Oregon City, Oregon

Final Report for

TRANSPORTATION SYSTEM DEVELOPMENT CHARGE STUDY

April 3, 2009

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City of Oregon City
Transportation System Development Charge Study

Final Report
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SECTION 1: INTRODUCTION

In April 2008, the City of Oregon City contracted with Financial Consulting Solutions Group, Inc. (FCS GROUP), and its subconsultant DKS Associates, to perform a transportation system development charge (TSDC) study. Oregon City is a growing city experiencing increasing demands on its transportation infrastructure. The City's latest transportation system plan identified a number of improvements that are needed to maintain and expand system capacity over the next two decades. With the study, the City wished to implement an equitable, adequate, and defensible transportation SDC that would generate funding to meet the needs of growth without unduly burdening existing residents and business owners.

Consistent with these objectives, the following general approach was used to calculate the City's transportation SDC:

- **Development of Policy Framework.** In this step, we wrote issue papers defining key policy issues, describing alternatives, and providing recommendations for City staff and the Oregon City Transportation Advisory Committee (TAC). The result was a set of recommendations on key TSDC policy issues that provided guidance for the technical analysis and input for the City Commission to consider in its decision on adoption. The issue papers and resulting TAC recommendations are included as Appendix A.
- **Conduct Technical Analysis.** In this step, we worked with City staff and the project engineer to finalize the TSDC project lists, isolate the recoverable portion of existing and planned facility costs, and calculate proposed fees. The technical analysis is included as Appendix B.
- **Assemble Documentation and Presentation.** In this step, we wrote the report describing the recommended policies and resulting charges, and drafted the adopting resolution.

SECTION 2: SYSTEM DEVELOPMENT CHARGE METHODOLOGY

A system development charge is a one-time fee imposed on new development (and some types of re-development) at the time of development. The fee is intended to recover growth's fair share of the costs of existing and planned facilities that provide the necessary capacity to accommodate future development.

Oregon Revised Statute (ORS) 223.297 - 223.314 defines SDCs and specifies how they shall be calculated, applied, and accounted for. By statute, an SDC is the sum of two components:

- a **reimbursement fee**, designed to recover costs associated with capital improvements *already constructed or under construction*, and
- an **improvement fee**, designed to recover costs associated with capital improvements *to be constructed in the future*.

The reimbursement fee methodology must be based on "the value of unused capacity available to future system users or the cost of the existing facilities", and must further consider prior contributions by existing users and gifted and grant-funded facilities. The calculation must also "promote the objective of future system users contributing no more than an equitable share to the cost of existing facilities." Reimbursement fee

proceeds may be spent on any capital improvements related to the systems for which the SDC is applied – i.e., transportation SDCs must be spent on transportation improvements.

The improvement fee methodology must include only the cost of projected capital improvements or portions of improvements needed to increase system capacity for future users. In other words, the cost(s) of planned projects or portions of projects that correct existing deficiencies, or do not otherwise increase capacity for future users, may not be included in the improvement fee calculation. Improvement fee proceeds may be spent only on capital improvements, or portions thereof, which increase the capacity of the systems for which they were applied.

A. REIMBURSEMENT FEE METHODOLOGY

The calculation of the reimbursement fee, described in detail in Section III, is fairly straightforward under the approach taken. In short, it is the dollar cost of unused, available, system capacity divided by the capacity it will serve. The unit of capacity used becomes the basis of the fee. In addition to the cost or value of the system, Oregon law (ORS 223.304) requires that the reimbursement fee methodology also incorporate the following:

- "Ratemaking principles employed to finance publicly owned capital improvements", taken to mean that the fees must be calculated to equitably recover appropriate costs;
- "Prior contributions by existing users", taken to mean that the cost of contributed assets should not be included in the reimbursement fee basis;
- "Gifts or grants from federal or state government or private persons", taken to mean that gifted or grant-funded assets should not be included in the reimbursement fee basis; and
- "Other relevant factors identified by the local government imposing the fee".

Finally, the methodology must promote the objective of future system users contributing no more than an equitable share to the cost of existing facilities.

Most of the City's arterial and collector streets were once County roads or State highways, which were ultimately funded through general tax sources. When considering deducting tax-funded infrastructure costs from the fee basis, it is most important to acknowledge that all transportation system users pay taxes – whether or not their properties are developed. Hence, a developer can argue that he / she has already paid for a share of that portion of the transportation system that has been constructed with tax revenues. This is unlike a water, sewer, or stormwater service, in which there are usually ratepayers to catch up with and reimburse, and is a strong argument for reducing the reimbursement fee cost basis by the corresponding portion of system value that has been funded by tax sources – including system infrastructure that was once part of the County or State system.

On the other hand, a strong argument can be made that previously paid SDCs need not be deducted from the reimbursement fee cost basis. If the previously paid charges have funded facilities that still have unused capacity available for growth, then the cost of that capacity must be included in the reimbursement fee cost basis in order for new customers to pay for a full share of the capacity that will serve them.

Therefore, we recommend that the City base the TSDC reimbursement fee entirely on the cost of unused capacity provided by infrastructure constructed *using previously collected* SDCs. This recommendation is further discussed in Issue Paper #1, provided in Appendix A.

B. IMPROVEMENT FEE METHODOLOGY

The improvement fee calculation, like that of the reimbursement fee, is straightforward. In short, it is the eligible dollar cost of capacity-increasing capital projects divided by the capacity they will serve. Again, the unit of capacity used becomes the basis of the fee. The overriding issue to consider in the improvement fee calculation is the identification and separation of capacity-increasing capital costs.

We recommend that the City utilize the "capacity" method to allocate costs to the improvement fee basis. Under the capacity approach, the cost of a given project is allocated to growth proportionately by the capacity made available for growth. As an example, assume we are allocating the $1 million cost of adding a lane to an existing roadway to meet existing demand as well as the needs of growth. If the new lane provides capacity for 500 trips and 200 meet an existing deficiency and 300 are for growth, then the allocation to the improvement fee basis would be 300 / 500 = 60% of $1 million, or $600,000. This recommendation is further discussed in Issue Paper #2, provided in Appendix A.

C. CALCULATION SUMMARY

In general, an SDC is calculated by adding the applicable reimbursement fee component to the applicable improvement fee component. Each separate component is calculated by dividing the eligible cost by the appropriate measure of growth in capacity. The unit of capacity used becomes the basis of the charge. A sample calculation is shown below.

Reimbursement Fee		Improvement Fee		SDC
Eligible cost of capacity in existing facilities / Growth in system capacity demand	+	Eligible cost of planned capacity-increasing capital improvements / Growth in system capacity demand	=	SDC ($ / unit)

D. SDC (IMPROVEMENT FEE) CREDITS

The law requires that credits be provided against the improvement fee for the construction of qualified public improvements. Oregon Revised Statute 223.304 states that, at a minimum, credits be provided against the improvement fee for

> "the construction of a qualified public improvement. A 'qualified public improvement' means a capital improvement that is required as a condition of development approval, identified in the plan and list adopted pursuant to ORS 223.309 and either:
>
> (a) Not located on or contiguous to property that is the subject of development approval; or
>
> (b) Located in whole or in part on or contiguous to property that is the subject of development approval and required to be built larger or with greater capacity than is necessary for the particular development project to which the improvement fee is related."

The law further states that credits

> "may be granted only for the cost of that portion of such improvement that exceeds the local government's minimum standard facility size or capacity needed to serve the particular development project or property."

The challenge is to craft a credit approach that meets statutory requirements *and* the City's assumed general objectives for cash flow, prioritization of capital projects, and orderly but sustained development. It must be noted that we believe it is important for the City to retain as much control as possible over the prioritization and implementation of its capital plan(s). These plans are created to address total system needs – not just the needs of growth. Without control over how and when those needs are addressed, the re-prioritization of projects over time can leave important City needs unmet. To avoid this outcome, credits should:

- be only for the portion of the agreed-upon or planned cost of capacity *in excess of that needed to serve the particular development*;
- not be transferable to other developers;
- be for planned projects only; and
- be provided only upon completion of a "qualified public improvement".

We recommend that the City maintain its current SDC credit policy, which is in compliance with statutory requirements and incorporates our recommended guidelines. This recommendation is further discussed in Issue Paper #3, provided in Appendix A.

It is important to note that the possession of credits does not necessarily obligate the City to provide cash redemption for SDC credits. In order to provide full compensation to developers while also minimizing the financial risk to the City, we recommend that the City's credit policy include cash reimbursement only from SDCs generated by the build out of the development in question. As a result, the City will have the ability to choose the timing and the improvements from a healthy cash position. This recommendation is further discussed in Issue Paper #4, provided in Appendix A.

E. INDEXING CHARGE FOR INFLATION

Oregon law (ORS 223.304) allows for the periodic indexing of system development charges for inflation, as long as the index used is

> "(A) A relevant measurement of the average change in prices or costs over an identified time period for materials, labor, real property or a combination of the three;
>
> (B) Published by a recognized organization or agency that produces the index or data source for reasons that are independent of the system development charge methodology; and
>
> (C) Incorporated as part of the established methodology or identified and adopted in a separate ordinance, resolution or order."

We recommend that Oregon City continue to index its TSDC to the **Engineering News Record** (ENR) Construction Cost Index (CCI) for the City of Seattle, and adjust the charge annually as per that index.

SECTION 3: TSDC CALCULATION

The City's existing transportation SDC is based on projected trip generation by land use. Specifically, new development is charged by added average daily trips (ADTs). Existing residential transportation SDCs are provided below: [Commercial charges vary by land use type.]

Existing Transportation SDC

Development Type	ADTs per Unit	Improvement Fee	Total TSDC
Single Family	9.60	$ 1,885	**$ 1,885**
Apartments (per living unit)	6.53	$ 1,282	**$ 1,282**

Both the existing and the proposed vehicle charges are based on trip generation statistics provided in the most recent edition of the Institute of Transportation Engineers (ITE) *Trip Generation* manual for each land use type and development size. However, the proposed charges are based on P.M. peak-hour trips (P-HTs). Peak-hour trips are defined as the average trip rate during the peak hour of adjacent street traffic – which usually coincides with the traditional commuting peak periods of 7 am to 9 am or 4 pm to 6 pm. Transportation engineers commonly use peak-hour trip estimates to assess transportation performance and determine system needs. Average daily trips, as measures of total traffic volume, are not generally used to size a system – although they are typically used to estimate maintenance requirements.

The proposed charges continue to adjust for linked, or pass-by, trips. There is documentation presented in ITE *Trip Generation* that a significant percentage of trip ends associated with specific land uses are a result of linked, or pass-by, trips. The recommended SDC basis of adjusted P.M. peak-hour trips is further discussed in Issue Paper #5, provided in Appendix A.

Furthermore, the proposed TSDC includes an additional bike/ped component. The related reimbursement and improvement fees for the bike/ped charge are based on estimated bike/ped trip generation rates by land use type. The inclusion of these alternative modes of transportation is discussed in Issue Paper #6, provided in Appendix A.

The calculation of the proposed TSDC is summarized below and provided in detail in Appendix B.

A. CAPACITY BASES

In order to estimate the number of P.M. peak-hour and bike/ped trips to be generated by growth over the planning period (ending in 2030) – the denominators in both the reimbursement and improvement fee calculations – the following approach was taken.

- DKS Associates consulted the 2005-2030 Metro Travel Demand Model to provide an estimate of total peak-hour trip growth within the urban growth boundary (UGB) during the study period. Trip projections reported for the Beavercreek Concept Plan and Park Place Concept Plan Areas were adjusted to reflect higher growth rates assumed in the Concept Plans and the actual ITE trip rate for single-family residential developments. The result was an initial UGB peak-hour trip total of 24,892 for 2005 and a forecasted 2030 total of 48,339 trips.
- Therefore, during the study period, new development within Oregon City's UGB was expected to generate 23,448 P.M. peak-hour trips.
- Additionally, growth in bicycle, pedestrian, and transit trip generation was estimated. First, as such trip generation is closely related to average daily trips, the forecast of peak-hour trip growth was converted to 234,476 ADTs based on the standard assumption of a 1:10 ratio between peak-hour trips and average daily trips. Second, U.S. Census travel data for the Portland Metro area indicated that 12% of total average daily trip generation generally consists of bike/ped trips. Accordingly, based on the 12% share for

bike/ped trips and the 234,476 ADT growth estimate in vehicle trips, total average daily trip growth – including bike/ped trips – during the period was estimated to total 266,450.

- Therefore, during the study period, new development within the UGB was expected to generate 31,974 bike/ped trips per day.

B. REIMBURSEMENT FEE CALCULATION

In order to estimate the cost of unused capacity in the existing transportation system – the numerator in the reimbursement fee calculation for the vehicle charge – the following approach was taken.

- It is important to first recall that the City's transportation infrastructure has been largely contributed and/or funded by general tax sources, leaving only unused capacity in SDC-funded infrastructure eligible for reimbursement. FCS GROUP found $7,775,416 of historical transportation SDC (improvement fee only) expenditures from FY 1993 through FY 2001. Current unused capacity was calculated by reducing the SDC expenditure total for each year proportionally by the estimated trip growth that has occurred since that year. The resulting total of unused capacity in the existing system was $6,208,392.
- Based on forecasted growth of 23,448 P.M. peak-hour trips, the resulting reimbursement fee was $264.78 per peak-hour vehicle trip.

C. IMPROVEMENT FEE CALCULATIONS

The following approach was taken to determine the cost of capacity-increasing capital improvements for inclusion in the improvement fee cost bases.

- DKS Associates provided the 2008 list of capital projects needed to increase vehicle capacity within the UGB. The sum of this list of project costs in current dollars was $312,918,784, of which the City was expected to be responsible for $244,939,884.
- DKS Associates then determined the extent to which each improvement provided capacity for future development. The preferred basis for these TSDC allocations was growth's share of total future peak-hour trips at the site of improvement. When such data was unavailable, baseline projections of vehicle/capacity (V/C) ratios were utilized to determine existing system deficiencies. The resulting total of eligible costs was $158,455,615.
- Finally, the beginning FY 2007 transportation SDC fund balance – $1,614,627 – was deducted from the eligible cost total to (1) recognize that the fund balance is available for spending on the project list and (2) prevent new users from paying for those project costs twice. The resulting net total of $156,840,988 was the improvement fee cost basis.
- Based on forecasted growth of 23,448 P.M. peak-hour trips, the resulting improvement fee was $6,689.01 per peak-hour vehicle trip.
- Additionally, DKS Associates provided a 2008 list of capital projects needed to increase bike/ped capacity within the UGB. The sum of this list of project costs in current dollars was $13,260,367.
- To assign project costs to the bike/ped TSDC cost basis, an allocation equal to growth's share of future vehicle trip generation – 48.5% – was applied. The sum of each project's growth allocation resulted in a total $6,432,131 of improvement fee-eligible costs.

- Based on forecasted growth of 31,974 bike/ped trips, the resulting improvement fee was $201.17 per bike/ped trip.

D. RECOMMENDED SYSTEM DEVELOPMENT CHARGE

The recommended TSDC of $7,000 per peak-hour vehicle trip and $202.51per bike/ped trip is the sum of the related reimbursement fees and improvement fees, adjusted by an administrative cost recovery factor of 0.67%, or $46 per vehicle trip and $1.34 per bike/ped trip. The administrative cost recovery factor was derived by dividing projected annual TSDC accounting and administrative costs, including the amortized cost of this study, by forecasted annual vehicle and bike/ped TSDC revenues. The resulting recommended TSDCs for a comprehensive list of land uses are provided immediately following this section.

Note that given the relatively small amount of data on bicycle and pedestrian trip generation by land use, it is recommended that the following bike/ped trip groupings be utilized to assess the bike/ped SDC:

Daily Bike/Ped Trip Generation and SDC (Per Unit of Development)

Group	Trips per Unit	SDC per Unit
Group 1	0.1	$ 20.25
Group 2	0.2	$ 40.50
Group 3	0.4	$ 81.00
Group 4	0.6	$ 121.51
Group 5	1.0	$ 202.51
Group 6	2.0	$ 405.02

Assignments to each group are made by land use designation, as shown in the Bike / Ped TSDC schedule following this section.

E. SDC IMPLEMENTATION

There are two transit and limited-parking corridors or areas within the City – the designated regional center and Molalla Avenue. Such corridors are suitable for higher residential densities, high-volume non-residential uses, and mixed use properties. Traffic modeling has shown that developments in such areas have lower vehicle trip generation rates.

To account for the expected reduction in residential vehicle trip generation, we recommend that the City provide a 10% discount on the TSDC for residential developments within these areas. Similarly, non-residential developments in such areas should be assessed a TSDC for the lesser of either their estimated trip generation rate or the trip rate for the Shopping Center land use. This recommendation is further discussed in Issue Paper #7, provided in Appendix A.

Finally, in July 2007, the Portland area metropolitan service district (Metro) published a report detailing the various approaches to crafting system development charges (SDCs) that promote full and equitable cost recovery. The report noted that the validity of each approach varied by jurisdiction. As such, to the extent practical, the City's TSDC was designed to be consistent with the five key SDC practices and policies recommended in the report:

- full cost recovery,

- impact-based SDCs,
- recognition of cost variations by location,
- green design,
- and technical vs. policy-based solutions.

These recommendations are further discussed in Issue Paper #8, provided in Appendix A.

Vehicle TSDC (1)

ITE Code	Customer Type	Land Use Description	Peak-Hour Trips	Pass-By Trip Factor	Adjusted P-H Ts	TSDC	Units
110	General Light Industrial	Typically less than 500 employees, free standing and single use. Examples: Printing plants, material testing laboratories, data processing equipment assembly, power stations.	0.98	1	0.98	$ 6,860	KSF
130	Industrial Park	Industrial Park areas that contain a number of industrial and/or related facilities (mix of manufacturing, service, and warehouse).	0.86	1	0.86	$ 6,020	KSF
140	Manufacturing	Facilities that convert raw materials into finished products. Typically have related office, warehouse, research, and associated functions.	0.74	1	0.74	$ 5,180	KSF
151	Mini-Warehouse	Storage Units or Vaults rented for storage of goods. Units are physically separate and access through an overhead door or other common access point. Example: U-Store-It.	0.26	1	0.26	$ 1,820	KSF
210	SF Detached	Single family detached housing.	1.01	1	1.01	$ 7,070	DU
220	Apartment	Rental Dwelling Units within the same building. At least 4 units in the same building. Examples: Quadplexes and all types of apartment buildings.	0.62	1	0.62	$ 4,340	DU
230	Condo/Townhouse	Residential Condominium/Townhouses under single-family ownership. Minimum of two single family units in the same building structure.	0.52	1	0.52	$ 3,640	DU
240	Mobile Home	Trailers or Manufactured homes that are sited on permanent foundations. Typically the parks have community facilities (laundry, recreation rooms, pools).	0.59	1	0.59	$ 4,130	DU
253	Elderly Housing	Restricted to senior citizens. Contains residential units similar to apartments or condos. Sometimes in self-contained villages. May also contain medical facilities, dining, and some limited, supporting retail.	0.17	1	0.17	$ 1,190	DU
310	Hotel	Lodging facility that may include restaurants, lounges, meeting rooms, and/or convention facilities. Can include a large motel with these facilities.	0.59	1	0.59	$ 4,130	Room
320	Motel	Sleeping accommodations and often a restaurant. Free on-site parking and little or no meeting space.	0.47	1	0.47	$ 3,290	Room
430	Golf Course	Includes 9, 18, 27, and 36 hole municipal and private country clubs. Some have driving ranges and clubhouses with pro shops, restaurants, lounges. Many of the muni courses do not include such facilities.	2.74	1	2.74	$ 19,180	Hole
435	Multipurpose Recreation Facility	Multi-purpose recreational facilities contain two or more of the following land uses at one site: mini-golf, batting cages, video arcade, bumper boats, go-carts, and driving ranges.	5.77	1	5.77	$ 40,390	Acre
437	Bowling Alley	Recreational facilities with bowling lanes which may include a small lounge, restaurant or snack bar.	3.54	1	3.54	$ 24,780	Lane
493	Athletic Club	Privately owned with weightlifting and other facilities often including swimming pools, hot tubs, saunas, racquet ball, squash, and handball courts.	5.76	1	5.76	$ 40,320	KSF
495	Recreational Community Center	Recreational community centers are facilities similar to and including YMCAs, often including classes, day care, meeting rooms, swimming pools, tennis racquetball, handball, weightlifting equipment, locker rooms, & food service.	1.64	1	1.64	$ 11,480	KSF
520 *	Elementary School	Public. Typically serves K-6 grades.	0.28	1	0.28	$ 1,960	Student
522	Middle School	Public. Serves students that completed elementary and have not yet entered high school.	0.15	1	0.15	$ 1,050	Student
530	High School	Public. Serves students that completed middle or junior high school.	0.14	1	0.14	$ 980	Student
540	Junior/Community College	Two-year junior colleges or community colleges.	0.12	1	0.12	$ 840	Student
560	Church	Contains worship area and may include meeting rooms, classrooms, dining area and facilities.	0.66	1	0.66	$ 4,620	KSF
565 *	Day Care	Facility for pre-school children care primarily during daytime hours. May	13.18	0.33	4.35	$ 30,450	KSF
		include classrooms, offices, eating areas, and playgrounds.	0.82	0.33	0.27	$ 1,890	Student
590	Library	Public or Private. Contains shelved books, reading rooms or areas, sometimes meeting rooms.	7.09	1	7.09	$ 49,630	KSF
591	Lodge/Fraternal Organization	Includes a club house with dining and drinking facilities, recreational and entertainment areas, and meeting rooms.	0.03	1	0.03	$ 210	Member
710	General Office	Office building with multiple tenants. Mixture of tenants can include professional services, bank and Loan institutions, restaurants, snack bars, and service retail facilities.	1.49	1	1.49	$ 10,430	KSF
715	Single Tenant Office Building	Single tenant office building. Usually contains offices, meeting rooms, file storage areas, data processing, restaurant or cafeteria, and other service functions.	1.73	1	1.73	$ 12,110	KSF
720	Medical-Dental Office	Provides diagnosis and outpatient care on a routine basis. Typically operated by one or more private physicians or dentists.	3.72	1	3.72	$ 26,040	KSF
750	Office Park	Park or campus-like planned unit development that contains office buildings and support services such as banks & loan institutions, restaurants, service stations.	1.5	1	1.5	$ 10,500	KSF
760	Research & Development Center	Single building or complex of buildings devoted to research & development. May contain offices and light fabrication facilities.	1.08	1	1.08	$ 7,560	KSF
770	Business Park	Group of flex-type or incubator 1 - 2 story buildings served by a common roadway system. Tenant space is flexible to accommodate a variety of uses. Rear of building usually served by a garage door. Typically includes a mix of offices, retail & wholesale.	1.29	1	1.29	$ 9,030	KSF

Vehicle TSDC (2)

ITE Code	Customer Type	Land Use Description	Peak-Hour Trips	Pass-By Trip Factor	Adjusted P-H Ts	TSDC	Units
812	Building Materials & Lumber	Small, free standing building that sells hardware, building materials, and lumber. May include yard storage and shed storage areas. The storage areas are not included in the GLA needed for trip generation estimates.	4.49	1	4.49	$ 31,430	KSF
813	Discount Super Store	A free-standing discount store that also contains a full service grocery dept. under one roof.	3.87	0.718	2.78	$ 19,460	KSF
814	Specialty Retail	Small strip shopping centers containing a variety of retail shops that typically specialize in apparel, hard goods, services such as real estate, investment, dance studios, florists, and small restaurants.	2.71	1	2.71	$ 18,970	KSF
815	Discount Store	A free-standing discount store that offers a variety of customer services, centralized cashiering, and a wide range of products under one roof. Does not include a full service grocery dept. like Land Use 813, Free-standing Discount Superstore.	5.06	0.475	2.4	$ 16,800	KSF
816	Hardware/Paint Store	Typically free-standing buildings with off-street parking that sell paints and hardware.	4.84	0.450	2.18	$ 15,260	KSF
817	Nursery/Garden Center	Free-standing building with yard containing planting or landscape stock. May have large green houses and offer landscape services. Typically have office, storage, and shipping facilities. GLA is Building GLA, not yard and storage GLA.	3.8	1	3.8	$ 26,600	KSF
820	Shopping Center	Integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Provides enough on-site parking to serve its own parking demand. May include non-merchandising facilities such as office buildings, movie theatres, restaurants, post offices, health clubs, and recreation like skating rinks and amusements.	3.75	0.393	1.47	$ 10,290	KSF Leasable
841	New Car Sales	New Car dealership with sales, service, parts, and used vehicles	2.64	1	2.64	$ 18,480	KSF
848	Tire Store	Primary business is tire sales and repair. Generally does not have a large storage or warehouse area.	4.15	0.617	2.56	$ 17,920	KSF
850	Supermarket	Free-standing grocery store. May also contain ATMs, photo centers, pharmacies, video rental areas.	10.45	0.265	2.76	$ 19,320	KSF
851	Convenience Market	Sells convenience foods, newspapers, magazines, and often Beer & Wine. Does not have gas pumps.	52.41	0.282	14.8	$ 103,600	KSF
880	Pharmacy w/o drive through	Facilities that fulfill medical Prescriptions	8.42	0.327	2.75	$ 19,250	KSF
881	Pharmacy w/ drive through	Facilities that fulfill medical Prescriptions	8.62	0.383	3.3	$ 23,100	KSF
890	Furniture Store	Sells furniture, accessories, and often carpet/floor coverings.	0.46	0.157	0.07	$ 490	KSF
911 *	Walk-In Bank	Usually a Free-standing building with a parking lot. Does not have drive-up windows. May have ATMs.	33.15	0.270	8.95	$ 62,650	KSF
912	Drive-In Bank	Provides Drive-up and walk-in bank services. May have ATMs.	45.74	0.270	12.35	$ 86,450	KSF
931	Quality Restaurant	High quality eating establishment with slower turnover rates (more than one hour).	7.49	0.288	2.15	$ 15,050	KSF
932	High Turnover Sit-Down Rest.	Sit-Down eating establishment with turnover rates of less than one hour.	10.92	0.315	3.44	$ 24,080	KSF
933 *	Fast Food w/o Drive-Thru	Fast Food but no drive-through window	26.15	0.265	6.94	$ 48,580	KSF
934	Fast Food With Drive-Thru	Fast Food with drive-through window	34.64	0.265	9.2	$ 64,400	KSF
936 *	Drinking Place	Contains a bar where alcoholic beverages and snacks are serviced and possibly some type of entertainment such as music, games, or pool tables	11.34	0.315	3.58	$ 25,060	KSF
944	Gas Station	Sell gasoline and may also provide vehicle service and repair. Does not have Convenience Market and/or Car Wash.	13.86	0.235	3.26	$ 22,820	Fueling Position
945	Gas/Service Station with Convenience Market	Selling gas and Convenience Market are the primary business. May also contain facilities for service and repair. Does not include Car Wash.	13.38	0.123	1.65	$ 11,550	Fueling Position
946 *	Gas/Service Station with Convenience Market, Car Wash	Selling gas, Convenience Market, and Car Wash are the primary business. May also contain facilities for service and repair.	13.33	0.382	5.09	$ 35,630	Fueling Position
947	Self-Service Car Wash	Allows manual cleaning of vehicles by providing stalls for the driver to park and wash.	5.54	1	5.54	$ 38,780	Wash Stall

NOTES:

Source: Institute of Transportation Engineers, *Trip Generation* , Seventh Edition.
Peak-Hour Trips: Weekday, peak-hour of adjacent street traffic. Most often, one hour between 4 and 6 p.m.
Pass-By Trip Factor reflects diverted linked trips in addition to pass-by trips.
ITE codes identified with asterisks (*) include information derived from the ITE manual (e.g., the pass-by factor is derived from pass-by counts for a similar land use or are as estimated by traffic engineers).

Land Use Units:
- KSF = 1,000 gross square feet building area
- DU = dwelling unit
- Room = number of rooms for rent
- Fueling Positions = maximum number of vehicles that can be served simultaneously
- Student = number of full-time equivalent students enrolled
- Hole = number of individual putting holes that are paired with driving tees
- Acre = 43,560 square feet of park space
- Lane = number of bowling lanes

Residential developments within designated regional centers and the Molalla Avenue area receive a 10% discount on the TSDC.
Non-residential developments within such areas will be assessed for the lesser of their estimated trip generation rate, based on land use, or 1.47 P-HTs per KSF.

Bike/Ped TSDC (1)

ITE Code	Customer Type	Land Use Description	Bike/Ped Group	Bike/Ped Trips	Bike/Ped SDC	Units
110	General Light Industrial	Typically less than 500 employees, free standing and single use. Examples: Printing plants, material testing laboratories, data processing equipment assembly, power stations.	1	0.1	$ 20.25	KSF
130	Industrial Park	Industrial Park areas that contain a number of industrial and/or related facilities (mix of manufacturing, service, and warehouse).	1	0.1	$ 20.25	KSF
140	Manufacturing	Facilities that convert raw materials into finished products. Typically have related office, warehouse, research, and associated functions.	2	0.2	$ 40.50	KSF
151	Mini-Warehouse	Storage Units or Vaults rented for storage of goods. Units are physically separate and access through an overhead door or other common access point. Example: U-Store-It.	1	0.1	$ 20.25	KSF
210	SF Detached	Single family detached housing.	5	1	$ 202.51	DU
220	Apartment	Rental Dwelling Units within the same building. At least 4 units in the same building. Examples: Quadplexes and all types of apartment buildings.	4	0.6	$ 121.51	DU
230	Condo/Townhouse	Residential Condominium/Townhouses under single-family ownership. Minimum of two single family units in the same building structure.	4	0.6	$ 121.51	DU
240	Mobile Home	Trailers or Manufactured homes that are sited on permanent foundations. Typically the parks have community facilities (laundry, recreation rooms, pools).	3	0.4	$ 81.00	DU
253	Elderly Housing	Restricted to senior citizens. Contains residential units similar to apartments or condos. Sometimes in self-contained villages. May also contain medical facilities, dining, and some limited, supporting retail.	3	0.4	$ 81.00	DU
310	Hotel	Lodging facility that may include restaurants, lounges, meeting rooms, and/or convention facilities. Can include a large motel with these facilities.	3	0.4	$ 81.00	Room
320	Motel	Sleeping accommodations and often a restaurant. Free on-site parking and little or no meeting space.	2	0.2	$ 40.50	Room
430	Golf Course	Includes 9, 18, 27, and 36 hole municipal and private country clubs. Some have driving ranges and clubhouses with pro shops, restaurants, lounges. Many of the muni courses do not include such facilities.	1	0.1	$ 20.25	Hole
435	Multipurpose Recreation Facility	Multi-purpose recreational facilities contain two or more of the following land uses at one site: mini-golf, batting cages, video arcade, bumper boats, go-carts, and driving ranges.	6	2	$ 405.02	Acre
437	Bowling Alley	Recreational facilities with bowling lanes which may include a small lounge, restaurant or snack bar.	3	0.4	$ 81.00	Lane
493	Athletic Club	Privately owned with weightlifting and other facilities often including swimming pools, hot tubs, saunas, racquet ball, squash, and handball courts.	5	1	$ 202.51	KSF
495	Recreational Community Center	Recreational community centers are facilities similar to and including YMCAs, often including classes, day care, meeting rooms, swimming pools, tennis racquetball, handball, weightlifting equipment, locker rooms, & food service.	6	2	$ 405.02	KSF
520 *	Elementary School	Public. Typically serves K-6 grades.	3	0.4	$ 81.00	Student
522	Middle School	Public. Serves students that completed elementary and have not yet entered high school.	2	0.2	$ 40.50	Student
530	High School	Public. Serves students that completed middle or junior high school.	1	0.1	$ 20.25	Student
540	Junior/Community College	Two-year junior colleges or community colleges.	1	0.1	$ 20.25	Student
560	Church	Contains worship area and may include meeting rooms, classrooms, dining area and facilities.	3	0.4	$ 81.00	KSF
565 *	Day Care	Facility for pre-school children care primarily during daytime hours. May include classrooms, offices, eating areas, and playgrounds.	1	0.1	$ 20.25	KSF
			1	0.1	$ 20.25	Student
590	Library	Public or Private. Contains shelved books, reading rooms or areas, sometimes meeting rooms.	6	2	$ 405.02	KSF
591	Lodge/Fraternal Organization	Includes a club house with dining and drinking facilities, recreational and entertainment areas, and meeting rooms.	4	0.6	$ 121.51	Member
710	General Office	Office building with multiple tenants. Mixture of tenants can include professional services, bank and Loan institutions, restaurants, snack bars, and service retail facilities.	6	2	$ 405.02	KSF
715	Single Tenant Office Building	Single tenant office building. Usually contains offices, meeting rooms, file storage areas, data processing, restaurant or cafeteria, and other service functions.	6	2	$ 405.02	KSF
720	Medical-Dental Office	Provides diagnosis and outpatient care on a routine basis. Typically operated by one or more private physicians or dentists.	1	0.1	$ 20.25	KSF
750	Office Park	Park or campus-like planned unit development that contains office buildings and support services such as banks & loan institutions, restaurants, service stations.	4	0.6	$ 121.51	KSF
760	Research & Development Center	Single building or complex of buildings devoted to research & development. May contain offices and light fabrication facilities.	2	0.2	$ 40.50	KSF
770	Business Park	Group of flex-type or incubator 1 - 2 story buildings served by a common roadway system. Tenant space is flexible to accommodate a variety of uses. Rear of building usually served by a garage door. Typically includes a mix of offices, retail & wholesale.	1	0.1	$ 20.25	KSF

Bike/Ped TSDC (2)

ITE Code	Customer Type	Land Use Description	Bike/Ped Group	Bike/Ped Trips	Bike/Ped SDC	Units
812	Building Materials & Lumber	Small, free standing building that sells hardware, building materials, and lumber. May include yard storage and shed storage areas. The storage areas are not included in the GLA needed for trip generation estimates.	1	0.1	$ 20.25	KSF
813	Discount Super Store	A free-standing discount store that also contains a full service grocery dept. under one roof.	1	0.1	$ 20.25	KSF
814	Specialty Retail	Small strip shopping centers containing a variety of retail shops that typically specialize in apparel, hard goods, services such as real estate, investment, dance studios, florists, and small restaurants.	6	2	$ 405.02	KSF
815	Discount Store	A free-standing discount store that offers a variety of customer services, centralized cashiering, and a wide range of products under one roof. Does not include a full service grocery dept. like Land Use 813, Free-standing Discount Superstore.	1	0.1	$ 20.25	KSF
816	Hardware/Paint Store	Typically free-standing buildings with off-street parking that sell paints and hardware.	1	0.1	$ 20.25	KSF
817	Nursery/Garden Center	Free-standing building with yard containing planting or landscape stock. May have large green houses and offer landscape services. Typically have office, storage, and shipping facilities. GLA is Building GLA, not yard and storage GLA.	1	0.1	$ 20.25	KSF
820	Shopping Center	Integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Provides enough on-site parking to serve its own parking demand. May include non-merchandising facilities such as office buildings, movie theatres, restaurants, post offices, health clubs, and recreation like skating rinks and amusements.	2	0.2	$ 40.50	KSF Leasable
841	New Car Sales	New Car dealership with sales, service, parts, and used vehicles	1	0.1	$ 20.25	KSF
848	Tire Store	Primary business is tire sales and repair. Generally does not have a large storage or warehouse area.	1	0.1	$ 20.25	KSF
850	Supermarket	Free-standing grocery store. May also contain ATMs, photo centers, pharmacies, video rental areas.	1	0.1	$ 20.25	KSF
851	Convenience Market	Sells convenience foods, newspapers, magazines, and often Beer & Wine. Does not have gas pumps.	6	2	$ 405.02	KSF
880	Pharmacy w/o drive through	Facilities that fulfill medical Prescriptions	3	0.4	$ 81.00	KSF
881	Pharmacy w/ drive through	Facilities that fulfill medical Prescriptions	3	0.4	$ 81.00	KSF
890	Furniture Store	Sells furniture, accessories, and often carpet/floor coverings.	1	0.1	$ 20.25	KSF
911 *	Walk-In Bank	Usually a Free-standing building with a parking lot. Does not have drive-up windows. May have ATMs.	1	0.1	$ 20.25	KSF
912	Drive-In Bank	Provides Drive-up and walk-in bank services. May have ATMs.	1	0.1	$ 20.25	KSF
931	Quality Restaurant	High quality eating establishment with slower turnover rates (more than one hour).	1	0.1	$ 20.25	KSF
932	High Turnover Sit-Down Rest.	Sit-Down eating establishment with turnover rates of less than one hour.	3	0.4	$ 81.00	KSF
933 *	Fast Food w/o Drive-Thru	Fast Food but no drive-through window	6	2	$ 405.02	KSF
934	Fast Food With Drive-Thru	Fast Food with drive-through window	6	2	$ 405.02	KSF
936 *	Drinking Place	Contains a bar where alcoholic beverages and snacks are serviced and possibly some type of entertainment such as music, games, or pool tables	1	0.1	$ 20.25	KSF
944	Gas Station	Sell gasoline and may also provide vehicle service and repair. Does not have Convenience Market and/or Car Wash.	1	0.1	$ 20.25	Fueling Position
945	Gas/Service Station with Convenience Market	Selling gas and Convenience Market are the primary business. May also contain facilities for service and repair. Does not include Car Wash.	1	0.1	$ 20.25	Fueling Position
946 *	Gas/Service Station with Convenience Market, Car Wash	Selling gas, Convenience Market, and Car Wash are the primary business. May also contain facilities for service and repair.	1	0.1	$ 20.25	Fueling Position
947	Self-Service Car Wash	Allows manual cleaning of vehicles by providing stalls for the driver to park and wash.	1	0.1	$ 20.25	Wash Stall

NOTES:

Land Use Units:

- KSF = 1,000 gross square feet building area
- DU = dwelling unit
- Room = number of rooms for rent
- Fueling Positions = maximum number of vehicles that can be served simultaneously
- Student = number of full-time equivalent students enrolled
- Hole = number of individual putting holes that are paired with driving tees
- Acre = 43,560 square feet of park space
- Lane = number of bowling lanes

Residential developments within designated regional centers and the Molalla Avenue area receive a 10% discount on the TSDC.
Non-residential developments within such areas will be assessed for the lesser of their estimated trip generation rate, by land use, or 1.47 P-HTs per KSF.

Appendix A

Issue Papers

ISSUE PAPER #1

Reimbursement Fee Cost Basis

ISSUE

Oregon Revised Statute 223.304 states that the reimbursement fee calculation methodology must be based on:

(A) "Ratemaking principles employed to finance publicly owned capital improvements;
(B) Prior contributions by existing users;
(C) Gifts or grants from federal or state government or private persons;
(D) The value of unused capacity available to future system users or the cost of the existing facilities; and
(E) Other relevant factors identified by the local government imposing the fee."

This issue paper addresses two questions regarding the application of this language to reimbursement fees for the City's transportation system. First, what is an appropriate measure of the "cost of the existing facilities" -- or the related "value of unused capacity" available for growth? Second, how should one consider in the calculation prior contributions by existing users, and gifts or grants?

ALTERNATIVES

Regarding the first question of considering the cost and related value of (unused capacity in) the system, there are several alternative approaches for establishing the initial reimbursement fee cost basis:

- Original cost less depreciation. Use the original cost of existing facilities less the accumulated depreciation on those facilities as a measure of value.
- Original cost. Use the original cost of existing facilities at the time they were constructed.
- Replacement cost less depreciation. Use the replacement cost of existing facilities less the accumulated depreciation on those facilities as a measure of value.
- Replacement cost. Use the escalated cost of existing facilities as a measure of what they would currently cost to construct.

ANALYSIS

In considering these alternatives, it is important to note that the purpose of the reimbursement fee is not to fund the replacement of the system. System replacement is commonly funded through taxes and/or rates. Rather, the purpose of the fee is to pay back those who funded construction of the system for their investment in available capacity. The reimbursement fee represents a "buy-in" to the cost of unused capacity in the existing system, to catch up with those who funded the existing system.

The **original cost less depreciation** approach recognizes that the value of

the system to the new user may be better reflected by depreciated cost, because the new user is connecting to assets of diminishing useful lives. However, this approach discounts the investment made by existing system users. Existing customers have borne the full cost burden of building excess capacity for future needs, with little benefit to themselves, and should recover those costs. If depreciated cost is used, then existing customers are not fully reimbursed for their investments in excess capacity.

The **original cost** approach simply requires the new user to reimburse existing users for their investment in the system – in terms of the invested cost. This "buy-in" puts them at par with the existing user. Further, by using unadjusted original cost, it protects the new user from paying both a full share of the existing system plus a full share of the cost of expanding the system. It is clearly an approach that considers the "cost" of the existing system.

A perhaps valid alternative would be to use **replacement cost less depreciation**. In order to address the issue of value, both to an existing user and to a connecting customer, replacement cost provides a valid measure. The current replacement cost of the system must be appropriately discounted for depreciation in order to incorporate the concurrent reduced useful life of the asset. This approach clearly considers the "value" of the existing system.

The **replacement cost** approach (unadjusted for depreciation), while an adequate measure of the cost of replacing the system, certainly overstates the value of the system to the new user. We do not recommend this approach, because it does not "promote the objective of future system users contributing no more than an equitable share to the cost of existing facilities" – as also required by Oregon Revised Statute. Rather, it ignores the fact that users of the system pay for the replacement of the system as needed in ongoing taxes and/or rates. It should not be new development's responsibility to pay for the replacement value of a system if taxes and/or rates also are being used for system replacement.

Once the system valuation approach is chosen, it is next necessary to consider in the calculation prior contributions by existing users, and **gifts or grants**. It seems clear that gifted or grant-funded facilities were provided at generally no direct cost to existing users. As such, their costs should be deducted from the reimbursement fee cost basis.

Prior contributions by existing users are a more complicated issue. Prior contributions by existing users of the transportation system consist primarily of taxes paid over time and previously paid SDCs. Most of the City's arterial and collector streets were once County roads or State highways, funded ultimately through general tax sources. When considering deducting tax-funded infrastructure costs from the fee basis, it is most important to acknowledge that all transportation system users pay taxes – whether or not their properties are developed. Hence, a developer can argue that he / she has already paid for a share of that portion of the transportation system that has been constructed with tax revenues. This is unlike a water, sewer, or

stormwater service, in which there are usually ratepayers to catch up with and reimburse, and is a strong argument for reducing the reimbursement fee cost basis by the corresponding portion of system value that has been funded by tax sources – including system infrastructure that was once part of the County or State system.

On the other hand, a strong argument can be made that previously paid SDCs need not be deducted from the reimbursement fee cost basis. If previously paid charges have resulted in a fund balance, then that balance is earmarked for future projects and has nothing to do with the amount that should be reimbursed to existing users. If the previously paid charges have funded facilities that still have unused capacity available for growth, then the cost of that capacity must be included in the reimbursement fee cost basis in order for new customers to pay for a full share of the capacity that will serve them.

RECOMMENDATIONS

We recommend that the City base the TSDC reimbursement fee entirely on the cost of unused capacity in infrastructure constructed *using previously collected SDCs*. This approach acknowledges that the original cost of the transportation system less both the cost of gifted or grant-funded facilities and the cost of those facilities or portions of facilities funded with tax revenues is effectively equal to SDC-funded infrastructure.

ISSUE PAPER #2

Improvement Fee Cost Basis

ISSUE

Oregon Revised Statute 223.304 states that the improvement fee calculation methodology must consider the cost of projected capital improvements "needed to increase the capacity of the systems to which the fee is related." The law further requires that the fee "be calculated to obtain the cost of capital improvements for the projected need for available system capacity for future users." In this issue paper, we evaluate a number of approaches that can be used to identify and allocate the growth-related portion of a project cost to the fee basis.

ALTERNATIVES

Three alternative approaches to determining the capacity-increasing, growth-related, portion of planned project costs are provided below:

- The "capacity" method. The cost of a given project is allocated to the fee basis proportionately by the capacity made available for growth.
- The "incremental cost" method. The cost of the project being considered is first estimated as if it were to be constructed to meet existing needs only, then the difference between that amount and the project total is allocated to the fee basis as a measure of the incremental additional cost of sizing a project to meet the needs of growth.
- The "causation" method. If construction of a project is "caused" by growth, then the entire project cost is allocated to the fee basis.

ANALYSIS

Under the "capacity" approach, the cost of a given project is allocated to growth proportionately by the capacity made available for growth. As an example, assume we are allocating the $1 million cost of adding a lane to an existing street to meet existing demand as well as the needs of growth. If the new lane provides capacity for 500 trips and 200 meet the existing deficiency and 300 are for growth, then the allocation to the improvement fee basis would be 300 / 500 = 60% of $1 million, or $600,000.

Ideally, the most directly applicable measure of capacity demand would be used as the basis for allocation. For allocating transportation projects, estimated growth in daily or peak-hour trips is commonly used. It is also acceptable to use a reasonable and understandable substitute for such information, if the demand measure is not readily available in a complete, accurate, and usable form.

Under the "incremental cost' approach, the cost of the project being considered is first estimated as if it were to be constructed to meet existing needs only. The estimated added cost of sizing it to meet the needs of growth is the portion of the project cost allocated to the improvement fee basis. Using the example above, it might be that the cost of adding the lane

would be $800,000, if it were needed only to meet the existing deficiency. The incremental additional cost to meet the needs of growth would be only $200,000. So, using the incremental cost approach, only $200,000 would be allocated to growth as part of the improvement fee basis.

Under the "causation" approach, a second step is added to the allocation process, after first determining that the project being considered has a capacity-increasing element. In the second step, we ask the question "would the project be necessary if not for growth?" If the answer to this question is "no", then we would allocate 100% of the project cost to growth and the improvement fee cost basis under the rationale that growth is causing the project to be constructed. If the answer is "yes", then we would use either the incremental cost or the capacity method to allocate the project cost between existing development and growth to determine the project cost share to be included in the improvement fee cost basis.

Of the three allocation methods, the causation method most aggressively allocates costs to growth. It is potentially the most difficult to defend because it, in essence, allocates the cost of non-capacity increasing portions of projects to the improvement fee cost basis if growth causes them to be constructed. While a logical approach, it may be open to challenge due to the specific language contained in ORS 223.

The incremental cost approach, while easily defensible, very conservatively assigns costs to growth. It will usually result in the smallest allocation to the improvement fee cost basis. The capacity approach, easily defensible and commonly used, is easy to understand and apply. While less aggressive than the causation method, it usually results in an appropriately higher allocation to the improvement fee basis than the incremental cost approach.

RECOMMENDATIONS

We recommend that the City utilize the "capacity" method to allocate costs to the improvement fee basis. Although many communities in Oregon have considered the causation approach, most use the capacity approach or a variation to allocate costs to the improvement fee basis.

It is worth pointing out that even within the capacity approach, there are several ways to perform the allocation, including incorporating volume or maximum demand in lieu of current capacity.

ISSUE PAPER #3

Credits / Adjustments

ISSUE

Oregon Revised Statute 223.304 states that, at a minimum, credits be provided against SDC improvement fees for

> "the construction of a qualified public improvement. A 'qualified public improvement' means a capital improvement that is required as a condition of development approval, identified in the plan and list adopted pursuant to ORS 223.309 and either:
>
> (a) Not located on or contiguous to property that is the subject of development approval; or
>
> (b) Located in whole or in part on or contiguous to property that is the subject of development approval and required to be built larger or with greater capacity than is necessary for the particular development project to which the improvement fee is related."

The law further states that credits

> "may be granted only for the cost of that portion of such improvement that exceeds the local government's minimum standard facility size or capacity needed to serve the particular development project or property."

Finally, the law [223.304(5)(d)] also specifies that credits must be used within ten years of issuance.

Given these legal guidelines, what is a reasonable SDC credit approach that meets statutory requirements and the City's general objectives for cash flow, prioritization of capital projects, and orderly but sustained development?

ALTERNATIVES

Oregon law effectively establishes the minimum that a public agency must do with regard to SDC credits. However, the following language in ORS 223.304(5)(c) has opened the door for cities to offer more than the legal minimum.

> "This subsection does not prohibit a local government from providing a greater credit, or from establishing a system providing for the transferability of credits, or from providing a credit for a capital improvement not identified in the plan and list adopted pursuant to ORS 223.309, or from providing a share of the cost of such improvement by other means, if a local government so chooses."

There are two primary issues related to the provision of SDC credits. These and their associated policy alternatives are provided below.

1. How much should be credited?
   - The amount of the current project improvement fee;
   - The full actual cost of excess capacity even if greater than the improvement fee;
   - The full cost of excess capacity even if greater than the improvement fee as a portion of the planned project cost.
2. How should the City handle requests for credits for the construction of public improvements that are not in the adopted capital improvement plan and list?
   - Do not provide credits for construction of improvements that are not in the adopted capital improvement plan and list;
   - Provide credits for the excess capacity in improvements constructed that are not in the adopted capital plan and list;
   - Provide credits for the excess capacity in improvements constructed that are not in the adopted capital plan and list, but only in special circumstances.

ANALYSIS

System development charge credits for development make sense as they encourage private enterprise to help solve, on a prospective basis, community needs. However, to the extent that the City provides credits in excess of minimum legal requirements, the practice may lead to a loss of institutional control over the construction of projects in the capital plan.

By constructing projects for credits (and/or cash reimbursement), a developer is imposing a construction schedule on the City, which may be in conflict with the City's established priorities. Due to such credit practices, SDC funds may not accrue as expected and the schedule of the CIP may be inverted or shuffled. This may be acceptable in some cases however it may not be acceptable in others. It may result in the equivalent of building floors before pouring a foundation.

The fundamental choice the City faces is to either grant full credit – potentially in excess of the legal minimum and acknowledge that this will lead to occasional re-ordering of CIP projects – or to constrain the credit policy to the legal minimum. In this context, analysis on the specific questions raised above is provided below.

1. How much should be credited? The City's existing credit policy allows for privately-provided construction cost estimates and receipts to supersede planned project expenditures. The result is that SDC credits may exceed the SDC revenues that the City will ultimately collect for the project. It is our interpretation that the legal minimum would require a city only to grant a credit up to the amount of the improvement fee that would have been paid, while the extra capacity portion of the cost of constructing a qualified public improvement might be substantially more than that. In this case, the full cost of that

extra capacity is truly a saved cost to the city in question. One way to prevent cost over-runs from impacting city resources for other projects would be to credit the over-sizing cost – but as determined by the lesser of the actual cost and the city-planned cost. The credit amount could also be set through mutual agreement between a city and developer in order to protect a developer from being held to outdated project cost estimates. [This is essentially the City's current practice.]

2. How should the City handle requests for credits for the construction of public improvements that are not on the adopted plan and list? Granting credits for the construction of projects that are not on the project list used to calculate the SDC jeopardizes the ability of a city to fully recover remaining SDC-eligible project costs. Done on a routine basis, this practice would make it almost impossible for a city to construct its planned projects with SDC revenues.

RECOMMENDATIONS

We recommend that the City maintain its current credit policy, particularly with respect to the need to limit credits to the planned or agreed-upon cost of the "qualified public improvement" constructed by the developer. We believe that it is important for the City to retain as much control as possible over the prioritization and implementation of its capital plan(s). These plans are created to address total system needs – not just the needs of growth. Without control over how and when those needs are addressed and at what cost, the reprioritization of projects over time can leave important needs unmet while depleting the City's ability to fund necessary improvements. To avoid this outcome, credits should:

- be for the portion of the agreed-upon or planned cost of capacity in excess of that needed to serve the particular development. It is important to note that while credits under this approach could exceed the amount of the improvement fee, they are only "paper" credits. The issue of cash redemption of those credits is addressed in Issue Paper #4;
- not be transferable to other developers;
- be for planned projects only; and
- be provided only upon completion of a "qualified public improvement".

ISSUE PAPER #4

Cash Redemption of Credits

ISSUE

Oregon Revised Statute 223.304 requires that credits be provided against the improvement fee component of system development charges (SDCs). Although required by statute to allow credits to be applied to future system improvement fees, some cities also allow SDC credits to be redeemed for cash. Should Oregon City provide for the cash redemption of SDC credits?

ALTERNATIVES

There are several alternative policies that the City may adopt regarding the cash redemption of credits. The following is a list of potential options:

- Allow credits to be redeemed for cash from SDCs generated from the subsequent build out of the development in question;
- Allow for credits granted to be redeemed for cash, if fund balances allow;
- Provide cash redemption for a portion of the total credit issued;
- Provide cash credits at a fraction of full value, reducing the amount of the total credit issued;
- Grant only non-cash credits, redeemable to reduce future SDC improvement fees – per current policy.

ANALYSIS

ORS 223.304 requires that credits be granted to a developer only for the "cost" of that portion of an improvement that exceeds the capacity needed to serve that particular development (up to the amount of the improvement fee). There is no provision for cash reimbursement. The statute does allow for "providing a share of the cost of such improvement by other means, if a local government so chooses."

We understand that the City does not currently provide cash credits. Instead, developers may apply credits to reduce the improvement fee component of their SDC. In those cases where a developer has SDC credits remaining after paying off their improvement fee, the developer may apply excess credits in the future if additional SDCs are incurred within five years or they may allow the credits to expire.

If the City allows credits to be redeemable for cash, there exists the potential for cash balances intended to fund near-term capital projects to be paid out as cash credits on low-priority developer-provided improvements. Furthermore, in those cases where developers have excess SDC credits, a cash redemption policy will result in immediate impacts to the City's cash position, rather than deferring such impacts until such time that developers have incurred additional improvement fees.

Policies that limit the availability of cash redemption of credits can minimize these impacts. Such policies may provide credits with any of the following

limitations: (1) only from SDCs generated by the build out of the development in question; (2) only when fund balances allow, after taking into account near-term project needs; (3) redeemable for only a portion of the total credit issued; or (4) redeemable at a fraction of the full credit value.

Of the four options noted above, the best compromise could be to provide cash redemptions from SDCs generated by the build out of the development in question. This would provide full cash compensation to developers for the cost of improvements while protecting the City's cash position and limiting the disruption that the City experiences when projects are built out of preferred order.

RECOMMENDATIONS

In general, providing cash credits will likely diminish City cash flows, and limit the City's ability to prioritize and construct capital projects as scheduled. The likelihood of such problems is directly linked to the extent that the City cash reimburses developers for credits. Accordingly, the City can minimize the risk of depleting its ability to fund necessary improvements by including limitations in its cash redemption policy.

In order to provide full compensation to developers while also minimizing the financial risk to the City, we recommend that the City's credit policy include cash reimbursement only from SDCs generated by the build out of the development in question. As a result, the City will have the ability to choose the timing and the improvements from a healthy cash position.

Although other cities apply similar policies, the City may find that implementation of the recommended approach requires too much manual tracking and coordination among departments (e.g., building, public works, and finance) to be feasible.

ISSUE PAPER #5

Basis of Charging

ISSUE

Oregon Revised Statute 223.301 states that system development charges cannot be

> "determined by the number of employees of an employer without regard to new construction, new development or new use of an existing structure by the employer."

There are a number of different, valid, bases for transportation system development charges (TSDCs) that meet the above criterion. Given the data available and the objectives of the City, what is the best charging basis to use for its transportation SDCs?

ALTERNATIVES

The following are the most commonly used and accepted bases for transportation SDCs:

- Average daily vehicle trips. Average daily vehicle trips are defined as the average 24-hour total of all vehicle trips to and from a site. [Average daily trips provide the City's current TSDC basis.]
- Peak-hour vehicle trips. Peak-hour trips are defined as the average trip rate for the peak hour of adjacent street traffic, usually during the traditional commuting peak periods of 7 am to 9 am (AM peak) and/or 4 pm to 6 pm (PM peak).

There are also a number of adjustments that can be appropriately applied to either of these bases.

ANALYSIS

The Institute of Transportation Engineers (ITE) publishes a detailed compilation of trip generation estimates by land use derived from survey data. This data can be used to calculate average daily and peak-hour vehicle trip generation rates by customer using available information such as land use and building square footage.

Transportation engineers commonly use PM peak-hour trip estimates to assess transportation performance and determine system needs. Average daily trips, as measures of total traffic volume, are not generally used to size a system. The number of average daily trips might determine the need for road maintenance, but PM peak-hour estimates more directly determine the necessary size of the system and its roadways.

Potential Adjustments

- *Pass-By or Linked Trips*

There is documentation presented in the ITE Trip Generation handbook, 7th Edition, that a significant percentage of trip ends associated with specific land uses are a result of linked, or pass-by, trips. Linked trips are interim stops between the trip origin and the final destination. Such stops count as

trip ends for each interim destination, but the impact on the system is as a single trip from the trip origin to the final destination. It would be reasonable to incorporate linked-trip adjustments into the revised SDC structure – particularly for retail land uses, for which there exists the greatest amount of pass-by trip data.

- *Trip Length*

Some jurisdictions apply transportation SDCs that incorporate vehicle miles traveled. In these cases, the estimated trip generation rate applied to a development, for assessment purposes, is adjusted by the average length of those trips – as compared to the average length of all trips systemwide. The reasoning is that even if two given types of land use both generate the same number of trips, if the average trip length associated with one development is twice as long as the average trip length for the second development, the land use with the longer trip length uses more of the transportation system and it should therefore pay a higher transportation charge.

The average trip length of vehicles originating from a development is a valid factor to take into account when evaluating a user's utilization of roadway capacity. Data shows that some land uses generate longer or shorter trips than others, thereby impacting more or less of the roadway system.

Our research found average trip lengths for 45 common land uses. Excluding residential land uses, the average trip factor of the remaining 38 land uses was 0.684, with a maximum trip length factor of 1.37 (industrial and manufacturing land uses) and a minimum of 0.26 (gas station). The full list of available trip length factors for non-residential land uses is provided below.

Land Use Code and Title	Trip Length Factor
110 - General Light Industrial	1.37
130 - Industrial Park	1.37
140 - Manufacturing	1.37
151 - Mini-Warehouse	0.54
493 - Athletic Club	0.85
520 - Elementary School	0.66
522 - Middle School	0.66
530 - High School	0.66
540 - Junior/Community College	1.06
560 - Church	0.68
565 - Day Care	0.68
590 - Library	0.57
710 - General Office	0.89
715 - Single Tenant Office Building	0.89
720 - Medical-Dental Office	0.89
750 - Office Park	0.89
760 - Research & Development Center	0.89
770 - Business Park	0.89
812 - Building Materials & Lumber	0.49
813 - Discount Super Store	0.38
814 - Specialty Retail	0.59
815 - Discount Store	0.38
816 - Hardware/Paint Store	0.49
817 - Nursery/Garden Center	1.06
820 - Shopping Center	0.38
841 - New Car Sales	0.81
848 - Tire Store	0.63
850 - Supermarket	0.37
851 - Convenience Market	0.37
880 - Pharmacy w/o drive through	0.37
881 - Pharmacy w/ drive through	0.37
890 - Furniture Store	1.06
911 - Walk-In Bank	0.42
912 - Drive-In Bank	0.42
931 - Quality Restaurant	0.54
932 - High Turnover Sit-Down Rest.	0.52
934 - Fast Food With Drive-Thru	0.28
944 - Gas Station	0.26

- *Residential / Commercial Zones*

Similar to the utilization of average trip length factors, another approach to differentiating transportation impacts beyond simple trip generation is to allocate roadway costs to broad customer classes by roadway type.

For example, in its development of a transportation utility fee structure, the City assigned all roadways one of four categories: Collector, Residential / Local, Arterial, and Other. The City determined that residential customers would bear 100% of the burden of maintaining residential / local and

"other" streets, 50% of the burden of maintaining collector streets, and none of the burden of maintaining arterial streets.

If the City incorporated this approach into its SDC methodology, it could apply the above residential allocations to transportation improvements on the City's SDC project list. SDC-eligible improvement costs would then be classified as residential or non-residential, and each cost would be recovered from its corresponding customer/development type.

With the City's transportation maintenance utility, nearly 75% of the annual revenue needs were designated for recovery from residential customers. If the City's planned transportation improvements were similarly weighted to serve residential users, the TSDC for non-residential developments would be reduced 50% while residential TSDCs would increase by 50%.

RECOMMENDATIONS

System development charges are intended to recover from growth the share of the capacity needed to serve it. Based on this general understanding, we recommend the use of PM peak-hour trips as the basis for charging transportation SDCs. It is important to note that certain development types may be required to make local improvements to mitigate their impacts on the transportation system during AM or off-peak hours. These requirements would be over and above the system development charge due.

We also recommend that the City make adjustments to the trip generation estimates for retail land uses, if not all non-residential land uses, in order to recognize and account for the impact of pass-by trips. Estimates for such trips, specific to land use, are reported in the ITE manual.

Although a part of the City's existing charge structure, we recommend foregoing a trip-length factor for the proposed TSDC. The City's roadway system, although expanding, may not be large enough to warrant the SDC differentials that would result from the use of these factors.

Likewise, we recommend foregoing a commercial / residential split based on street type. Such an approach would require additional tracking and complexity, while providing arguable additional TSDC equity.

ISSUE PAPER #6

Inclusion of Alternative Modes of Transportation

ISSUE

Oregon Revised Statute (ORS) 223.299 defines a system development charge (SDC) as a fee for costs related to

> "facilities or assets used for the following:
> (A) Water supply, treatment and distribution;
> (B) Waste water collection, transmission, treatment and disposal;
> (C) Drainage and flood control;
> (D) Transportation; or
> (E) Parks and recreation."

Furthermore, ORS 223.304 requires that the improvement fee basis include only the cost of projects "needed to increase the capacity of the systems to which the fee is related". Additionally, ORS 223.307 limits the expenditure of improvement fee proceeds to capital improvements that increase system capacity, specifying that such an increase may be established if a capital improvement "increases the level of performance or service provided by existing facilities or provides new facilities."

Several different types of assets comprise a transportation system. The core of such systems has typically consisted of roadways, traffic signals, bridges, and State highways – facilities designed for vehicle capacity. However, transportation systems clearly now include facilities designed to support "alternative" modes of transportation, such as walking, biking, and public transportation (transit). Given the above statutory requirements, should the costs of alternative transportation facilities be included in the City's transportation SDC?

ALTERNATIVES

The City's current TSDC does not include the costs of alternative mode improvements. Therefore, the City has three options:

1. Retain the existing approach and include only facilities serving automobile transportation.
2. Include the cost of facilities serving alternative transportation modes.
3. Include the costs of selected alternative mode facility types.

ANALYSIS

As stated previously, alternative transportation modes funded by TSDC revenues can include bicycle and pedestrian facilities, transit capital improvements (buses, shelters, and terminals), bus pull-outs, park and ride lots, signage programs, and light rail facilities.

When considering including planned project costs for a given type of

alternative mode facility within the improvement fee component of the TSDC, one prevailing question must be answered – does the alternative mode facility increase system capacity to meet the needs of future users? This can be a particularly difficult question to answer when a city's minimum standards (e.g., for sidewalks) may effectively mean that a system is deficient against the standard as applied to its existing customer base.

Often, the determination of how much of each project's cost is eligible for inclusion in the improvement fee basis is made by estimating the percentage reduction in vehicle trips due to the presence of the alternative transportation mode. This generally results in a relatively small allocation to growth, but is entirely consistent with the way the TSDC is based and charged – on peak-hour vehicle trips. Charging a new customer for improvements to the street system based on peak-hour trips and then adding the full or even proportional cost of alternate modes also based on peak-hour vehicle trips could essentially overcharge for each vehicle trip. The approach used to allocate alternate mode facilities to growth must acknowledge and account for this potential issue.

Generally, including the cost of alternative mode facilities in a TSDC is most relevant when there is a demonstrated direct relationship between the need for such facilities and development. On a policy level, the issue is more a question of "who pays". As alternative modes of transportation become more desired, and often required, by cities, the need for funding those facilities increases. If they are not included in the TSDC cost basis, then the funding liability remains, and other sources must be relied upon.

Furthermore, TSDC revenues dedicated to alternative mode facilities can be used as local matching funds for State and federal funding for such facilities. Also, TSDC revenues could be used to help pay for debt service if such facilities were funded with bonds.

RECOMMENDATIONS

We recommend that the City include the cost of facilities serving alternative modes of transportation within its TSDC, and equitably allocate the cost of such facilities to growth.

ISSUE PAPER #7

Development in Transit and Limited-Parking Areas (i.e., the Regional Center & Molalla Avenue)

ISSUE

Oregon Revised Statute 223.297 states that the purpose of system development charges is to provide a uniform framework for the "equitable funding" of capital improvements. With respect to transportation system development charges (TSDCs), it is generally accepted that an equitable TSDC must be roughly proportionate to each property's relative use of transportation capacity.

Transit and limited-parking corridors, such as the City's designated regional center and Molalla Avenue, are areas suitable for higher residential densities, high-volume non-residential uses, and mixed use properties. Such areas/corridors are centered along major bus routes and/or existing or planned train lines. Traffic modeling has shown that developments in such areas have lower vehicle trip generation rates.

Given the City's objective to fully utilize both its regional center and Molalla Avenue, is there a basis for distinguishing development there when assessing TSDCs that also maintains the equitable nature of the charge?

ALTERNATIVES

In assessing its TSDC to development in the regional center and Molalla Avenue, the City has three basic options:

- Provide a distinction for development within the regional center and Molalla Avenue.
- Provide a distinction for development within the regional center and Molalla Avenue, and restrict such development to high-density uses.
- Make no distinction between development inside and outside the regional center or Molalla Avenue.

ANALYSIS

The regional center is a transit and limited-parking area. In this designated area, the City is building capacity for alternative modes of transportation – such as walking, biking, and busing. One purpose of the regional center is to reduce vehicle congestion, improve air quality, increase the utilization of alternative transportation infrastructure, and reduce the overall cost and the amount of land required to meet transportation demand.

High-density development near and within transit corridors like Molalla Avenue can result in reduced trip lengths (due to the proximity of destinations) and decreased trip counts (resulting from increased utilization of transit facilities). In the long run, development clustered in transit corridors could result in a significant reduction in the amount of roadway capacity needed to serve City needs. Traffic modeling conducted by some municipalities has shown that transit and limited-parking corridors can

extend the service life of current roadway capacity by 20 or even 30 years.

In the short-term, the most reliable data of the information we reviewed indicates that a combination of urban development and transit availability can reduce residential vehicle trips between six to seven percent and fifteen percent (from "Trip Reductions for Residential or Mixed Use Developments within ¼ Mile of a Transit Center", ITE Trip Generation).

In addition to the reduced trip generation of residential developments, there is also a cost-of-service basis for a TSDC credit for non-residential developments. The higher density of development in mixed use areas and transit corridors should allow visitors to park only once to visit more than one commercial establishment. Accordingly, in such areas, the unit cost of meeting transportation demand should be lower. This could serve as a basis for lower transportation system development charges for non-residential developments in the area.

RECOMMENDATIONS

To account for the expected reduction in vehicle trips generated by residential developments within areas like the regional center and Molalla Avenue, we recommend that the City provide a discount for such developments in the amount of 10% of its TSDC.

Given the close proximity of non-residential establishments in high-density areas, we recommend that non-residential developments in the regional center be assessed a TSDC for the lesser of either their estimated trip generation rate or the trip rate for the Shopping Center land use.

Finally, in order to ensure that the developments within the regional center or on applicable sections of Molalla Avenue experience the reduction in vehicle trips that is embedded within the TSDC charge structure, the City should consider a policy of providing the above-mentioned TSDC adjustments only for permitted uses in the regional center or on Molalla Avenue. It should be the responsibility of the property owner to notify the City of their eligibility for such TSDC adjustments.

ISSUE PAPER #8

Metro Consistency

ISSUE

In July 2007, the Portland area metropolitan service district (Metro) published a report detailing the various approaches to crafting system development charges (SDCs) that promote full and equitable cost recovery. The report noted that the validity of each approach varies by jurisdiction. Given the development characteristics and improvement needs within Oregon City, which recommendations identified in "Promoting Vibrant Communities with System Development Charges" could appropriately be incorporated into the City's transportation system development charge (TSDC)?

ALTERNATIVES

The Metro report recommends five SDC practices/policies that are consistent with regional objectives:

- full cost recovery,
- impact-based SDCs,
- recognition of cost variations by location,
- green design,
- and technical vs. policy-based solutions.

ANALYSIS

Full Cost Recovery

The 2007 Metro report recommends that local governments provide for full cost recovery in SDCs by:

- basing each charge on a recently adopted capital improvements plan projecting needs for at least 10 years,
- including a reimbursement fee component to recover the cost of capacity in existing facilities serving growth,
- incorporating the planning and financing costs associated with improvements as well as the costs of calculating SDCs and accounting for their expenditures and revenues,
- adjusting fees annually to account for changes in costs, including land and materials.

The City is currently updating a 20-year capital improvements plan, developed for the 2001 Transportation System Plan. The updated list will serve as the basis for the improvement fee, absent financing costs. Additionally, as the City has previous TSDC revenues with which it has funded capacity improvements, we have recommended that a reimbursement fee component be incorporated into the City's updated TSDC. Similarly, the proposed TSDC methodology would incorporate the costs of calculating the TSDC and accounting for revenues and expenditures. Also, the City does adjust its fees annually according to

changes in a regional construction cost index.

Impact-Based SDCs

In order to reflect the true costs of serving different types of development and land uses, the Metro report recommends:

- differentiating TSDCs by type of dwelling and type of non-residential land use;
- varying residential TSDCs by house size to reflect the fact that "dwelling size is a potential indicator of the number of occupants," which relates to trip generation;
- varying residential TSDCs by the number of units per lot in recognition that high-density development has less impact on roadways and is less costly to serve per unit.

The proposed TSDC methodology differentiates the charge according to type of land use, however distinctions related to housing size and homes per lot have yet to be considered. Relatedly, the City's current TSDC structure includes an adjustment for the average length of the vehicle trips generated by the various types of development.

Recognition of Cost Variations By Location

Since the location of a development is an important factor of the relative cost of serving it, the Metro Report recommends that local governments consider location-based SDCs, especially if development is expected in an area with limited transportation infrastructure relative to projected demand.

A location-based TSDC would result in lower or discounted charges in the downtown core, mixed use areas, and transit and limited-parking corridors in recognition of the fact that developments in such areas generate fewer and shorter vehicle trips.

The TSDC methodology proposed for the City's updated charge provides discounts for developments within high-density areas. Also, individual high-density residential developments could be eligible for a discounted TSDC after providing documentation of their reduced vehicle trip generation rates.

Green Design

The Metro Report notes that adopting green design standards has led to a reduced need for additional infrastructure improvements. The Report also recommends discounting TSDCs for green design features: transportation demand management measures and site designs that may reduce vehicle trip generation (for example, bicycle parking structures or reduced parking).

Although the City has yet to adopt design standards that would reduce the capacity demand of future development, sites that incorporate green design features are eligible for a discounted TSDC after providing documentation of their reduced vehicle trip generation rates.

Technical vs. Policy-Based Solutions

The Metro Report notes that either a technical or a policy basis can support differences in the total TSDC assessed to a particular development. Both bases reflect the infrastructure impact of development characteristics such as land use, density, location, and design elements. However, policy-based differences often have less supporting documentation and typically result in a decrease in SDC revenues that must be funded from other governmental revenues. On the other hand, technically-based charge variations can be incorporated into the TSDC methodology to ensure full cost recovery. It is our belief that such "technical" or cost-based variations are consistent with the statutory requirement that ratemaking principles be used to develop the SDC, or more specifically, the reimbursement fee.

RECOMMENDATIONS

Full Cost Recovery

In order to ensure full recovery of costs required to meet the capacity demands of growth, we recommend that the City use the 20-year project list under development. The City should also update its capital improvement plans as often as necessary to ensure that they are comprehensive in their identification of required improvements to serve growth.

Additionally, the City should ensure that the construction cost index utilized to annually adjust the TSDC is the most effective measure of changes in the City's cost of building transportation infrastructure.

Impact-Based SDCs

We recommend that the City continue to vary its TSDC by land use type, without incorporating distinctions related to specific housing size and/or homes per lot.

Recognition of Cost Variations By Location

We recommend that location-based considerations in the allocation of planned transportation improvement costs be limited to dedicated high-density areas for development (the Regional Center and Molalla Avenue).

Green Design

We recommend that the City provide for the use of alternative methodologies to calculate individual TSDCs. Such a process would allow documented site-specific trip generation estimates to supersede the Institute of Transportation Engineers (ITE) estimates used to initially calculate the applicable charge. For example, if it could be shown that the inclusion of physical features like bicycle racks or parking limitations support reduced trip generation rates, then that green design practice would be charged for the lower trip generation. In addition, the TSDC adopting ordinance should explicitly encourage green design and the resulting reduction in trip generation.

Technical vs. Policy-Based Solutions

Finally, we concur with the recommendation that technically-based considerations in the TSDC be given preference over policy-based approaches. Although there is sound reasoning underlying assumptions in lower or greater vehicle trip rates and cost of service based on specific development characteristics, distinctions in the transportation charge should be supported by documented variations.

Appendix B

Technical Analysis

Oregon City
Transportation SDC Study
Transportation Fee Calculation

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Table 1

Reimbursement Fee		**Roadway Improvements**		**Bike / Ped Improvements**	
Cost of Net Unused Capacity		$ 6,208,392		$ -	
Citywide Growth to End of Planning Period		23,448	Peak-Hour Trips	31,974	Bike / Ped Trips
Reimbursement Fee		$ 264.78	per P-HT	$ -	per Bike/Ped Trip
Improvement Fee					
Capacity Expanding Projects		$ 156,840,988		$ 6,432,131	
Citywide Growth to End of Planning Period		23,448	Peak-Hour Trips	31,974	Bike / Ped Trips
Improvement Fee		$ 6,689.01	per P-HT	$ 201.17	per Bike/Ped Trip
Total System Development Charge					
Reimbursement Fee		$ 264.78	per P-HT	$ -	per Bike/Ped Trip
Improvement Fee		$ 6,689.01	per P-HT	$ 201.17	per Bike/Ped Trip
TSDC Subtotal		$ 6,953.78	per P-HT	$ 201.17	per Bike/Ped Trip
plus: Administrative Cost Recovery	0.67%	$ 46.25	per P-HT	$ 1.34	per Bike/Ped Trip
Total TSDC		**$ 7,000**	per P-HT	**$ 202.51**	per Bike/Ped Trip

Oregon City
Transportation SDC Study
Customer Data: Trip Growth

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Table 2

Trip Data

Vehicle Trips within UGB	#	Year	Note
Initial Peak-Hour Trips	24,892	2005	(1)
Current Peak-Hour Trips	26,955	2008	(2)
P-HT Growth During Study Period	**23,448**		(3)
Future Peak-Hour Trips	48,339	2030	(1)
Average Annual Peak-Hour Trip Growth	2.69%		
% Future Composed of Growth	48.51%		

Bike / Ped Trips within UGB		Note
Peak-Hour Trip Growth	23,448	(3)
Average Daily Trip Growth (estimate)	234,476	(4)
Bike/Ped % of Total Trips	12.0%	(5)
Total Daily Trip Growth (Vehicle & Bike/Ped)	266,450	
Bike/Ped Daily Trip Growth	**31,974**	

NOTES

(1) Source: 2005-2030 Metro Travel Demand Model.

(2) Interpolated from the average annual growth rate for peak-hour trips from 2005 to 2030.

(3) Source: 2008 Oregon City Transportation SDC Rate. DKS Associates. Growth between the 2005 and 2030 Metro travel demand model data for land within the urban growth boundary. This does include the urban level development assumptions within the Park Place Concept Plan area and the Beavercreek Concept Plan area.

(4) Estimate based on standard ratio of 10 average daily trips per 1 peak-hour trip.

(5) Census travel data in the Portland Metro area demonstrates that walking, bike, and transit trips generally account for 12% of all trips.

Oregon City
Transportation SDC Study
Existing Infrastructure Costs for TSDC

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Table 3

Description	Capacity Related	**Unused Capacity**	Used Capacity
Historical TSDC Expenditures (1)	$ 7,775,416	**$ 6,208,392**	$ 1,567,025

NOTES

(1) Unused Capacity of Assets Funded by TSDC Expenditures. To date, the charge has not had a reimbursement fee component (source: 1997 Transportation System Development Charge update).

Unused Capacity of Assets Funded by TSDC Expenditures

Construction Year	**FY 1993**	**FY 1994**	**FY 1995**	**FY 1996**	**FY 1997**	**FY 1998**	**FY 1999**	**FY 2000**	**FY 2001**
Improvement Fee Expenditures [Note A]	$ 12,444.45	$ 5,162.59	$ 507,848.58	$ 714,934.89	$ 136,329.78	$ 607,437.68	$ 349,194.47	$ 2,150,624.00	$ 3,291,440.00
Percentage For Capacity Increasing Projects	100%	100%	100%	100%	100%	100%	100%	100%	100%
Applicable TSDC Expenditures	$ 12,444	$ 5,163	$ 507,849	$ 714,935	$ 136,330	$ 607,438	$ 349,194	$ 2,150,624	$ 3,291,440
Beginning Trip Total [Note B]	18,101	18,588	19,088	19,601	20,129	20,670	21,226	21,797	22,384
Current Trip Total (FY 2008) [Note B]	26,955	26,955	26,955	26,955	26,955	26,955	26,955	26,955	26,955
Ending Trip Total for Study Period (FY 2030) [Note B]	48,339	48,339	48,339	48,339	48,339	48,339	48,339	48,339	48,339
% of Capacity Used by Growth to FY 2008	**29.3%**	**28.1%**	**26.9%**	**25.6%**	**24.2%**	**22.7%**	**21.1%**	**19.4%**	**17.6%**
Cost of Unused Capacity	**$ 8,800**	**$ 3,711**	**$ 371,258**	**$ 531,986**	**$ 103,340**	**$ 469,458**	**$ 275,410**	**$ 1,732,696**	**$ 2,711,733**

Note [A]. Source: FY1991 - FY2001 Street SDC report of revenues and expenditures (Program 401).

Note [B]. Source: Historical peak-hour trips derived from rate of growth implied in 2005-2030 trip forecast.

Oregon City
Transportation SDC Study
TSDC Project List -- Road Improvements

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Table 4

#	Project Source (1)	Yr of Cost Estimate	Project Title (1)	Eligible Capacity Increasing % (2)	Serving Existing Deficiency	City Funding Responsibility (3)	Project Cost (1)	SDC Eligible Cost
			State Facility Projects (All Sources)					
PP-1	2008 List	2008	HWY 213 Corridor Improvements (I-205 to Oregon City UGB)	0.0%	100.0%	30.0%	R-37, R-51, R-52, R-53, R-77, R-88, R-105	See Related Project Costs
R-37	2008 List	2008	HWY 213: I-205 to Redland Rd	17.3%	82.7%	30.0%	PP-1, R-51, R-52, R-53, R-77, R-88	See Related Project Costs
R-38	2008 List	2008	HWY 213: Molalla Ave to Henrici Rd	23.8%	76.2%	30.0%	R-54, R-55, R-56, P-51	See Related Project Costs
R-48	2008 List	2008	HWY 99E/I-205 SB Ramps	93.0%	7.0%	30.0%	762,000	212,598
R-49	2008 List	2008	HWY 99E/I-205 NB Ramps	0.0%	100.0%	30.0%	783,000	-
R-50	2008 List	2008	HWY 99E/Main Street	38.8%	61.2%	30.0%	422,000	49,159
R-52	2008 List	2008	HWY 213/Washington Street	83.0%	17.0%	30.0%	20,000,000	4,980,000
R-53	2008 List	2008	Hwy 213/Redland Road	99.0%	1.0%	40.0%	10,600,000	4,197,600
R-54	2008 List	2008	HWY 213/Molalla Avenue	54.0%	46.0%	30.0%	1,450,000	235,026
R-55	2008 List	2008	HWY 213/Glen Oak Road/Caufield Road	79.0%	21.0%	30.0%	340,000	80,580
R-56	2008 List	2008	HWY 213/Henrici Road	62.8%	37.2%	30.0%	720,000	135,574
R-77	2008 List	2008	Redland Rd/Abernethy Rd	84.0%	16.0%	30.0%	450,000	113,400
R-88	2008 List	2008	Redland Rd extension between Abernethy Rd & Washington St	39.2%	60.8%	30.0%	13,100,000	1,540,959
R-105	2008 List	2008	Hwy 213/Beavercreek Road (improvement for existing deficiency)	0.0%	100.0%	30.0%	50,000,000	-
			Beavercreek Concept Plan-BR					
BR-1	2008 List	2008	Beavercreek Rd: Marjorie Ln to Clairmont Dr (CCC Entrance)	51.6%	48.4%	100.0%	6,300,000	3,251,502
BR-2	2008 List	2008	Beavercreek Rd: Clairmont Dr (CCC Entrance) to UGB (not Henrici)	54.0%	46.0%	100.0%	10,995,000	5,940,487
BR-3	2008 List	2008	Clairmont Drive: Beavercreek Road to Center Parkway	100.0%	0.0%	100.0%	2,400,000	2,400,000
BR-4	2008 List	2008	Loder Road: Beavercreek Road to Center Parkway	54.8%	45.2%	100.0%	1,400,000	766,610
BR-5	2008 List	2008	Loder Road: Center Parkway to East Site Boundary	100.0%	0.0%	100.0%	4,200,000	4,200,000
BR-6	2008 List	2008	Meyers Road: Beavercreek Road to Ridge Parkway	100.0%	0.0%	100.0%	3,500,000	3,500,000
BR-7	2008 List	2008	Glen Oak Road: Beavercreek Road to Ridge Parkway	100.0%	0.0%	100.0%	3,400,000	3,400,000
BR-8	2008 List	2008	Center Parkway: Old Acres Ln to Thayer Road	100.0%	0.0%	100.0%	17,700,000	17,700,000
BR-9	2008 List	2008	Ridgeway Parkway: Old Acres Ln to North Site Boundary	100.0%	0.0%	100.0%	9,800,000	9,800,000
BR-10	2008 List	2008	Beavercreek Road/Maplelane Road	53.4%	46.6%	100.0%	250,000	133,444
BR-11	2008 List	2008	Beavercreek Road/Meyers Road	53.1%	46.9%	100.0%	5,000,000	2,654,172
			Park Place Concept Plan-PP					
PP-2	2008 List	2008	Redland Road: Abernethy/Holcomb to Swan Ave (Holly Ln)	39.6%	60.4%	100.0%	11,500,000	4,558,791
PP-3	2008 List	2008	Holly Lane: Redland to Maplelane Road	54.4%	45.6%	100.0%	1,000,000	544,218
PP-4	2008 List	2008	Livesay Road: Swan Ext to Holly Ext	76.3%	23.7%	100.0%	1,800,000	1,373,333
PP-5	2008 List	2008	Donovan Road: Holly Lane to Ogden Middle School	62.8%	37.2%	100.0%	1,200,000	753,191
PP-6	2008 List	2008	Swan Ave Extension: Existing Swan Ave S to Holcomb Blvd	100.0%	0.0%	100.0%	1,100,000	1,100,000
PP-8	2008 List	2008	Swan Ave Extension: Redland Rd to Holly Ln	100.0%	0.0%	100.0%	9,300,000	9,300,000

#	Project Source (1)	Yr of Cost Estimate	Project Title (1)	Eligible Capacity Increasing % (2)	Serving Existing Deficiency	City Funding Responsibility (3)	Project Cost (1)	SDC Eligible Cost
PP-9	2008 List	2008	Holly Lane Extension: Redland Rd to Holcomb Blvd	100.0%	0.0%	100.0%	17,400,000	17,400,000
PP-10	2008 List	2008	Anchor Way/Redland	70.0%	30.0%	100.0%	2,900,000	2,030,000
PP-11	2008 List	2008	Holly Ln/Redland Rd	65.0%	35.0%	100.0%	2,000,000	1,300,000
PP-12	2008 List	2008	Holly Ln/Maplelane Rd	65.0%	35.0%	100.0%	1,600,000	1,040,000
PP-13	2008 List	2008	Swan Ave/Holcomb Blvd	69.2%	30.8%	100.0%	300,000	207,468
			Roadway System Plan-R (City Streets)					
R-10	2008 List	2008	Washington Street/12th Street	29.9%	70.1%	100.0%	510,000	152,696
R-11	2008 List	2008	Anchor Way: 18th St to Redland Rd	40.0%	60.0%	100.0%	445,000	178,000
R-12	2008 List	2008	Beavercreek Road: CCC to Glen Oak Rd	0.0%	100.0%	100.0%	See cost for BR-2.	-
R-13	2008 List	2008	Boynton Street: Warner Parrot Rd to Buol St	40.0%	60.0%	100.0%	445,000	178,000
R-14	2008 List	2008	Central Point Road: Roundtree Dr to UGB	40.0%	60.0%	100.0%	940,000	376,000
R-15	2008 List	2008	Forsythe Rd: Clackamas River Dr to Swan Ave	40.0%	60.0%	100.0%	1,200,000	480,000
R-16	2008 List	2008	Gaffney Lane: Molalla Ave to Meyers Rd	40.0%	60.0%	100.0%	1,635,000	654,000
R-17	2008 List	2008	Glen Oak Road: HWY 213 to Beavercreek Rd	100.0%	0.0%	100.0%	825,000	825,000
R-18	2008 List	2008	Holcomb Road: Redland Rd to UGB	40.0%	60.0%	100.0%	2,710,000	1,084,000
R-19	2008 List	2008	Holmes Lane-Hilda St: Linn Ave to Alden St	40.0%	60.0%	100.0%	1,090,000	436,000
R-20	2008 List	2008	Leland Rd: McCord Rd to UGB	100.0%	0.0%	100.0%	1,616,000	1,616,000
R-21	2008 List	2008	Maplelane Road: Beavercreek Rd to UGB	40.0%	60.0%	100.0%	1,360,000	544,000
R-22	2008 List	2008	McCord Road: Central Point Rd to Leland Rd	40.0%	60.0%	100.0%	740,000	296,000
R-23	2008 List	2008	Partlow Road: South End Rd to Central Point Rd	40.0%	60.0%	100.0%	1,700,000	680,000
R-24	2008 List	2008	Pease Road: Leland Rd to McCord Rd	40.0%	60.0%	100.0%	1,070,000	428,000
R-25	2008 List	2008	Redland Rd: Holly Ln to UGB	100.0%	0.0%	100.0%	2,212,000	2,212,000
R-26	2008 List	2008	South End Road: Partlow Rd to UGB	100.0%	0.0%	100.0%	1,445,000	1,445,000
R-27	2008 List	2008	Swan Avenue: Holcomb Rd to Forsythe Rd	40.0%	60.0%	100.0%	851,000	340,400
R-28	2008 List	2008	Thayer Road: Maplelane Rd to UGB	40.0%	60.0%	100.0%	902,000	360,800
R-29	2008 List	2008	Washington St-Clackamas River Drive: Abernethy Rd to UGB	100.0%	0.0%	100.0%	1,750,000	1,750,000
R-30	2008 List	2008	Holcomb Road/Front St/Beemer Jacobs Way	52.5%	47.5%	100.0%	1,130,000	593,690
R-31	2008 List	2008	Leland Rd/Pease Rd	72.6%	27.4%	100.0%	250,000	181,513
R-34	2008 List	2008	Warner Milne Rd/Molalla Ave	30.7%	69.3%	100.0%	1,614,000	496,228
R-35	2008 List	2008	Warner Milne/Warner Parrott Rd/Leland/Linn Ave/Central Point Rd	42.8%	57.2%	100.0%	2,000,000	856,924
R-40	2008 List	2008	Washington Street: 12th St to 7th St	35.4%	64.6%	100.0%	1,340,000	474,768
R-42	2008 List	2008	Molalla Avenue: Holmes Lane to HWY 213	31.9%	68.1%	100.0%	See related project costs.	-
R-44	2008 List	2008	Warner Milne Road: Beavercreek Rd to Leland/Linn Ave	28.6%	71.4%	100.0%	7,500,000	2,148,058
R-61	2008 List	2008	Main Street/14th Street	65.0%	35.0%	100.0%	515,000	334,750
R-62	2008 List	2008	Main Street/10th Street	65.0%	35.0%	100.0%	515,000	334,750
R-63	2008 List	2008	Molalla Avenue/Barclay Hills Dr	32.3%	67.7%	100.0%	60,000	19,394
R-64	2008 List	2008	Molalla Avenue/Clairmont Way	23.5%	76.5%	100.0%	400,000	94,068
R-65	2008 List	2008	Molalla Avenue/Gaffney Lane	23.6%	76.4%	100.0%	450,000	106,354
R-66	2008 List	2008	Beavercreek Rd/Warner Milne Rd	27.4%	72.6%	100.0%	440,000	120,402
R-69	2008 List	2008	Beavercreek Rd/Glen Oak Rd	54.0%	46.0%	100.0%	See cost for BR-7.	-
R-70	2008 List	2008	Warner Parrott Rd/South End Rd	65.0%	35.0%	100.0%	1,553,580	1,009,827
R-71	2008 List	2008	Warner Parrott Rd/Central Point Rd	42.5%	57.5%	100.0%	See R-35	-
R-72	2008 List	2008	Warner Milne Rd/Linn-Leland Ave	42.9%	57.1%	100.0%	See R-35	-

#	Project Source (1)	Yr of Cost Estimate	Project Title (1)	Eligible Capacity Increasing % (2)	Serving Existing Deficiency	City Funding Responsibility (3)	Project Cost (1)	SDC Eligible Cost
R-73	2008 List	2008	South End Rd/High Street/S 2nd St	65.0%	35.0%	100.0%	1,367,604	888,943
R-75	2008 List	2008	Linn Ave/Davis Rd/Ethel St	86.0%	14.0%	100.0%	510,300	438,858
R-76	2008 List	2008	Leland Rd/Clairmont Way/Meyers Rd	67.9%	32.1%	100.0%	510,300	346,493
R-79	2008 List	2008	Spring Valley Dr: Partlow Rd to Salmonberry Dr	0.0%	100.0%	100.0%	N/A	-
R-80	2008 List	2008	Shenandoah Dr: Central Point to Pease Rd & Pease to Leland Rd	28.6%	71.4%	100.0%	N/A	-
R-83	2008 List	2008	South Douglas Loop (CCC) to Glen Oak Road	23.7%	76.3%	100.0%	3,120,000	739,518
R-84	2008 List	2008	Coquille Drive Extension	49.7%	50.3%	100.0%	5,200,000	2,586,347
R-86	2008 List	2008	Meyers Road to Caufield Road	65.8%	34.2%	100.0%	N/A	-
R-91	2008 List	2008	SE 82nd Drive crossing of Clackamas River	24.9%	75.1%	100.0%	N/A	-
R-92	2008 List	2008	Fir Street Extension: Highway 213 to Beavercreek Road	51.5%	48.5%	100.0%	18,750,000	9,660,883
R-93	2008 List	2008	Ethel St to May St (south of Holmes Lane)	44.5%	55.5%	100.0%	N/A	-
R-94	2008 List	2008	Laurel Lane Extension: May St to Warner Milne Rd	42.7%	57.3%	100.0%	N/A	-
R-95	2008 List	2008	Roosevelt St Extension: Molalla Ave to Linn Ave	45.6%	54.4%	100.0%	N/A	-
R-96	2008 List	2008	12th Street Extension: Taylor St to Grant St	40.3%	59.7%	100.0%	N/A	-
R-97	2008 List	2008	Skellenger Way to Meyers Road/Clairmont Way	40.4%	59.6%	100.0%	N/A	-
R-98	2008 List	2008	Meyers Road Extension: Highway 213 to High School Lane	54.2%	45.8%	100.0%	10,000,000	5,415,282
R-102	2008 List	2008	Parrish Road Extension	100.0%	0.0%	100.0%	4,000,000	4,000,000
R-104	2008 List	2008	Molalla Avenue/Taylor/Division	34.2%	65.8%	100.0%	1,000,000	341,998
R-106	2008 List	2008	Agnes Street: Main Street to Highway 213	61.4%	38.6%	100.0%	13,575,000	8,332,559
Total				**58.1%**	**41.9%**	**78.3%**	**$ 312,918,784**	**$ 158,455,615**
less: Beginning FY2007 Transportation SDC Fund Balance (4)								$ 1,614,627
Total Future Capital Projects for SDC Calculation								$ 156,840,988

NOTES

(1) 2008 List = Primary sources were the 2001 Transportation System Plan and the Beavercreek Road and Park Place Concept Plans. Original cost estimates in 2001 TSP were updated to 2008 dollars.

(2) Projects were allocated based on growth's share of total future peak-hour trips. When such data was unavailable, baseline projections of vehicle/capacity (V/C) ratios were utilized to determine existing system deficiencies.

(3) Minimum 10% City match for State project costs. The City anticipates potential City contribution of at least 30% and up to 40%.

(4) Source: FY2007 City budget.

Oregon City
Transportation SDC Study
TSDC Project List -- Bike/Ped Improvements

FINAL

Table 5

#	Project Source (1)	Yr of Cost Estimate	Project Title (1)	Eligible Capacity Increasing % (2)	Serving Existing Deficiency	Project Cost (1)	SDC Eligible Cost
			Bicycle System Improvements-B				
B-2	2008 Bike/Ped	2008	Beavercreek Road (Maplelane to UGB)	48.5%	51.5%	$ 55,080	$ 26,717
B-3	2008 Bike/Ped	2008	Molalla Avenue (Beavercreek to Hwy 213)	48.5%	51.5%	29,160	14,144
B-4	2008 Bike/Ped	2008	Singer Hill (Hwy 99E to 7th St)	48.5%	51.5%	N/A	-
B-5	2008 Bike/Ped	2008	South End Road (Barker Avenue to UGB)	48.5%	51.5%	2,360,897	1,145,187
B-6	2008 Bike/Ped	2008	Warner Milne Road (Linn Ave to Molalla Ave)	48.5%	51.5%	23,328	11,316
B-7	2008 Bike/Ped	2008	Washington Street (11th Street to 5th Street)	48.5%	51.5%	12,960	6,286
B-8	2008 Bike/Ped	2008	Highway 99E (S 2nd Street to South UGB)	48.5%	51.5%	133,650	64,829
B-9	2008 Bike/Ped	2008	Highway 213 (I-205 to Molalla Ave)	48.5%	51.5%	12,960	6,286
B-10	2008 Bike/Ped	2008	5th Street (High street to Jackson street)	48.5%	51.5%	7,128	3,458
B-11	2008 Bike/Ped	2008	Anchor Way (Redland Road to Division Street)	48.5%	51.5%	See cost for R-11.	-
B-12	2008 Bike/Ped	2008	Central Point Road (Warner Parrott to UGB)	48.5%	51.5%	125,388	60,821
B-13	2008 Bike/Ped	2008	Division Street (Anchor Way to Molalla Ave)	48.5%	51.5%	33,048	16,030
B-14	2008 Bike/Ped	2008	Gaffney Lane (Molalla Avenue to Meyers Road)	48.5%	51.5%	See cost for R-16.	-
B-15	2008 Bike/Ped	2008	Holmes Lane (Telford Road to Molalla Avenue)	48.5%	51.5%	9,720	4,715
B-16	2008 Bike/Ped	2008	Leland Road (Warner Milne Road to UGB)	48.5%	51.5%	2,195,988	1,065,195
B-17	2008 Bike/Ped	2008	Main Street Extension	48.5%	51.5%	346,874	168,256
B-18	2008 Bike/Ped	2008	Monroe Street (12th Street to 5th Street)	48.5%	51.5%	7,290	3,536
B-19	2008 Bike/Ped	2008	Partlow Road (South End Road to Central Point Road)	48.5%	51.5%	See cost for R-23.	-
B-20	2008 Bike/Ped	2008	12th Street (99E to Taylor St)	48.5%	51.5%	45,360	22,003
B-21	2008 Bike/Ped	2008	15th Street (Washington St to Division St)	48.5%	51.5%	11,340	5,501
B-22	2008 Bike/Ped	2008	Barker Ave (South End Rd to Telford Ave)	48.5%	51.5%	8,100	3,929
B-24	2008 Bike/Ped	2008	Center Street (7th St to Telford Ave)	48.5%	51.5%	31,104	15,087
B-25	2008 Bike/Ped	2008	Clackamette Drive (Main St Extension to Highway 99E)	48.5%	51.5%	19,440	9,430
B-26	2008 Bike/Ped	2008	Front Avenue (Forsythe Rd to Holcomb Rd)	48.5%	51.5%	21,384	10,373
B-28	2008 Bike/Ped	2008	High Street (7th St to S 2nd St)	48.5%	51.5%	8,586	4,165
B-29	2008 Bike/Ped	2008	Hilda St/Alden St/Barclay Hills Dr-Molalla Ave to Newell Ridge Dr	48.5%	51.5%	6,480	3,143
B-30	2008 Bike/Ped	2008	Holcomb Boulevard (Abernethy Rd to UGB)	48.5%	51.5%	65,448	31,746
B-31	2008 Bike/Ped	2008	Jackson Street (15th St to 12th St)	48.5%	51.5%	6,480	3,143
B-32	2008 Bike/Ped	2008	Main Street (Main Extension to Singer Hill)	48.5%	51.5%	11,340	5,501
B-33	2008 Bike/Ped	2008	Meyers Road (Highway 213 to Beavercreek Rd)	48.5%	51.5%	See cost for R-98.	-
B-34	2008 Bike/Ped	2008	Railroad Avenue (Main St to Hwy 99E)	48.5%	51.5%	4,860	2,357
B-35	2008 Bike/Ped	2008	Swan Avenue (Forsythe Rd to Holcomb Blvd)	48.5%	51.5%	8,910	4,322
B-36	2008 Bike/Ped	2008	Telford Road (Center St to Holmes Lane)	48.5%	51.5%	8,100	3,929

#	Project Source (1)	Yr of Cost Estimate	Project Title (1)	Eligible Capacity Increasing % (2)	Serving Existing Deficiency	Project Cost (1)	SDC Eligible Cost
B-37	2008 Bike/Ped	2008	Taylor Street (12th St to 7th St)	48.5%	51.5%	10,368	5,029
B-38	2008 Bike/Ped	2008	Canemah Road (Telford Road to Warner Parrott Road)	48.5%	51.5%	3,564	1,729
B-39	2008 Bike/Ped	2008	Davis Road (Telford Road to Linn Avenue)	48.5%	51.5%	5,994	2,907
B-40	2008 Bike/Ped	2008	Cleveland Street (Front Street to Swan Avenue)	48.5%	51.5%	10,692	5,186
B-41	2008 Bike/Ped	2008	Clackamas River Drive (Hwy 213 to UGB)	48.5%	51.5%	27,540	13,359
B-42	2008 Bike/Ped	2008	Abernethy Road (Washington Street to Redland Road)	48.5%	51.5%	17,172	8,330
B-43	2008 Bike/Ped	2008	Fir Street (Molalla Avenue to Beavercreek Road)	48.5%	51.5%	29,160	14,144
B-44	2008 Bike/Ped	2008	Melinda Street (Clackamas River Drive to Front Street)	48.5%	51.5%	4,212	2,043
			Recommended Pedestrian Improvements				
P-1	2008 Ped List		Highway 213 (Molalla Avenue to UGB)	48.5%	51.5%	-	-
P-2	2008 Ped List		Highway 99E (Clackamas River Br to Dunes Drive)	48.5%	51.5%	-	-
P-4	2008 Ped List		Highway 99E (Tumwater Drive to Hedges Street)	48.5%	51.5%	-	-
P-5	2008 Ped List		Abernethy-Holcomb Blvd (Washington Street to Winston Drive)	48.5%	51.5%	See cost for R-18.	-
P-6	2008 Ped List		Abernethy-Holcomb Blvd (Redland Road to Winston Drive)	48.5%	51.5%	See cost for R-18.	-
P-10	2008 Ped List		Beavercreek Road (Maplelane Road to UGB)	48.5%	51.5%	See costs for BR-1 & BR-2.	-
P-11	2008 Ped List		Berta Drive (Clairmont Way to Gaffney Lane)	48.5%	51.5%	116,640	56,578
P-12	2008 Ped List		Berta Drive (Gaffney Lane to End)	48.5%	51.5%	77,760	37,719
P-13	2008 Ped List		Boynton Street (warner Parrott Road to Buol street)	48.5%	51.5%	See cost for R-13.	-
P-14	2008 Ped List		Center Street (S 2nd Street to Telford Road)	48.5%	51.5%	388,800	188,593
P-15	2008 Ped List		Central Point Road (Roundtree Drive to Partlow Road)	48.5%	51.5%	See cost for R-14.	-
P-16	2008 Ped List		Central Point Road (Skellenger Way to UGB)	48.5%	51.5%	See cost for R-14.	-
P-17	2008 Ped List		Central Point Road (Roundtree Drive to UGB)	48.5%	51.5%	See cost for R-14.	-
P-18	2008 Ped List		Clackamas River Drive (Hwy 213 to UGB)	48.5%	51.5%	See cost for R-29.	-
P-19	2008 Ped List		Clairmont Way (Southwood Drive to Leland Road)	48.5%	51.5%	291,600	141,445
P-20	2008 Ped List		Clairmont Way (Molalla Avenue to Leland Road)	48.5%	51.5%	388,800	188,593
P-21	2008 Ped List		Division Street (Selma Street to 12th Street)	48.5%	51.5%	58,320	28,289
P-22	2008 Ped List		Division Street (Gilman Park Drive to Anchor Way)	48.5%	51.5%	194,400	94,296
P-23	2008 Ped List		Division Street (15th Street to Anchor Way)	48.5%	51.5%	71,604	34,733
P-24	2008 Ped List		Forsythe Road (Clackamas River Dr to UGB)	48.5%	51.5%	See cost for R-15.	-
P-25	2008 Ped List		Front Avenue (Forsythe Road to Holcomb Blvd)	48.5%	51.5%	264,141	128,125
P-26	2008 Ped List		Gaffney Lane (Meyers Road to Lazy Creek Lane)	48.5%	51.5%	See cost for R-16.	-
P-27	2008 Ped List		Glen Oak Road (Hwy 213 to Beavercreek Road)	48.5%	51.5%	486,648	236,056
P-28	2008 Ped List		Holmes Lane (Molalla Avenue to Linn Avenue)	48.5%	51.5%	213,840	103,726
P-29	2008 Ped List		Holmes Lane (Laurel Lane to Reliance Lane)	48.5%	51.5%	See cost for R-19.	-
P-30	2008 Ped List		Leland Road (Warner Milne Road to Whitcomb Drive)	48.5%	51.5%	See cost for R-20.	-
P-31	2008 Ped List		Leland Road (Haven Road to UGB)	48.5%	51.5%	See cost for R-20.	-
P-32	2008 Ped List		Leland Road (Hiefield Court to UGB)	48.5%	51.5%	See cost for R-20.	-
P-33	2008 Ped List		Linn Ave (Jackson Street to Oak Street)	48.5%	51.5%	97,200	47,148
P-34	2008 Ped List		Linn Ave (Charman Street to Holmes Lane)	48.5%	51.5%	155,520	75,437

#	Project Source (1)	Yr of Cost Estimate	Project Title (1)	Eligible Capacity Increasing % (2)	Serving Existing Deficiency	Project Cost (1)	SDC Eligible Cost
P-35	2008 Ped List		Linn Ave (Jackson street to Holmes Lane)	48.5%	51.5%	349,920	169,734
P-36	2008 Ped List		Maplelane Road (Beavercreek Road to Country Village Drive)	48.5%	51.5%	See cost for R-21.	-
P-37	2008 Ped List		McCord Road (Daybreak Court to Leland Road)	48.5%	51.5%	See cost for R-22.	-
P-38	2008 Ped List		McCord Road (Central Point Road to Leland Road)	48.5%	51.5%	See cost for R-22.	-
P-39	2008 Ped List		Meyers Road (Leland Road to Highway 213)	48.5%	51.5%	514,026	249,336
P-40	2008 Ped List		Meyers Road (Leland Road to Gaffney Lane)	48.5%	51.5%	291,600	141,445
P-41	2008 Ped List		Partlow Road (South End Road to Central Point Road)	48.5%	51.5%	See cost for R-23	-
P-42	2008 Ped List		Redland Road (Highway 213 to Abernethy Road)	48.5%	51.5%	See cost for R-25.	-
P-43	2008 Ped List		Redland Road (Abernethy Road to UGB)	48.5%	51.5%	See cost for R-25.	-
P-44	2008 Ped List		South End Road (Warner Parrott Road to UGB)	48.5%	51.5%	See cost for R-26.	-
P-45	2008 Ped List		South End Road (Barker Road to Warner Parrott Rd)	48.5%	51.5%	116,640	56,578
P-46	2008 Ped List		South End Road (Barker Road to 2nd Street)	48.5%	51.5%	855,360	414,905
P-47	2008 Ped List		Swan Avenue (Forsythe Road to Holcomb Blvd)	48.5%	51.5%	See cost for R-27.	-
P-48	2008 Ped List		Telford Road (Center Street to Davis Road)	48.5%	51.5%	445,176	215,939
P-49	2008 Ped List		Thayer Road (Maplelane Road to UGB)	48.5%	51.5%	See cost for R-28.	-
P-50	2008 Ped List		Warner Parrott Road (Linn Ave to South End Road)	48.5%	51.5%	316,467	153,507
P-51	2008 Ped List		Washington Street (Abernethy Road to Hwy 213)	48.5%	51.5%	See cost for R-29.	-
P-52	2008 Ped List		S 2nd Street (Tumwater Drive to Center Street)	48.5%	51.5%	77,760	37,719
P-53	2008 Ped List		15th Street (Highway 99E to Taylor Street)	48.5%	51.5%	816,480	396,045
P-55	2008 Ped List		Hood Street (Linn Ave to Gardiner Middle School)	48.5%	51.5%	116,640	56,578
P-56	2008 Ped List		Ethel Street (Linn Ave to Gardiner Middle School)	48.5%	51.5%	174,960	84,867
P-57	2008 Ped List		Jackson Street (16th Street to Atkinson Park)	48.5%	51.5%	77,760	37,719
P-58	2008 Ped List		Park Drive (Linn Avenue to Rivercrest Park)	48.5%	51.5%	194,400	94,296
P-59	2008 Ped List		Hilda Street (Molalla Avenue to Mountain View Cem.)	48.5%	51.5%	194,400	94,296
P-60	2008 Ped List		Warner Street (Molalla Avenue to St. John's Cem.)	48.5%	51.5%	194,400	94,296
Total				**48.5%**	**51.5%**	**$ 13,260,367**	**$ 6,432,131**

NOTES

(1) 2008 Bike/Ped = Project list provided as an appendix to 2008 Oregon City Transportation SDC Rate memo. DKS Associates.
2008 Ped List = Pedestrian System Plan Sidewalk Projects.

(2) Based on growth's share of total future peak-hour trips (2005-2030).

Oregon City
Transportation SDC Study
Administrative Cost Recovery Calculation

FINAL

Table 6

Net Annual Administrative Cost related to Transportation SDC (1)	$	30,000
Amortization of SDC Study Cost over 5 years (2):		21,239
Net Annual Transportation SDC Administrative Cost:	**$**	**51,239**

Estimated Annual Proposed SDC Revenues before Admin. Cost

Revenues from Roadway Improvements Charge:	$	7,411,335
Revenues from Bike/Ped Improvements Charge:		292,370
	$	**7,703,705**

Admin. Cost / Total Annual Transportation SDC Revenues: **0.67%** on all SDCs

NOTES

(1) Source: City staff.

(2)

Cost of:	**$ 97,270**
at:	**3.0%**
over:	**5** years

Oregon City
Transportation SDC Study
TSDC by Land Use

FINAL

Table 7

TSDC **$ 7,000** per P-HT

ITE Code	Customer Type	Land Use Description	Peak-Hour Trips	Pass-By Trip Factor	Adjusted P-H Ts	TSDC	Units
110	General Light Industrial	Typically less than 500 employees, free standing and single use. Examples: Printing plants, material testing laboratories, data processing equipment assembly, power stations.	0.98	1	0.98	**$ 6,860**	KSF
130	Industrial Park	Industrial Park areas that contain a number of industrial and/or related facilities (mix of manufacturing, service, and warehouse).	0.86	1	0.86	**$ 6,020**	KSF
140	Manufacturing	Facilities that convert raw materials into finished products. Typically have related office, warehouse, research, and associated functions.	0.74	1	0.74	**$ 5,180**	KSF
151	Mini-Warehouse	Storage Units or Vaults rented for storage of goods. Units are physically separate and access through an overhead door or other common access point. Example: U-Store-It.	0.26	1	0.26	**$ 1,820**	KSF
210	SF Detached	Single family detached housing.	1.01	1	1.01	**$ 7,070**	DU
220	Apartment	Rental Dwelling Units within the same building. At least 4 units in the same building. Examples: Quadplexes and all types of apartment buildings.	0.62	1	0.62	**$ 4,340**	DU
230	Condo/Townhouse	Residential Condominium/Townhouses under single-family ownership. Minimum of two single family units in the same building structure.	0.52	1	0.52	**$ 3,640**	DU
240	Mobile Home	Trailers or Manufactured homes that are sited on permanent foundations. Typically the parks have community facilities (laundry, recreation rooms, pools).	0.59	1	0.59	**$ 4,130**	DU
253	Elderly Housing	Restricted to senior citizens. Contains residential units similar to apartments or condos. Sometimes in self-contained villages. May also contain medical facilities, dining, and some limited, supporting retail.	0.17	1	0.17	**$ 1,190**	DU
310	Hotel	Lodging facility that may include restaurants, lounges, meeting rooms, and/or convention facilities. Can include a large motel with these facilities.	0.59	1	0.59	**$ 4,130**	Room
320	Motel	Sleeping accommodations and often a restaurant. Free on-site parking and little or no meeting space.	0.47	1	0.47	**$ 3,290**	Room
430	Golf Course	Includes 9, 18, 27, and 36 hole municipal and private country clubs. Some have driving ranges and clubhouses with pro shops, restaurants, lounges. Many of the muni courses do not include such facilities.	2.74	1	2.74	**$ 19,180**	Hole
435	Multipurpose Recreation Facility	Multi-purpose recreational facilities contain two or more of the following land uses at one site: mini-golf, batting cages, video arcade, bumper boats, go-carts, and driving ranges.	5.77	1	5.77	**$ 40,390**	Acre
437	Bowling Alley	Recreational facilities with bowling lanes which may include a small lounge, restaurant or snack bar.	3.54	1	3.54	**$ 24,780**	Lane
493	Athletic Club	Privately owned with weightlifting and other facilities often including swimming pools, hot tubs, saunas, racquet ball, squash, and handball courts.	5.76	1	5.76	**$ 40,320**	KSF
495	Recreational Community Center	Recreational community centers are facilities similar to and including YMCAs, often including classes, day care, meeting rooms, swimming pools, tennis racquetball, handball, weightlifting equipment, locker rooms, & food service.	1.64	1	1.64	**$ 11,480**	KSF
520 *	Elementary School	Public. Typically serves K-6 grades.	0.28	1	0.28	**$ 1,960**	Student
522	Middle School	Public. Serves students that completed elementary and have not yet entered high school.	0.15	1	0.15	**$ 1,050**	Student
530	High School	Public. Serves students that completed middle or junior high school.	0.14	1	0.14	**$ 980**	Student
540	Junior/Community College	Two-year junior colleges or community colleges.	0.12	1	0.12	**$ 840**	Student
560	Church	Contains worship area and may include meeting rooms, classrooms, dining area and facilities.	0.66	1	0.66	**$ 4,620**	KSF
565 *	Day Care	Facility for pre-school children care primarily during daytime hours. May include classrooms, offices, eating areas, and playgrounds.	13.18 0.82	0.33 0.33	4.35 0.27	**$ 30,450** **$ 1,890**	KSF Student
590	Library	Public or Private. Contains shelved books, reading rooms or areas, sometimes meeting rooms.	7.09	1	7.09	**$ 49,630**	KSF
591	Lodge/Fraternal Organization	Includes a club house with dining and drinking facilities, recreational and entertainment areas, and meeting rooms.	0.03	1	0.03	**$ 210**	Member
710	General Office	Office building with multiple tenants. Mixture of tenants can include professional services, bank and Loan institutions, restaurants, snack bars, and service retail facilities.	1.49	1	1.49	**$ 10,430**	KSF
715	Single Tenant Office Building	Single tenant office building. Usually contains offices, meeting rooms, file storage areas, data processing, restaurant or cafeteria, and other service functions.	1.73	1	1.73	**$ 12,110**	KSF
720	Medical-Dental Office	Provides diagnosis and outpatient care on a routine basis. Typically operated by one or more private physicians or dentists.	3.72	1	3.72	**$ 26,040**	KSF
750	Office Park	Park or campus-like planned unit development that contains office buildings and support services such as banks & loan institutions, restaurants, service stations.	1.5	1	1.5	**$ 10,500**	KSF
760	Research & Development Center	Single building or complex of buildings devoted to research & development. May contain offices and light fabrication facilities.	1.08	1	1.08	**$ 7,560**	KSF
770	Business Park	Group of flex-type or incubator 1 - 2 story buildings served by a common roadway system. Tenant space is flexible to accommodate a variety of uses. Rear of building usually served by a garage door. Typically includes a mix of offices, retail & wholesale.	1.29	1	1.29	**$ 9,030**	KSF

ITE Code	Customer Type	Land Use Description	Peak-Hour Trips	Pass-By Trip Factor	Adjusted P-H Ts	TSDC	Units
812	Building Materials & Lumber	Small, free standing building that sells hardware, building materials, and lumber. May include yard storage and shed storage areas. The storage areas are not included in the GLA needed for trip generation estimates.	4.49	1	4.49	**$ 31,430**	KSF
813	Discount Super Store	A free-standing discount store that also contains a full service grocery dept. under one roof.	3.87	0.718	2.78	**$ 19,460**	KSF
814	Specialty Retail	Small strip shopping centers containing a variety of retail shops that typically specialize in apparel, hard goods, services such as real estate, investment, dance studios, florists, and small restaurants.	2.71	1	2.71	**$ 18,970**	KSF
815	Discount Store	A free-standing discount store that offers a variety of customer services, centralized cashiering, and a wide range of products under one roof. Does not include a full service grocery dept. like Land Use 813, Free-standing Discount Superstore.	5.06	0.475	2.4	**$ 16,800**	KSF
816	Hardware/Paint Store	Typically free-standing buildings with off-street parking that sell paints and hardware.	4.84	0.450	2.18	**$ 15,260**	KSF
817	Nursery/Garden Center	Free-standing building with yard containing planting or landscape stock. May have large green houses and offer landscape services. Typically have office, storage, and shipping facilities. GLA is Building GLA, not yard and storage GLA.	3.8	1	3.8	**$ 26,600**	KSF
820	Shopping Center	Integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Provides enough on-site parking to serve its own parking demand. May include non-merchandising facilities such as office buildings, movie theatres, restaurants, post offices, health clubs, and recreation like skating rinks and amusements.	3.75	0.393	1.47	**$ 10,290**	KSF Leasable
841	New Car Sales	New Car dealership with sales, service, parts, and used vehicles	2.64	1	2.64	**$ 18,480**	KSF
848	Tire Store	Primary business is tire sales and repair. Generally does not have a large storage or warehouse area.	4.15	0.617	2.56	**$ 17,920**	KSF
850	Supermarket	Free-standing grocery store. May also contain ATMs, photo centers, pharmacies, video rental areas.	10.45	0.265	2.76	**$ 19,320**	KSF
851	Convenience Market	Sells convenience foods, newspapers, magazines, and often Beer & Wine. Does not have gas pumps.	52.41	0.282	14.8	**$ 103,600**	KSF
880	Pharmacy w/o drive through	Facilities that fulfill medical Prescriptions	8.42	0.327	2.75	**$ 19,250**	KSF
881	Pharmacy w/ drive through	Facilities that fulfill medical Prescriptions	8.62	0.383	3.3	**$ 23,100**	KSF
890	Furniture Store	Sells furniture, accessories, and often carpet/floor coverings.	0.46	0.157	0.07	**$ 490**	KSF
911 *	Walk-In Bank	Usually a Free-standing building with a parking lot. Does not have drive-up windows. May have ATMs.	33.15	0.270	8.95	**$ 62,650**	KSF
912	Drive-In Bank	Provides Drive-up and walk-in bank services. May have ATMs.	45.74	0.270	12.35	**$ 86,450**	KSF
931	Quality Restaurant	High quality eating establishment with slower turnover rates (more than one hour).	7.49	0.288	2.15	**$ 15,050**	KSF
932	High Turnover Sit-Down Rest.	Sit-Down eating establishment with turnover rates of less than one hour.	10.92	0.315	3.44	**$ 24,080**	KSF
933 *	Fast Food w/o Drive-Thru	Fast Food but no drive-through window	26.15	0.265	6.94	**$ 48,580**	KSF
934	Fast Food with Drive-Thru	Fast Food with drive-through window	34.64	0.265	9.2	**$ 64,400**	KSF
936 *	Drinking Place	Contains a bar where alcoholic beverages and snacks are serviced and possibly some type of entertainment such as music, games, or pool tables	11.34	0.315	3.58	**$ 25,060**	KSF
944	Gas Station	Sell gasoline and may also provide vehicle service and repair. Does not have Convenience Market and/or Car Wash.	13.86	0.235	3.26	**$ 22,820**	Fueling Position
945	Gas/Service Station with Convenience Market	Selling gas and Convenience Market are the primary business. May also contain facilities for service and repair. Does not include Car Wash.	13.38	0.123	1.65	**$ 11,550**	Fueling Position
946 *	Gas/Service Station with Convenience Market, Car Wash	Selling gas, Convenience Market, and Car Wash are the primary business. May also contain facilities for service and repair.	13.33	0.382	5.09	**$ 35,630**	Fueling Position
947	Self-Service Car Wash	Allows manual cleaning of vehicles by providing stalls for the driver to park and wash.	5.54	1	5.54	**$ 38,780**	Wash Stall

NOTES:

Source: Institute of Transportation Engineers, *Trip Generation* , Seventh Edition.
Peak-Hour Trips: Weekday, peak-hour of adjacent street traffic. Most often, one hour between 4 and 6 p.m.
Pass-By Trip Factor reflects diverted linked trips in addition to pass-by trips.
ITE codes identified with asterisks (*) include information derived from the ITE manual (e.g., the pass-by factor is derived from pass-by counts for a similar land use or are as estimated by traffic engineers).

Land Use Units:

- KSF = 1,000 gross square feet building area
- DU = dwelling unit
- Room = number of rooms for rent
- Fueling Positions = maximum number of vehicles that can be served simultaneously
- Student = number of full-time equivalent students enrolled
- Hole = number of individual putting holes that are paired with driving tees
- Acre = 43,560 square feet of park space
- Lane = number of bowling lanes

Residential developments within designated regional centers and the Molalla Avenue area receive a 10% discount on the TSDC.
Non-residential developments within such areas will be assessed for the lesser of their estimated trip generation rate, based on land use, or 1.47 P-HTs per KSF.

Oregon City
Transportation SDC Study
Bicycle/Pedestrian Trip Generation Groups

FINAL

Table 8

Bike/Ped SDC | **$ 202.51** | per bike/ped trip

Group 1	0.1	**Group 4**	0.6
Group 2	0.2	**Group 5**	1.0
Group 3	0.4	**Group 6**	2.0

ITE Code	Customer Type	Land Use Description	Bike/Ped Group	Bike/Ped SDC	Units
110	General Light Industrial	Typically less than 500 employees, free standing and single use. Examples: Printing plants, material testing laboratories, data processing equipment assembly, power stations.	1	**$ 20.25**	KSF
130	Industrial Park	Industrial Park areas that contain a number of industrial and/or related facilities (mix of manufacturing, service, and warehouse).	1	**$ 20.25**	KSF
140	Manufacturing	Facilities that convert raw materials into finished products. Typically have related office, warehouse, research, and associated functions.	2	**$ 40.50**	KSF
151	Mini-Warehouse	Storage Units or Vaults rented for storage of goods. Units are physically separate and access through an overhead door or other common access point. Example: U-Store-It.	1	**$ 20.25**	KSF
210	SF Detached	Single family detached housing.	5	**$ 202.51**	DU
220	Apartment	Rental Dwelling Units within the same building. At least 4 units in the same building. Examples: Quadplexes and all types of apartment buildings.	4	**$ 121.51**	DU
230	Condo/Townhouse	Residential Condominium/Townhouses under single-family ownership. Minimum of two single family units in the same building structure.	4	**$ 121.51**	DU
240	Mobile Home	Trailers or Manufactured homes that are sited on permanent foundations. Typically the parks have community facilities (laundry, recreation rooms, pools).	3	**$ 81.00**	DU
253	Elderly Housing	Restricted to senior citizens. Contains residential units similar to apartments or condos. Sometimes in self-contained villages. May also contain medical facilities, dining, and some limited, supporting retail.	3	**$ 81.00**	DU
310	Hotel	Lodging facility that may include restaurants, lounges, meeting rooms, and/or convention facilities. Can include a large motel with these facilities.	3	**$ 81.00**	Room
320	Motel	Sleeping accommodations and often a restaurant. Free on-site parking and little or no meeting space.	2	**$ 40.50**	Room
430	Golf Course	Includes 9, 18, 27, and 36 hole municipal and private country clubs. Some have driving ranges and clubhouses with pro shops, restaurants, lounges. Many of the muni courses do not include such facilities.	1	**$ 20.25**	Hole
435	Multipurpose Recreation Facility	Multi-purpose recreational facilities contain two or more of the following land uses at one site: mini-golf, batting cages, video arcade, bumper boats, go-carts, and driving ranges.	6	**$ 405.02**	Acre
437	Bowling Alley	Recreational facilities with bowling lanes which may include a small lounge, restaurant or snack bar.	3	**$ 81.00**	Lane
493	Athletic Club	Privately owned with weightlifting and other facilities often including swimming pools, hot tubs, saunas, racquet ball, squash, and handball courts.	5	**$ 202.51**	KSF
495	Recreational Community Center	Recreational community centers are facilities similar to and including YMCAs, often including classes, day care, meeting rooms, swimming pools, tennis racquetball, handball, weightlifting equipment, locker rooms, & food service.	6	**$ 405.02**	KSF
520 *	Elementary School	Public. Typically serves K-6 grades.	3	**$ 81.00**	Student
522	Middle School	Public. Serves students that completed elementary and have not yet entered high school.	2	**$ 40.50**	Student
530	High School	Public. Serves students that completed middle or junior high school.	1	**$ 20.25**	Student
540	Junior/Community College	Two-year junior colleges or community colleges.	1	**$ 20.25**	Student
560	Church	Contains worship area and may include meeting rooms, classrooms, dining area and facilities.	3	**$ 81.00**	KSF
565 *	Day Care	Facility for pre-school children care primarily during daytime hours. May include classrooms, offices, eating areas, and playgrounds.	1 1	**$ 20.25** **$ 20.25**	KSF Student
590	Library	Public or Private. Contains shelved books, reading rooms or areas, sometimes meeting rooms.	6	**$ 405.02**	KSF
591	Lodge/Fraternal Organization	Includes a club house with dining and drinking facilities, recreational and entertainment areas, and meeting rooms.	4	**$ 121.51**	Member
710	General Office	Office building with multiple tenants. Mixture of tenants can include professional services, bank and Loan institutions, restaurants, snack bars, and service retail facilities.	6	**$ 405.02**	KSF
715	Single Tenant Office Building	Single tenant office building. Usually contains offices, meeting rooms, file storage areas, data processing, restaurant or cafeteria, and other service functions.	6	**$ 405.02**	KSF
720	Medical-Dental Office	Provides diagnosis and outpatient care on a routine basis. Typically operated by one or more private physicians or dentists.	1	**$ 20.25**	KSF
750	Office Park	Park or campus-like planned unit development that contains office buildings and support services such as banks & loan institutions, restaurants, service stations.	4	**$ 121.51**	KSF
760	Research & Development Center	Single building or complex of buildings devoted to research & development. May contain offices and light fabrication facilities.	2	**$ 40.50**	KSF

ITE Code	Customer Type	Land Use Description	Bike/Ped Group	Bike/Ped SDC	Units
770	Business Park	Group of flex-type or incubator 1 - 2 story buildings served by a common roadway system. Tenant space is flexible to accommodate a variety of uses. Rear of building usually served by a garage door. Typically includes a mix of offices, retail & wholesale.	1	**$ 20.25**	KSF
812	Building Materials & Lumber	Small, free standing building that sells hardware, building materials, and lumber. May include yard storage and shed storage areas. The storage areas are not included in the GLA needed for trip generation estimates.	1	**$ 20.25**	KSF
813	Discount Super Store	A free-standing discount store that also contains a full service grocery dept. under one roof.	1	**$ 20.25**	KSF
814	Specialty Retail	Small strip shopping centers containing a variety of retail shops that typically specialize in apparel, hard goods, services such as real estate, investment, dance studios, florists, and small restaurants.	6	**$ 405.02**	KSF
815	Discount Store	A free-standing discount store that offers a variety of customer services, centralized cashiering, and a wide range of products under one roof. Does not include a full service grocery dept. like Land Use 813, Free-standing Discount Superstore.	1	**$ 20.25**	KSF
816	Hardware/Paint Store	Typically free-standing buildings with off-street parking that sell paints and hardware.	1	**$ 20.25**	KSF
817	Nursery/Garden Center	Free-standing building with yard containing planting or landscape stock. May have large green houses and offer landscape services. Typically have office, storage, and shipping facilities. GLA is Building GLA, not yard and storage GLA.	1	**$ 20.25**	KSF
820	Shopping Center	Integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Provides enough on-site parking to serve its own parking demand. May include non-merchandising facilities such as office buildings, movie theatres, restaurants, post offices, health clubs, and recreation like skating rinks and amusements.	2	**$ 40.50**	KSF Leasable
841	New Car Sales	New Car dealership with sales, service, parts, and used vehicles	1	**$ 20.25**	KSF
848	Tire Store	Primary business is tire sales and repair. Generally does not have a large storage or warehouse area.	1	**$ 20.25**	KSF
850	Supermarket	Free-standing grocery store. May also contain ATMs, photo centers, pharmacies, video rental areas.	1	**$ 20.25**	KSF
851	Convenience Market	Sells convenience foods, newspapers, magazines, and often Beer & Wine. Does not have gas pumps.	6	**$ 405.02**	KSF
880	Pharmacy w/o drive through	Facilities that fulfill medical Prescriptions	3	**$ 81.00**	KSF
881	Pharmacy w/ drive through	Facilities that fulfill medical Prescriptions	3	**$ 81.00**	KSF
890	Furniture Store	Sells furniture, accessories, and often carpet/floor coverings.	1	**$ 20.25**	KSF
911 *	Walk-In Bank	Usually a Free-standing building with a parking lot. Does not have drive-up windows. May have ATMs.	1	**$ 20.25**	KSF
912	Drive-In Bank	Provides Drive-up and walk-in bank services. May have ATMs.	1	**$ 20.25**	KSF
931	Quality Restaurant	High quality eating establishment with slower turnover rates (more than one hour).	1	**$ 20.25**	KSF
932	High Turnover Sit-Down Rest.	Sit-Down eating establishment with turnover rates of less than one hour.	3	**$ 81.00**	KSF
933 *	Fast Food w/o Drive-Thru	Fast Food but no drive-through window	6	**$ 405.02**	KSF
934	Fast Food with Drive-Thru	Fast Food with drive-through window	6	**$ 405.02**	KSF
936 *	Drinking Place	Contains a bar where alcoholic beverages and snacks are serviced and possibly some type of entertainment such as music, games, or pool tables	1	**$ 20.25**	KSF
944	Gas Station	Sell gasoline and may also provide vehicle service and repair. Does not have Convenience Market and/or Car Wash.	1	**$ 20.25**	Fueling Position
945	Gas/Service Station with Convenience Market	Selling gas and Convenience Market are the primary business. May also contain facilities for service and repair. Does not include Car Wash.	1	**$ 20.25**	Fueling Position
946 *	Gas/Service Station with Convenience Market, Car Wash	Selling gas, Convenience Market, and Car Wash are the primary business. May also contain facilities for service and repair.	1	**$ 20.25**	Fueling Position
947	Self-Service Car Wash	Allows manual cleaning of vehicles by providing stalls for the driver to park and wash.	1	**$ 20.25**	Wash Stall

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- KSF = 1,000 gross square feet building area
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