting point for the impact fee structure was the impact fee project improvement list, composed of selected transportation capacity projects from the City’s Transportation Element (adopted June 2008). This list was updated in May 2010 to account for changes in project costs and schedule assumptions. This updated list of projects was then analyzed to determine what proportion of need is due to existing deficiencies.

Cost allocation was the next step in the process. Eligible project costs were distributed either within the City and Annexation Areas or to external areas. Travel modeling and land use data were provided by the City’s travel demand model.

The next component calculated the “cost per trip” by dividing the total cost of growth projects by the number of new trips forecast in the study area. The final component adjusted the “cost per trip” information to prepare a detailed impact fee schedule for Kent. The fee schedule shows fees as dollars per unit of development for different land use categories.

IMPACT FEE PROJECT LIST

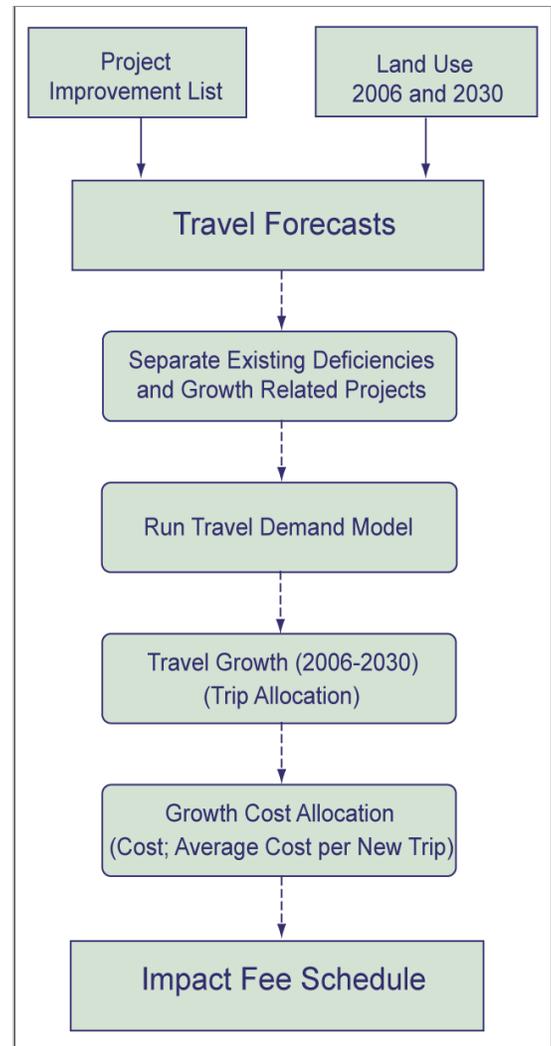
Washington State law (RCW 82.02.050) specifies that Transportation Impact Fees are to be spent on “system improvements.” System improvements can include physical or operational changes to existing streets as well as new street connections that are built in one location to benefit projected needs at another location.

During the development of the City's Transportation Master Plan and Comprehensive Plan Element, the City identified street and road projects needed by 2030 to meet the adopted Level of Service (LOS) standards. These capital projects form the basis for the City's impact fee project list.

The street and road projects were adopted in June 2008 within the Transportation Element of the Comprehensive Plan. The Transportation Element is specified as the source of road and street projects in the Capital Facilities Plan Element.

The impact fee project list, shown in **Table 1**, includes 28 projects. These projects, mapped in **Figure 2**, form the basis for the City's transportation funding program. The total project list equals \$388.9 Million (2010 dollars).

Figure 1. Impact Fee Process





Rate Study for Transportation Impact Fees

Table 1. List of Transportation Projects

Project Type	TMP ID	Group #	Project Description	Total Cost (2010 \$)
Intersection Improvement	I-2	7	S 196th Street/80th Avenue S - Change intersection phasing and lane approaches.	\$250,000
	I-12	8	Smith St/Lincoln Ave (Smart Growth Initiative) - Add eastbound left turn pocket including the construction of new traffic signal.	\$1,175,000
	I-14	8	Smith Street/Central Avenue - Revise southbound and northbound turn lane assignment.	\$20,000
	I-15	8	Meeker St/Washington Ave - Modify signal phasing. Add eastbound and westbound right turn pockets.	\$780,000
	I-19	4	Kent-Kangley Rd/108th Avenue SE -Add eastbound and westbound dual left turn lanes. Add eastbound right turn pocket. Change northbound right turn phasing.	\$1,410,000
	I-20	2	SE 256th Street and 132nd Ave SE - Extend northbound left, southbound left, and westbound left turn pockets. Construct new eastbound and southbound right turn lanes.	\$525,000
	I-22	1	S 272nd St/Military Rd -Add a southbound through lane at intersection. Add northbound dual left turn lanes.	\$1,540,000
	New Street	N-2	7	72nd Ave S (S 200th St to S 196th St) - Extend roadway to connect to S 196th St.
N-3		5	S 224th St (84th Ave S to 104th Ave SE (Benson Rd-SR515) - Extend roadway to connect to E Valley Hwy and widen existing road to 3-5 lanes	\$30,500,000
N-5		5	108th Ave SE (SE Kent Kangley Rd (SR 516) to SE 256th St) - Extend roadway connection to SE 256th St.	\$3,400,000
Railroad Grade Separation	R-1	11	S 212th St/Union Pacific Railroad - Grade Separation.	\$30,000,000
	R-2	11	S 212th St/Burlington Northern Santa Fe Railroad - Grade Separation.	\$35,000,000
	R-3	11	S 228th St / Union Pacific Railroad - Grade Separation.	\$25,000,000
	R-5	11	Willis St (SR 516)/Union Pacific Railroad - Grade Separation.	\$20,000,000
	R-6	11	Willis Street (SR 516)/Burlington Northern Santa Fe Railroad - Grade Separation.	\$27,000,000



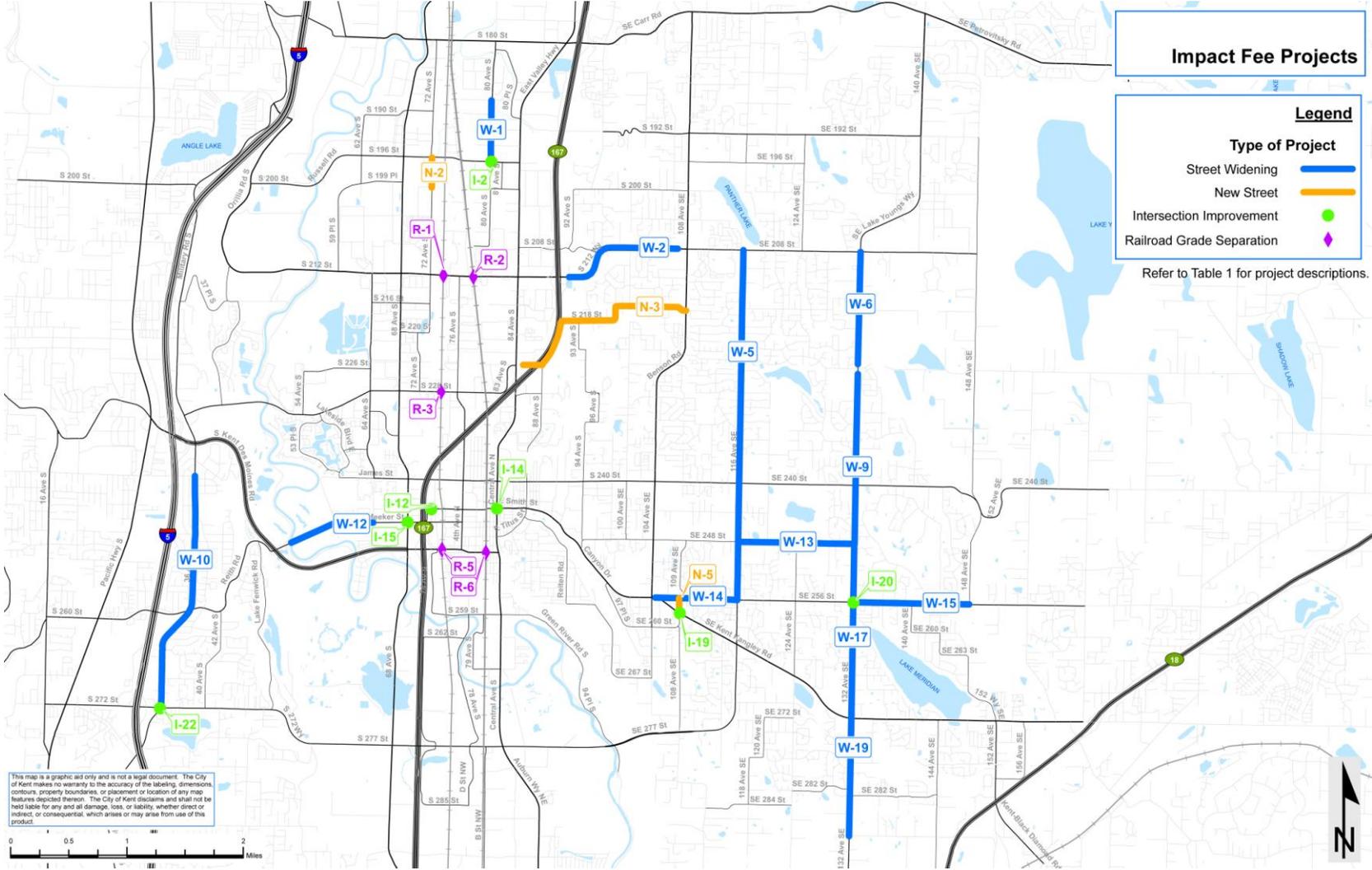
Rate Study for Transportation Impact Fees

Project Type	TMP ID	Group #	Project Description	Total Cost (2010 \$)
Street Widening	W-1	7	80th Ave S Widening (S 196th St to S 188th St) - Widen to 5 lanes.	\$5,500,000
	W-2	5	S 212th/208th Street (SR 167 to 108th Avenue SE) -Widen to 5-6 lanes	\$12,100,000
	W-5A	3	116th Ave SE (SE 240th St to SE 256th St) Phase I- Widen to 5 lanes with bike lanes.	\$18,200,000
	W-5B	3	116th Ave SE (SE 208 St to 240th St) Phase II- Widen to 5 lanes with bike lanes.	\$36,500,000
	W-6	2	132nd Ave SE (SE 224th St to SE 208th St)- Phase IV Widen to 5 lanes with bike lanes	\$14,600,000
	W-9	2	132nd Ave SE-Phase III (SE 248th St to SE 224th St) - Widen to 5 lanes with bike lanes.	\$18,700,000
	W-10	1	Military Rd S (S 272nd St to S 240th St) - Widen to provide a center turn lane, bike lanes and sidewalks.	\$18,500,000
	W-12	10	W Meeker St Phase I (64th Ave S to Green River Bridge) - Widen to 5 lanes.	\$7,200,000
	W-13	4	SE 248th St (116th Ave SE to 132nd Ave SE) - Construct a 3 lane roadway. TIP starts at 109th Ave	\$13,300,000
	W-14	4	SE 256th St-Phase II (SR 516 (Kent Kangley Rd) to 116th Ave SE) - Construct a 5 lane roadway with bike lanes.	\$7,000,000
	W-15	2	SE 256th St-Phase III (132nd Ave SE to 148th Ave SE) - Widen to 5 lanes with bike lanes.	\$19,500,000
	W-17	2	132nd Ave SE-Phase II (Kent Kangley Rd (SR 516) to SE 248th St) - Widen to 5 lanes with bike lanes.	\$25,100,000
	W-19	2	132nd Ave SE - Phase I (SE 288th St to Kent Kangley Rd (SR 516)) - Widen to 5 lanes with bike lanes.	\$14,800,000
Total Cost				\$388,850,000

TMP # = Transportation Master Plan Number

Group # = Travel Model Select Link Group

Figure 2. Impact Fee Projects





DEFICIENCY ANALYSIS

RCW 82.02.050(4)(a) requires that the capital facilities element of a jurisdiction's comprehensive plan identify "deficiencies in public facilities serving existing development". Future development cannot be held responsible for the portion of added capacity needed to serve existing development. The following section describes the deficiency methodology used for the City of Kent.

Level of Service

To adequately assess both the extent of the existing road deficiencies (if any) and the magnitude of the future needs on city roads, a standard evaluation criterion was developed. The criterion was selected to be uniform, consistent, and easily applied to the available road traffic volume data.

Transportation planners and engineers use the term "level of service" (LOS) to measure the operational performance of a transportation facility. For roads and intersections, this measure considers the perception by motorists and passengers in terms of speed, travel time, freedom to maneuver, traffic interruptions and delays, comfort and convenience. Levels of service are given letter designations, from A to F, with LOS A representing the best operating conditions (free flow, little delay) and LOS F the worst (congestion, long delays). Generally, LOS A and B are good, LOS C and D are moderate, and LOS E and F represent congested conditions.

The City of Kent used roadway corridors to evaluate the level of service. The methodology calculates the LOS operation for key corridor intersections (in seconds of delay) and then develops a corridor-wide average based upon a weighting of the corridor intersection volumes. This method provides a "corridor-wide" result, allowing some intersections to operate at a congested LOS as long as the overall corridor operation is maintained.

Level of Service Corridors

For the LOS analysis, the City chose 16 corridors including the downtown street system, which was represented as a zone. The corridors represent the primary north-south and east-west travel routes within the City. Non-Kent corridors, such as I-5 and SR167 were not included in the evaluation. Since traffic flows along multiple streets in the downtown grid, the downtown area of Kent is treated as a zone rather than a corridor. The corridors and their limits are described in the Transportation Element of the Comprehensive Plan.¹

¹ For the analysis of the City's roadway system during the PM peak hour Synchro 6.14 software was used to calculate the intersection level of service. This software considers the traffic volumes, signal timing and phasing, presence of pedestrians and transit and topographic features to estimate the LOS operation of the intersections. The evening commute traffic conditions were analyzed at each corridor intersection to calculate the existing PM peak hour LOS conditions. The weighted average LOS for each corridor in the analysis was calculated using the LOS results of each intersection.



Rate Study for Transportation Impact Fees

The City has set the level of service (LOS) standard to require that most corridors operate at LOS E or better during the PM peak hour. ² Corridors that operate below this adopted standard are considered deficient. The City allows two locations, Pacific Highway south (SR 99) and downtown Kent to operate at LOS F. Pacific Highway has an LOS F standard since it is largely outside of the City’s control and is designated as a Highway of Statewide Significance. The City recently improved SR 99 and further widening is unlikely. The operation of SR 99 is highly dependent upon travel conditions along I-5.

Downtown Kent is also designated with an LOS F standard. The City considers the downtown street system to be largely complete and few street capacity increases are available. The City also recognizes that traffic conditions in downtown Kent are heavily influenced by conditions on the State highways, SR 167 and SR 18. City policies encourage non-auto modes such as transit, pedestrian, and bicycle for travel within downtown Kent. **Table 2** defines the corridors and identifies the impact fee projects located within each corridor.

Table 2. Corridors for LOS Analysis

Corridor		From	To	List of Impact Fee Projects within the LOS Corridor ¹
ID	Area			
1	S 196th St/SE 192nd St Corridor	W Valley Highway	SR 515 (Benson)	I-2, N-2*, W-1*
2	S 212th St/S 208th St	42nd Ave S	132nd Ave SE	R-1, R-2, W-2
3	S 224th St/S 228th St	SR 516/Military Road	S 228th St/ 84th Ave S	R-3
4	James Street/SE 240th St	64th Ave S	132nd Ave SE	W-5*, W-9*
5	S 260th Street/ Reith Road/ W Meeker Street	SR 99	Washington Ave	W-10*, W-12, I-15
6	Smith St/ Canyon Drive/ 256th St / Kent-Kangley Rd	Jason Avenue	152nd Way SE	I-14, W-14*, W-19*
7	S 256th Street	SR 515	132nd Ave SE	W-14, W-15, N-5*, W-5*, W-9*, W-17*
8	S 272nd Street	SR 99	Military Road	I-22, W-10*
9	Pacific Highway S	S 240th Street	S 272nd Street	None
10	Military Road	231st Street	S 272nd Street	I-22, W-10
11	64th Avenue S	S 212th Street	Meeker Street	None
12	Washington Ave/ 68th Ave S/ W Valley Hwy	S 196th Street	Meeker Street	I-15
13	Central Ave/ 84th Ave S	S 196th Street	James Street	None
14	SR 515/Benson Ave	SE 192nd Street	SE 256th Street	N-3*, W-14*
15	116th Ave SE	SE 208th Street	Kent-Kangley Road	W-5, W-13*, W-14*

² The City’s PM peak hour occurs between 4:30 and 5:30 pm.



Rate Study for Transportation Impact Fees

Corridor		From	To	List of Impact Fee Projects within the LOS Corridor ¹
ID	Area			
16	132nd Ave SE	SE 208th Street	Kent-Kangley Road	I-20, W-6, W-9, W-17, W-19, W-13*, W-15*
17	Downtown Area	4th Ave N to E Titus St	James St to W Willis St	I-12, I-14, R-5, R-6

1 - TMP Project Number

* - Crosses another TMP Project at the intersection

Deficiency Analysis Results

In order to calculate deficiencies, the Transportation Master Plan provided data on existing level of service (LOS) for each corridor, as shown in **Table 3**. The analysis showed that the LOS of each corridor is currently within the City's adopted standard, except for corridor #8.

The deficiency method is based on the amount of excess 'existing traffic' that exceeds the current capacity of the corridor. The formula for determining the existing deficiency percentage of a corridor follows:

$$\text{Existing Deficiency Percentage} = \frac{[\text{existing corridor delay} - \text{LOS standard delay}]}{[\text{existing corridor delay} - \text{improved corridor delay}]}$$

The 'existing corridor delay' is calculated using existing traffic counts and existing street geometrics. The 'LOS standard delay' is the maximum delay for the adopted LOS standard, based upon the Highway Capacity Manual. The 'improved corridor delay' is calculated using existing traffic counts and the street geometrics that include the impact fee projects in that corridor.

The existing deficiency percentage for Corridor # 8 (S 272nd Street) would be calculated as follows:

$$\text{Existing Deficiency Percentage} = \frac{[98 \text{ seconds (existing)} - 80 \text{ seconds (standard)}]}{[98 \text{ seconds} - 36 \text{ seconds (with improvement)}]}$$

$$\text{Existing Deficiency Percentage} = [98-80] \div [98-36] = 18/62 = 29\%$$

As a result, 29 percent of the street improvement capacity in this corridor is attributed to an existing deficiency. The 29 percent deficiency was applied to the four projects within corridor # 8, as follows:

TMP #	Project Description	Total Cost Estimate	Existing Deficiency Percent	Existing Deficient Amount
W-10	Military Road Widening – S272nd Street to S 240th Street	\$ 18,500,000	29%	\$ 5,365,000
I-22	S 272nd Street & Military Road	1,540,000	29%	446,600
TOTAL		\$20,040,000		\$5,811,600



Rate Study for Transportation Impact Fees

Table 3. Level of Service Deficiency Analysis

Corridor		From	To	LOS Standard	LOS 2006	% Deficient
ID	Area					
1	S 196th St/SE 192nd St Corridor	W Valley Highway	SR 515 (Benson)	E	D	0%
2	S 212th St/S 208th St	42nd Ave S	132nd Ave SE	E	C	0%
3	S 224th St/S 228th St	SR 516/Military Road	S 228th St/ 84th Ave S	E	D	0%
4	James Street/SE 240th St	64th Ave S	132nd Ave SE	E	D	0%
5	S 260th Street/ Reith Road/ W Meeker Street	SR 99	Washington Ave	E	D	0%
6	Smith St/ Canyon Drive/ 256th St / Kent-Kangley Rd	Jason Avenue	152nd Way SE	E	E	0%
7	S 256th Street	SR 515	132nd Ave SE	E	E	0%
8	S 272nd Street	SR 99	Military Road	E	F	29%
9	Pacific Highway S	S 240th Street	S 272nd Sreet	F	E	0%
10	Military Road	231st Street	S 272nd Street	E	E	0%
11	64th Avenue S	S 212th Street	Meeker Street	E	C	0%
12	Washington Ave/ 68th Ave S/ W Valley Hwy	S 196th Street	Meeker Street	E	D	0%
13	Central Ave/ 84th Ave S	S 196th Street	James Street	E	D	0%
14	SR 515/Benson Ave	SE 192nd Street	SE 256th Street	E	E	0%
15	116th Ave SE	SE 208th Street	Kent-Kangley Road	E	D	0%
16	132nd Ave SE	SE 208th Street	Kent-Kangley Road	E	D	0%
17	Downtown Area	4th Ave N to E Titus St	James St to W Willis St	F	E	0%

TRAVEL GROWTH

The Kent TMP and the Transportation Element used travel forecasts to 2030 for evaluating transportation needs. The City also selected 2030 as a realistic time horizon for the impact fee program. Land use growth was input to the City’s travel demand model.³ The model converted the land use data into estimates of PM peak hour vehicle trips. Using this

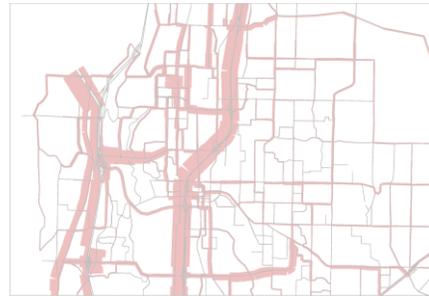
³ Models are a tool used to forecast travel demand for local, regional and countywide trips. The regional planning organization, the PSRC, has developed a regional model for the Puget Sound Region that was customized for the City of Kent, is explained in the TMP.

methodology, the growth estimates resulted in an increase of 13,876 PM peak hour vehicle trip ends⁴ originating within or destined to the City and Annexation Areas between 2007 and 2030. Further details of the travel demand process and results are provided within the adopted Transportation Element.

HOW TRAVEL DEMAND FORECASTS WERE USED

The City's travel demand model was used in this study to prepare traffic forecasts. The model generates "PM peak hour" vehicle trip-ends based on housing and employment data. Then the model distributes the trip-ends between different zones within the region. Finally, the model assigns the trips to the roadway network to predict traffic volumes. A "select link" assignment procedure provided the origin and destination information for each vehicle trip traveling through a particular improvement project group.

Future Traffic Growth



Source: City of Kent Travel Model (Fehr & Peers). Note: Width of line indicates greater volumes.

COST ALLOCATION

The City's impact fee analysis is based on a methodology that distinguishes between roadway infrastructure 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).

Not all growth-related costs can be attributed to growth within the City of Kent and Annexation Areas. 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 Kent, but do not have any origins or destinations internal to Kent, were not allocated to Kent zones. That is, development in Kent is not being charged for growth trips passing "through" the City. This "through traffic" amount will have to be covered by other revenues. A portion of these

SINGLE SERVICE AREA

The Impact Fee Program is based on a single service area that includes the City and the Annexation Areas. The analyses using the city's travel demand model indicate that trips generated in one part of the city are likely to travel throughout the city, impacting many of the identified projects. The estimated average development trip length of 3.9 miles is consistent with the geographic range within the city. A citywide impact fee area provides a consistent cost applied to all new development

⁴ 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 an given land use, consistent with trip generation formulas used by the Institute of Transportation Engineers.



Rate Study for Transportation Impact Fees

revenues will come from development occurring in King County, which has an interagency agreement with the city to pay reciprocal impact fees.

Figure 3 summarizes the cost allocation results. The total cost of the projects on the impact fee list is \$388.9 million. Of this amount, the City has identified \$0.2 million of growth-committed funding and \$5.8 million attributable to an existing deficiency. The remaining \$382.8 million has been split into 'city growth'⁵ and 'outside city growth' components using the City's travel model data. The details of this calculation are shown in **Appendix A**. Using these data, the average percent of city growth responsibility equals 49 percent. The city growth percentage, applied to the \$382.8 million needed funds, yields an amount equal to \$188.9 million. This is the amount that could be charged to new development using impact fees. The remaining \$193.9 million would need to be obtained from local, federal, state or other grant resources as detailed in the TMP. Note that the impact fees are expected to be collected over a 20-year period.

The final step in the cost allocation process dealt with calculating the "cost per new trip" within Kent, derived by dividing the total project cost by the total number of new PM peak hour trip ends. The analysis produced the following results:

Impact Fee Costs	\$188,908,794
Divide by:	
New PM Peak Hour Trips	÷ 13,876
Equals:	
Cost-per-New-Trip	\$13,614

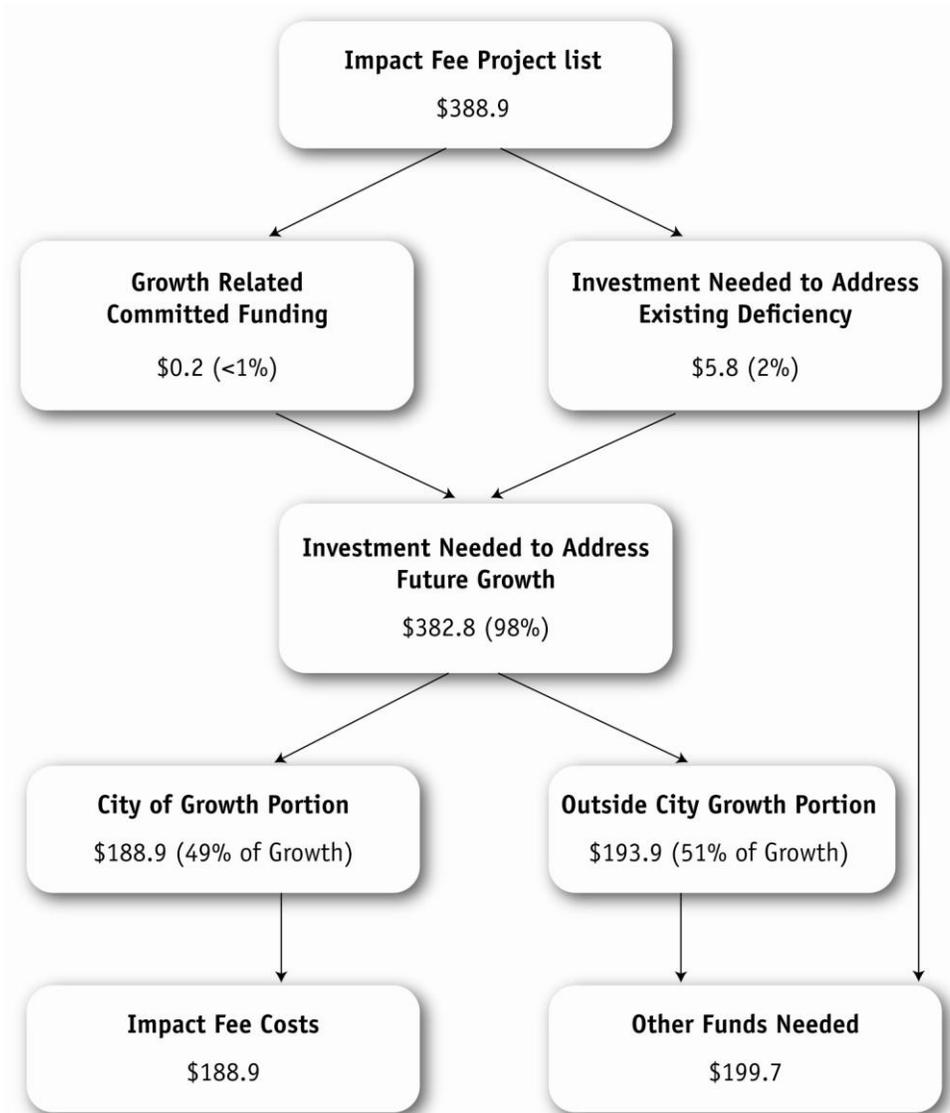
The \$13,614 per trip rate reflects the updated impact fee project list and cost estimates. The fee schedule is anticipated to pay for a higher proportion of project costs, resulting in a 20-year fee collection of approximately \$188.9 million.

⁵ City growth includes both the City Limits and Annexation Areas



Rate Study for Transportation Impact Fees

Figure 3. Impact Fee Cost Allocation (2008 – 2020)



Cost Allocation Scenarios

The proposed impact fee program is part of the comprehensive transportation funding program adopted by Council during the adoption of the Transportation Master Plan (TMP). The impact fee rates and revenues shown in Figure 3 represent the maximum levels that the city could charge to meet GMA requirements. Impact fee rates lower than these amounts could be adopted, resulting in lower impact fee revenues and a need to secure more funds from other sources within the funding program.



Rate Study for Transportation Impact Fees

Table 4 documents four potential (4) impact fee funding scenarios along with ranges of funds needed from other funding sources. These scenarios are illustrative only, since the mix of funding sources can vary substantially. The following four scenarios assume varying impact fee rates as a percentage of the maximum eligible fee:

1. Maximum allowable = 100% of maximum fee
2. 67% of maximum fee
3. 50% of maximum fee
4. 33% of maximum fee

Table 4. Transportation Impact Fee Scenarios

Revenue/Cost Component	Percent of Maximum Eligible Fees			
	33%	50%	67%	100%
Impact Fee Cost Per Trip End	\$4,493	\$6,807	\$9,121	\$13,614
Approximate Impact Fee Revenues (2010-2030) \$ in Millions	\$62.3	\$94.5	\$126.6	\$188.9
(Grade Separation Portion of Revenues)	(\$22.3)	(\$33.8)	(\$45.3)	(\$67.6)
Total Funds Needed For Impact Fee Projects	\$388.9	\$388.9	\$388.9	\$388.9
Growth-Related Committed Funding	\$0.2	\$0.2	\$0.2	\$0.2
Other Funds Required	\$326.4	\$294.2	\$262.1	\$199.8

Within these scenarios, transportation impact fees could pay between 16 and 49 percent of the total streets capital needs. The magnitude of impact fees would dictate which other sources of funding would be needed and the magnitude of those funds. Various funding sources are available to address those needs, as described in Chapter 9 of the Transportation Master Plan.

IMPACT FEE SCHEDULE

The impact fee schedule was developed by adjusting the "cost per trip" 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 in which fees are represented as dollars per unit for each land use category. **Table 5** shows the various components of the fee schedule. 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* (8th 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.⁶

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 Kent. 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 in miles. The average new trip length estimated for Kent was 3.9 miles based upon the current mix of land use types within the City.

⁶ Trip Generation Sources: ITE *Trip Generation* (8th Edition); ITE *Trip Generation Handbook* (March 2001); *Pinellas County (FL) Impact Fee Study* (1991), *Osceola County (FL), Alternative Traffic Generation Rate Study* (2004), *Polk County (FL) Transportation Impact Fee Study* (2005).



Rate Study for Transportation Impact Fees

Table 5. Components of Impact Fee Schedule

Land Use	ITE Land Use Code	Unit of Measure	Basic Trip Rate	New Trip %	New Trip Rate *	Avg. Trip Length	Trip Length Adjustment	Impact Fee Rate
Cost Per Trip End						3.9		\$ 13,614
Residential								
Single Family (Detached)	210	dwelling	1.01	100%	1.01	3.50	0.90	\$12,339.80
Multi-Family	220, 221, 230, 233	dwelling	0.62	100%	0.62	3.70	0.95	\$8,007.78
Senior Housing	251	dwelling	0.27	100%	0.27	2.80	0.72	\$2,639.01
Mobile Home in MH Park	240	dwelling	0.59	100%	0.59	2.80	0.72	\$5,766.72
Commercial - Services								
Drive-in Bank	912	sf/GFA	25.82	60%	15.49	1.50	0.38	\$81.12
Hotel	310	room	0.59	100%	0.59	4.00	1.03	\$8,238.17
Motel	320	room	0.47	100%	0.47	4.00	1.03	6562.61
Day Care Center	565	sf/GFA	12.46	75%	9.35	2.00	0.51	\$65.24
Library	590	sf/GFA	7.3	75%	5.48	1.70	0.44	\$32.49
Post Office	732	sf/GFA	11.12	75%	8.34	1.70	0.44	\$49.49
Service Station	944	VFP	13.87	40%	5.55	1.70	0.44	\$32,923.34
Service Station w/minimart	945	sf/GFA	97.08	30%	29.12	1.70	0.44	\$172.83
Auto Care Center	942	sf/GLA	3.38	70%	2.37	2.20	0.56	\$18.17
Movie Theater	444, 445	seat	0.07	85%	0.06	2.30	0.59	\$477.71
Health Club	492, 493	sf/GFA	3.53	75%	2.65	3.10	0.79	\$28.65
Commercial - Institutional								
Elementary School	520	sf/GFA	1.21	80%	0.97	1.70	0.44	\$5.75
Middle/Jr High School	522	sf/GFA	1.19	80%	0.95	2.70	0.69	\$8.97
High School	530	sf/GFA	0.97	80%	0.78	3.70	0.95	\$10.02
Assisted Living, Nursing Home	254, 620	bed	0.22	100%	0.22	2.80	0.72	\$2,150.30
Church	560	sf/GFA	0.55	100%	0.55	3.70	0.95	\$7.10
Hospital	610	sf/GFA	1.14	80%	0.91	5.00	1.28	\$15.92
Commercial - Restaurant								
Restaurant	931	sf/GFA	7.49	80%	5.99	3.40	0.87	\$71.12
High Turnover Restaurant	932	sf/GFA	11.15	80%	8.92	2.30	0.59	\$71.62
Fast Food Restaurant	934	sf/GFA	33.84	50%	16.92	2.00	0.51	\$118.13
Espresso w/drive thru	938	sf/GFA	75.00	20%	15.00	2.00	0.51	\$104.72
Commercial - Retail Shopping								
Shopping Center	820	sf/GLA	3.73	70%	2.61	2.10	0.54	\$19.14
Supermarket	850	sf/GFA	10.50	75%	7.88	2.10	0.54	\$57.73
Convenience Market	851	sf/GFA	52.41	45%	23.58	1.30	0.33	\$107.03
Free Standing Discount Store	813, 815, 857, 863, 864	sf/GFA	4.61	70%	3.23	2.10	0.54	\$23.66
Hardware/Paint Store	816	sf/GFA	5.05	40%	2.02	1.70	0.44	\$11.99



Rate Study for Transportation Impact Fees

Land Use	ITE Land Use Code	Unit of Measure	Basic Trip Rate	New Trip %	New Trip Rate *	Avg. Trip Length	Trip Length Adjustment	Impact Fee Rate
Specialty Retail Center	814	sf/GFA	2.71	50%	1.36	1.70	0.44	\$8.04
Furniture Store	890	sf/GFA	0.45	60%	0.27	1.70	0.44	\$1.60
Home Improvement Superstore	862	sq ft/GFA	2.37	70%	1.66	2.10	0.54	\$12.16
Pharmacy(with Drive Through)	881	sq ft/GFA	10.35	50%	5.18	1.7	0.44	\$30.71
Car Sales -New	841	sf/GFA	2.59	80%	2.07	4.60	1.18	\$33.27
Car Sales -New/ Used	NA	Space ¹	.28	80%	0.22	4.60	1.18	\$3,596
Commercial - Office								
General Office	710, 715, 750	sf/GFA	1.49	90%	1.34	5.10	1.31	\$23.87
Medical Office	720	sf/GFA	3.46	75%	2.60	4.80	1.23	\$43.48
Industrial								
Light Industry/Manufacturing	110, 140	sf/GFA	0.97	100%	0.97	5.10	1.31	\$17.27
Heavy Industry	120	sf/GFA	0.68	100%	0.68	5.10	1.31	\$12.11
Industrial Park	130	sf/GFA	0.86	100%	0.86	5.10	1.31	\$15.31
Mini-Warehouse/Storage	151	sf/GFA	0.26	100%	0.26	5.10	1.31	\$4.63
Warehousing	150	sf/GFA	0.32	100%	0.32	5.10	1.31	\$5.70

Notes:

- A. Basic trip rates are based on the ITE *Trip Generation*, 8th Edition.
- B. Impact fee rate calculation is based upon the following methodology:
 - Basic Trip Rate = PM Peak Hour Trip Generation (per unit of measure)
 - Basic Trip Rate x Percent of New Trips x Trip Length Adjustment x Per Trip Fee / (divide by) 1,000 for rate per square foot (where applicable) = Impact Fee Rate (per unit of measure)
- C. For land uses not specifically identified here trip generation rates could be derived from ITE or a special study by the applicant.
- E. sf /GFA= Square feet Gross Floor Area; sf/GLA= Square Feet Gross Leasable Area; VFP= Vehicle Fueling Position

Footnotes:

- 1. Space is individual vehicle sales space. 70 vehicles for sale = 70 vehicle spaces.

SCHEDULE OF RATES

The impact fee schedule of rates is shown as the last two columns in **Table 6** using the maximum allowable cost per trip end. 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 land use does not fit into one of the categories, an impact fee can be calculated based on the development’s projected trip generation. Applicants may also submit independent fee calculations for consideration and approval by the Public Works Director.



Rate Study for Transportation Impact Fees

Table 6. Proposed Transportation Impact Fee Schedule

Land Use	ITE Land Use Code	Unit of Measure	Impact Fee Rate
Cost Per Trip End			\$ 13,614
Residential			
Single Family (Detached)	210	dwelling	\$12,339.80
Multi-Family	220, 221, 230, 233	dwelling	\$8,007.78
Senior Housing	251	dwelling	\$2,639.01
Mobile Home in MH Park	240	dwelling	\$5,766.72
Commercial - Services			
Drive-in Bank	912	sf/GFA	\$81.12
Hotel	310	room	\$8,238.17
Motel	320	room	6562.61
Day Care Center	565	sf/GFA	\$65.24
Library	590	sf/GFA	\$32.49
Post Office	732	sf/GFA	\$49.49
Service Station	944	VFP	\$32,923.34
Service Station w/minimart	945	sf/GFA	\$172.83
Auto Care Center	942	sf/GLA	\$18.17
Movie Theater	444, 445	seat	\$477.71
Health Club	492, 493	sf/GFA	\$28.65
Commercial - Institutional			
Elementary School	520	sf/GFA	\$5.75
Middle/Jr High School	522	sf/GFA	\$8.97
High School	530	sf/GFA	\$10.02
Assisted Living, Nursing Home	254, 620	bed	\$2,150.30
Church	560	sf/GFA	\$7.10
Hospital	610	sf/GFA	\$15.92
Commercial - Restaurant			
Restaurant	931	sf/GFA	\$71.12
High Turnover Restaurant	932	sf/GFA	\$71.62
Fast Food Restaurant	934	sf/GFA	\$118.13
Espresso w/drive thru	938	sf/GFA	\$104.72
Commercial - Retail Shopping			
Shopping Center	820	sf/GLA	\$19.14
Supermarket	850	sf/GFA	\$57.73
Convenience Market	851	sf/GFA	\$107.03
Free Standing Discount Store	813, 815, 857, 863, 864	sf/GFA	\$23.66
Hardware/Paint Store	816	sf/GFA	\$11.99
Specialty Retail Center	814	sf/GFA	\$8.04
Furniture Store	890	sf/GFA	\$1.60
Home Improvement Superstore	862	sq ft/GFA	\$12.16
Pharmacy(with Drive Through)	881	sq ft/GFA	\$30.71
Car Sales -New	841	sf/GFA	\$33.27



Rate Study for Transportation Impact Fees

Land Use	ITE Land Use Code	Unit of Measure	Impact Fee Rate
Car Sales -Used	NA	Space ¹	\$3,596
Commercial - Office			
General Office	710, 715, 750	sf/GFA	\$23.87
Medical Office	720	sf/GFA	\$43.48
Industrial			
Light Industry/Manufacturing	110, 140	sf/GFA	\$17.27
Heavy Industry	120	sf/GFA	\$12.11
Industrial Park	130	sf/GFA	\$15.31
Mini-Warehouse/Storage	151	sf/GFA	\$4.63
Warehousing	150	sf/GFA	\$5.70

Notes:

- A. Basic trip rates are based on the ITE *Trip Generation*, 8th Edition.
- B. For land uses not specifically identified here trip generation rates could be derived from ITE or a special study by the applicant.
- C. sf /GFA= Square feet Gross Floor Area; sf/GLA= Square Feet Gross Leasable Area; VFP= Vehicle Fueling Position

Footnotes:

- 1. Space is individual vehicle sales space. 70 vehicles for sale = 70 vehicle spaces.



Rate Study for Transportation Impact Fees

Attachment A – Cost Allocation Results

The cost allocation results are summarized in **Exhibit A**, which illustrates how the impact fee project costs (shown in Table 1) were divided into growth-related costs attributable to the City and Annexation Areas. In order to determine this proportion, the City’s traffic 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. The analysis shows that 49 percent of the total project costs could be attributable to new growth within the City and Annexation Areas.

Exhibit A. Cost Allocation by Project Group (in \$000)

Project Group #	Project Costs (Total)	Existing Deficiency Portion	Growth Related Committed Funding	Project Costs minus Deficiencies and Committed Funding	Percent of New Project Traffic due to Growth within City and Annexation Areas	Project Costs Allowable for Impact Fees
1	\$20,040,000	\$5,811,600	\$3	\$14,228,397	25.2%	\$3,583,435.85
2	\$93,225,000	\$0	\$79,511	\$93,145,489	48.6%	\$45,269,658.90
3	\$54,700,000	\$0	\$0	\$54,700,000	60.0%	\$32,799,230.06
4	\$21,710,000	\$0	\$11	\$21,709,989	54.8%	\$11,893,228.54
5	\$46,000,000	\$0	\$0	\$46,000,000	41.7%	\$19,174,238.86
6	\$0	\$0	\$0	\$0	52.6%	\$0.00
7	\$7,000,000	\$0	\$134,636	\$6,865,364	45.8%	\$3,142,687.99
8	\$1,975,000	\$0	\$0	\$1,975,000	54.3%	\$1,072,668.71
9	\$0	\$0	\$0	\$0	46.2%	\$0.00
10	\$7,200,000	\$0	\$4	\$7,199,996	60.8%	\$4,378,537.68
11	\$137,000,000	\$0	\$0	\$137,000,000	49.3%	\$67,595,107.07
Total	\$388,850,000	\$5,811,600	\$214,165	\$382,824,235	49.3%	\$188,908,794
					Trip Growth	13876
					Cost/Trip	\$13,614

Project Group Definitions (Used for Grouping Projects for Traffic Modeling)

1	272nd/ West Valley
2	132nd/ Meridian
3	116th Avenue
4	East Hill
5	Hill Climb
6	84th/ East Valley
7	North Kent
8	Downtown
9	68th Ave
10	Meeker
11	Grade Separation



Attachment B – Land Use Definitions

The following land use definitions are derived from the ITE Trip Generation (8th Edition). The asterisk indicates ITE category trip rate used in Impact Fee Schedule (Table 6).

RESIDENTIAL

Single Family Residential: Includes all single-family detached homes on individual lots. Also includes accessory dwelling units and duplexes. (ITE # 210)

Multi Family Residential: A building or buildings designed to house three or more families living independently of each other. Includes apartments, condos, attached duplexes, PUDs, and attached townhouses. This land use Includes accessory dwelling units (separate structure) and single-room occupancy, if additional parking provided. (ITE #s 220*, 221, 230, and 233)

Senior Housing: Residential units restricted to adults or senior citizens. (ITE #s 251)

Mobile Home (in Mobile Home Park): Trailers shipped, sited, and installed on permanent foundations within a mobile home park. (ITE # 240)

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)

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

Motel: A place of lodging providing sleeping accommodations. Motels generally offer free on-site parking, little or no meeting space, and may have exterior corridors. (ITE # 320)

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. (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)



Rate Study for Transportation Impact Fees

Service Station: A facility used for the sale of gasoline, oil, and lubricants. This land use may include areas for servicing, repairing, and washing vehicles. (ITE # 944)

Service Station with 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)

Automobile Care Center: A facility that provides automobile-related services, such as repair and servicing, stereo installation, and tire installation and repair. (ITE # 942)

Movie Theater: Consists of audience seating, one or more screens and auditoriums, a lobby, and refreshment stand. Typically includes matinee showings. (ITE #s 444* and 445)

Health Club: Privately owned facilities that may include swimming pools and whirl pools, saunas, weight lifting and gymnastics equipment, exercise classes, tennis, racquetball, and handball courts. Features exercise, sports, and other active physical conditioning, as well as a broader range of services such as juice bars and meeting rooms. (ITE #s 492* and 493)

COMMERCIAL-INSTITUTIONAL

Elementary School: These facilities serve students attending kindergarten through the fifth or sixth grade. Elementary schools are usually centrally located in residential neighborhoods where bus service is usually provided to students living beyond a specified distance from school. Both public and private schools are included in this land use. (ITE # 520)

Junior High School: These are facilities serve students who have completed elementary school and have not yet entered high school. Both public and private schools are included in this land use. (ITE # 522)

High School: Facility serving students who have completed middle school or junior high school. Schools are separated from other land uses and have exclusive access points and parking facilities. (ITE # 530)

Assisted Living, Nursing Home: One or more multi-unit buildings designed for the elderly or those who are unable to live independently due to physical or mental handicap. Facilities may contain dining rooms, medical facilities, and recreational facilities. The primary function of a nursing home is to provide chronic or convalescent care for persons who by reason of illness or infirmity are unable to care for themselves. This land use applies to rest homes, chronic care, and convalescent centers. (ITE #s 254 and 620*)

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



Rate Study for Transportation Impact Fees

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. Includes bars/taverns. (ITE # 931)

High Turnover Restaurant: A sit-down, full-service eating establishment with a turnover rate of approximately one hour or less. This type of restaurant is usually moderately priced and frequently belongs to a restaurant chain. Generally, these restaurants serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours per day. (ITE # 932)

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. Restaurants in this category have a drive-up window. (ITE # 934)

Espresso Stand Drive Thru: A drive-up kiosk serving coffee beverages. No inside seating provided. (No ITE category)

COMMERCIAL-RETAIL

Shopping Center: 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. In addition to the integrated unit of shops in one building or enclosed around a mall, include peripheral buildings located on the perimeter of the center adjacent to the streets and major access points. Supermarkets should typically be separated for calculation purposes from the rest of the shopping center. (ITE # 820)

Supermarket: Retail store (greater than 5,000 gsf) that sells a complete assortment of food, food preparation and wrapping materials, and household cleaning and servicing items. (ITE # 850)

Convenience Market: A use (less than 5,000 gsf) that combines retail food sales with fast foods or take-out food service; generally open long hours or 24 hours a day. (ITE # 851)

Free-standing Discount Store: A free-standing store or warehouse with off-street parking. Usually offers centralized cashiering and a wide range of merchandise and/or food products. May include items sold in large quantities or bulk. Often is the only store on a site, but can be found in mutual operation with its own or other supermarkets, garden centers and service stations, or as part of community-sized shopping centers. Fred Meyer



Rate Study for Transportation Impact Fees

stores, Costco, and big box consumer electronic/computer/toy stores are examples of this land use. (ITE #s 813*, 815, 861, 863, and 864)

Hardware/Paint Store: A small free-standing or attached store with off-street parking. Stores sell hardware, paint, and related materials. Storage areas are not included in the total gross floor area. (ITE # 816)

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

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

Car Sales (new, 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. Stand-alone used car sales facilities are typically smaller lots without service areas or other amenities. (ITE # 841 for new car sales)

Home Improvement Superstore: A free-standing warehouse 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. Home Depot and Lowes are examples of this land use. (ITE # 862)

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)

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, government, 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 #s 710*, 715, and 750)

Medical Office: 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 dentists. (ITE # 720)



INDUSTRIAL

Light Industry/Manufacturing: 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 #s 110* and 140)

Heavy Industry: These facilities usually have a high number of employees per industrial plant and could also be categorized as manufacturing facilities. Heavy industrial uses are limited to the manufacturing of large items. (ITE # 120)

Industrial Park: 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. Industrial parks include research centers facilities or groups of facilities that are devoted nearly exclusively to research and development activities.

(ITE # 130)

Mini-Warehouse/Storage: Buildings in which a number of storage units or vaults are rented for the storage of goods. Each unit is physically separated from other units, and access is usually provided through an overhead door or other common access point. (ITE # 151)