

Appendix E – Fiscal Impact Analysis





J O H N S O N

G A R D N E R

MEMORANDUM

DATE: April 18, 2008

TO: Joe Dills
Otak

FROM: Anne Fifield
JOHNSON GARDNER

SUBJECT: Fiscal impact analysis for the Brookman Addition-Final

JOHNSON GARDNER was retained by Otak and their client, the City of Sherwood, to conduct a fiscal impact analysis of a hybrid concept plan for the Brookman Addition. This memorandum summarizes the results of the analysis.

A fiscal impact analysis estimates the costs and revenues to a local jurisdiction directly associated with new development. This analysis estimates the costs and revenues associated with the development of infrastructure and operations. It is based on Otak's *Brookman Addition Concept Plan, Steering Committee Recommended Draft*, dated March 28, 2008, and data supporting the Concept Plan.

This memorandum is organized into four sections:

- I. Summary of Key Issues** summarizes the analysis and describes different tools the City can use to fund infrastructure.
- II. Assumptions and Methods** discusses the basic elements of the Concept Plan that affect costs and revenues.
- III. Infrastructure** describes estimated costs to build expanded infrastructure and projected revenue from System Development Charges. The section discusses transportation, water, sanitary sewer, stormwater, and parks.
- IV. Property Tax Revenue** estimates the property tax revenue generated by new development in the Brookman Addition.

I. SUMMARY OF KEY ISSUES

A. Costs and Revenues

This analysis compares the cost of constructing infrastructure to serve the Brookman Addition, and compares costs to revenues generated to pay for those costs. Costs are based on analyses by Otak and DKS Associates. Revenues are based on analysis conducted by Johnson Gardner.



Please see Section III, Infrastructure, for a detailed discussion of how the figures were determined.

The costs shown in this summary are those typically borne by the City, not the developer. There are additional costs that developers would fund. The text in Section III, Infrastructure, discusses the costs for local infrastructure that developers typically build.

The revenue calculations are focused on those generated by System Development Charges, or SDCs. SDCs are one-time fees levied on new development to recover a fair share of the costs of existing and planned future improvements to infrastructure to serve that development. The City of Sherwood also collects a Traffic Impact Fee (TIF) for Washington County, which is a countywide charge to fund transportation infrastructure. SDCs vary by development type, and this analysis is a reasonable estimate of expected revenues.¹

Figure 1 and Table 1 shows the total costs and revenues for four basic urban infrastructure types. The data show only the costs that are expected to be paid by the City. The numbers do not include costs typically paid by developers. The following text explains the reasons for the funding gap in stormwater and transportation, and then discusses potential funding sources to fill the gap.

¹ SDC revenue for non-residential development may be significantly different from what is estimated in this analysis. The SDCs will vary with size of building and type of use. Residential SDCs, however, are likely to be roughly equivalent to the estimates in this analysis, if build-out is similar to the Concept Plan. The great majority of the development in the Brookman Addition is residential, and the great majority of SDC revenue is from residential development. Therefore, total SDC revenue projections are likely to be fairly accurate.



Figure 1
Total Costs and SDC/TIF Revenue

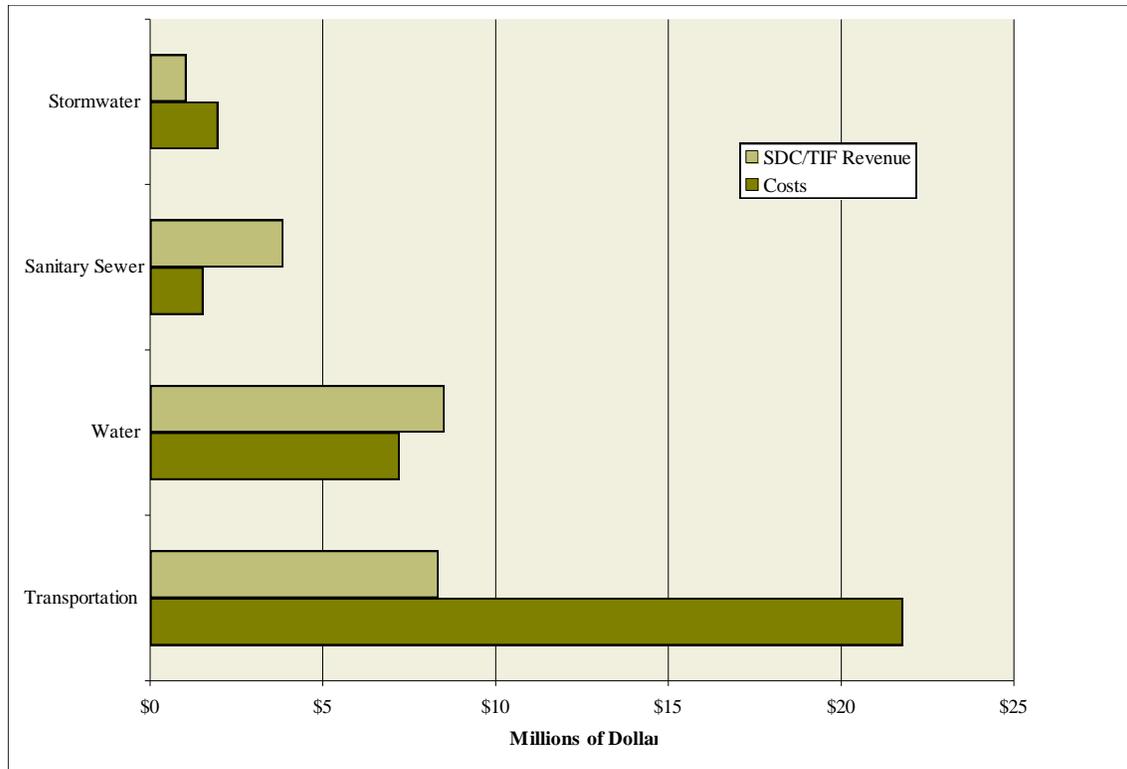


Table 1
Total Costs and SDC/TIF Revenue

	Cost	SDC/TIF Revenue	Cost - Revenue	% Funded by SDC/TIF
Transportation	\$21,790,000	\$8,349,051	\$13,440,949	38%
Water	\$7,221,000	\$8,517,869	-\$1,296,869	118%
Sanitary Sewer	\$1,538,782	\$3,853,792	-\$2,315,010	250%
Stormwater	\$1,965,160	\$1,042,449	\$922,711	53%
Parks	not estimated	\$8,105,625	n/a	n/a

- **Transportation.** There is a large funding gap for transportation. The large gap is not unexpected. SDC and TIF revenue is not intended to cover 100% of costs. The City of Sherwood reduced its transportation SDC in November 2007 because of complaints from developers in the City. The County is working now to expand the revenue generated by the TIF, but how the revised TIF will be calculated is not known at this time. The City’s transportation SDC is expected to be reduced proportionate to any increases in the County TIF.
- **Water.** SDCs fund just over 100% of expected infrastructure costs for the Brookman Addition. Revenues exceed costs because the Brookman Addition is able to connect to existing capacity.



- **Sanitary Sewer.** SDCs fund 250% of expected infrastructure costs for the Brookman Addition. Revenues exceed costs because the Brookman Addition is able to connect to existing capacity. The excess revenues support capital improvements to the entire system.
- **Stormwater.** SDCs fund about half of expected costs for the Brookman Addition. The City may be able to apply revenue generated by a parks SDC to stormwater services—open space can provide recreation and stormwater infiltration services. If the open space is designed to do so, parks SDC revenue can help fund the stormwater infrastructure.

The funding gap for transportation and stormwater is about \$14.3 million, or about \$11,600 per residential unit in the Concept Plan.

B. How Can Sherwood Close the Gap?

Sherwood is not alone with its gap for transportation and stormwater. Other urban reserve areas have large funding gaps for infrastructure, and there are no obvious or easy solutions. Infrastructure is expensive, and nobody likes to pay for it. Sherwood will have to consider all funding options, and work to identify which funding mechanisms will be politically palatable to Sherwood residents.

The following is a brief discussion of some potential funding sources. The first two funding mechanisms, a Local Improvement District and a County Service District, are the most appropriate funding solutions, given the relatively small funding gap.

Local Improvement District (LID)

The landowners could create a taxing district of the Brookman area, where the revenue funds infrastructure improvements. Future property owners in the area would pay the tax. The funding gap is less than \$12,000 per household, and that amount could be financed with a LID in the Brookman District.

County Service District

This is a special district that can fund construction, operation, and maintenance of public facilities and services. Similar to a LID, but the tax does not need to be based on property value, but some other factor (e.g., square feet of structure). Such a tax structure avoids statewide property tax limitations. The funding gap is small enough that it could be financed with a County Service District.

Expand Developer Requirements

The City could require that developers build infrastructure in addition to the local infrastructure. Although the developer pays for developer requirements, the expenditures do not necessarily come from the developers' pocket. The total cost will affect how much developers are willing to pay current landowners for the land, likely reducing the purchase price. The increased cost of development will affect the type of housing the developer is willing to build due to the potentially sizeable impact to development financial feasibility.



Expand SDCs

The City is already working on an update of the sanitary sewer and stormwater SDC and Washington County is considering an expansion of the TIF. It is expected, however, that the City's transportation SDC will be reduced proportionate to any increases in the County TIF.

As with developer requirements, the total cost of SDCs will affect how much developers are willing to pay current landowners for the land, and the increased cost of development will affect the type of housing the developer is willing to build due to the impact to financial feasibility.

Fuel Tax

A fuel tax is levied when drivers buy fuel for vehicles. In Oregon, the tax ranges between 1 and 5 cents per gallon. The revenue typically funds road maintenance. It would be impossible to tax only the residents of the Brookman for their fuel, and existing residents of Sherwood would be unlikely to approve a city-wide tax to fund improvements to one part of town.

Transportation Utility Fees

A Transportation Utility Fee (TUF) is a monthly charge assessed to households and businesses, based on the average number of trips generated by types of land uses. The fee is often collected as part of a utility bill. The revenue typically funds road maintenance.

Bonds

A General Obligation (GO) Bond is a traditional tool used to fund capital improvements. The voters of Sherwood would have to approve a bond, which would be secured by property tax revenue. GO Bonds are not subject to property tax limitations established by Measures 5, 47, and 50.

Revenue bonds are typically secured by water/wastewater/stormwater billing revenue. The City could institute a transportation utility fee to secure a bond for roads.

Urban Renewal District

Urban Renewal allows a jurisdiction to use tax increment financing to fund infrastructure. Tax increment financing 'freezes' the assessed value of the district, and all property tax revenue associated with any incremental growth in assessed values goes to the UR District. It is likely that the value of improvements in the Brookman Addition are currently low enough to legally permit the establishment of an UR District. The primary disadvantage with Urban Renewal, is that existing taxing districts do not collect property tax revenue generated by the new, higher value development. That revenue funds operations for the City, the County, and any special districts. However, compromises, such as dedicated matching funds and/or projects mutually beneficial to the City/District can be planned to mitigate potential negative effects of foregone revenues. By State statute, school districts do not forego property tax revenues with establishment of urban renewal.

MSTIP

The Major Streets Transportation Improvement Program (MSTIP) is a funding mechanism for roads in Washington County. The MSTIP was originally a countywide serial levy, but as a result of statewide property tax limitations, the levy became part of the County's permanent rate. Funds



are now transferred from the County's General Fund to the MSTIP at the discretion of the County Board of Commissioners. The Board of Commissioners has approved projects to be funded between 2007 and 2012, and none of the improvements identified in the Brookman Addition Concept Plan are included.² At this time, the MSTIP is *not* an option for the Brookman Addition.

State funds

The roads identified in the Concept Plan are *not* eligible for funds from ODOT. That could change, depending on *if* the Highway 99/I-5 connector is built, and where that connector is located. If it is built, it will affect traffic volumes on Highway 99 and what improvements on Highway 99 can be funded by ODOT. ODOT is in the planning process now, to determine the future of that connector.³

II. ASSUMPTIONS AND METHODS

Otak provided Johnson Gardner with land uses, densities, and other descriptive data for the 143-acre Brookman Addition. Table 1 summarizes the development data used in the fiscal analysis.

The Concept Plan shows the number of acres for each use. Otak provided Johnson Gardner with the estimates of square feet of space required per employee and the total number of employees for non-residential uses. Johnson Gardner used those estimates to calculate the square feet of built space for retail, office, and industrial uses.

**Table 2
 Projected acres, built square feet, jobs, and dwelling units in the Brookman Addition**

Non-Residential Land Uses	Built Square		
	Acres	Feet	Jobs
Retail	2.07	27,550	29
Office	6.01	78,525	349
Industrial	6.01	78,540	102
Parks	6.21	0	
Total	20.3	184,615	480
Residential Land Uses	Dwelling		
	Acres	Units	
Medium-Density Residential Low	90.43	723	
Medium-Density Residential High	20.01	220	
High-Density Residential	12.32	296	
Total	122.76	1,239	

Source: Otak, Brookman Addition Concept Plan-Metrics, April 2, 2008.

² Personal communication with Dan Brown, Washington County Capital Project Management, December 11, 2007.

³ Personal communication with Marah Danielson, ODOT Development Review Planner, December 12, 2007.



All figures reported in this analysis are in 2007 dollars.

III. INFRASTRUCTURE

This analysis compares the cost of constructing infrastructure to serve the Brookman Addition to revenues generated to pay for those costs. The primary funding mechanism for funding infrastructure for new development is the System Development Charge, or SDC. SDCs are one-time fees levied on new development to recover a fair share of the costs of existing and planned future improvements to infrastructure to serve that development. In Oregon, local governments have legal authority to collect SDCs for five types of infrastructure: transportation, water, sanitary sewer, stormwater, and parks. The Oregon Legislature recently enabled school districts to charge a tax on new construction based on square footage. While not technically a SDC, the construction tax is imposed on new development and the revenue is limited to funding capital improvements for K-12 schools.

The City of Sherwood also collects a Traffic Impact Fee (TIF), which is a countywide charge to fund transportation infrastructure.

This analysis compares the costs and SDC and TIF revenue for transportation, water, sanitary sewer, and stormwater. At this time, there are no cost estimates for parks, but Johnson Gardner calculates the revenue the parks SDC will generate.

A. Transportation

Transportation infrastructure in the Brookman Addition has three funding sources: developer requirements, system development charges (SDCs), and Washington County's Traffic Impact Fee (TIF).

Costs

DKS Associates provided planning cost estimates for transportation, summarized in Table 3. The table shows a low and high estimate, and identifies how each project will be funded, either by developers or through the City's SDC and the County's TIF.

Johnson Gardner worked with City staff to identify which improvements could be funded by the City's transportation SDC and the County TIF.⁴ Table 3 identifies which projects will be built and paid for by developers, and the remainder will be funded by the SDC and the County TIF. Based on that data, total transportation cost that will be funded by SDCs and the TIF is between \$21 and \$22 million.

⁴ Personal communication with Gene Thomas, City of Sherwood Civil Engineer, December 11, 2007.



Table 3
Transportation Planning Cost Estimates, Non-local Roads

Location	Project	Built and Paid for by Developer	Funded by TIF/SDC	Estimated Cost	
				Low	High
Concept Plan Infrastructure Projects					
Concept Area	Construct new 2-lane local roadways	x		\$80,400,000	\$80,400,000
Old Hwy 99	Upgrade to collector standards		x	\$1,235,000	\$1,235,000
Brookman Rd east of Middleton Rd	Urbanize and rebuild existing roadway		x	\$10,855,000	\$10,855,000
Brookman Rd west of Middleton Rd	Construct new collector with rail crossing		x	\$6,770,000	\$6,770,000
Brookman Rd/Old Hwy 99	Construct a roundabout		x	\$800,000	\$800,000
Traffic Calming/Neighborhood Cut-through Reduction Projects					
Redfern Dr/Pinehurst Dr/Inkster Dr	Install speed cushions	x		\$50,000	\$50,000
Intersection Mitigation Projects					
Hwy 99W/Sunset Blvd	Add eastbound right turn overlap phase		x	\$10,000	\$10,000
	Add westbound right turn lane		x	\$250,000	\$250,000
	Add westbound right turn overlap phase		x	\$10,000	\$10,000
Hwy 99W/Brookman Rd	Add a traffic signal		x	\$250,000	\$250,000
	Construct a roundabout		x	\$800,000	\$800,000
Sunset Blvd/Timbrell Ln	All-way stop control		x	\$10,000	\$10,000
Sunset Blvd/Redfern Dr	All-way stop control		x	\$10,000	\$10,000
Brookman Rd/Ladd Hill Rd	Add a southbound right turn lane		x	\$250,000	
	-or- Construct a roundabout		x		\$800,000
Totals	Total Cost			\$101,700,000	\$102,240,000
	Built and Paid for by Developer			\$80,450,000	\$80,450,000
	Funded by TIF/SDC			\$21,250,000	\$21,790,000

Source: DKS Associates, Draft Memorandum, December 5, 2007. Funding method based on personal communication with Gene Thomas, City of Sherwood Civil Engineer.

SDC Revenue

Johnson Gardner estimated the transportation SDC revenue associated with the development described in the *Concept Plan*, based on current SDC rates in the City of Sherwood, as reported in the City of Sherwood Rates and Fees Schedule, posted on the City's website. In November 2007, the City reduced its transportation SDCs by 25%.⁵ To estimate SDC revenue, Johnson Gardner made the following assumptions:

- **Retail.** The concept plan estimates there will be 27,550 square feet of retail space. The SDC is the average (mean) of "commercial/services" SDCs based on gross floor area. SDCs excluded from the average calculation are those based on the numbers of rooms (hotels and motels) and vehicle fueling positions (e.g., gas stations).⁶
- **Office.** The concept plan estimates there will be 78,525 square feet of office space. The estimate is based on the SDC for "general office building" uses.
- **Industrial.** The concept plan estimates there will be 78,540 square feet of industrial space. The estimate is based on the SDC for "general light industrial" uses.
- **Medium-density residential.** All units are detached, single-family homes.

⁵ Personal communication with Debra Czysz, City of Sherwood Development Program Coordinator, December 13, 2007.

⁶ Square footage figures are based on the number of jobs and square feet per job figures provided by Otak. Square feet per job estimates are: retail, 950; office, 225; industrial, 770.



- **High-density residential.** All units are condominiums/townhouses.⁷

**Table 4
 Transportation SDC Revenue**

Land Use	SDC	Unit	Number of 1,000 S.F. Units	Total SDC Revenue
Retail	\$18,367	1,000 s.f.	28	\$506,020
Office	\$4,065	1,000 s.f.	79	\$319,204
Industrial	\$2,328	1,000 s.f.	79	\$182,841
Single Family (medium density-low and high)	\$2,721	dwelling unit	943	\$2,565,903
Multi-Family (high density)	\$1,726	dwelling unit	296	\$510,822
Total				\$4,084,790

Source: Johnson Gardner based on City of Sherwood SDCs and Brookman Concept Plan.

Traffic Impact Fee Revenue

The City of Sherwood collects Washington County’s Traffic Impact Fee (TIF) and directs the revenue to the County. The TIF can only be used to pay for road capacity improvements that serve future growth, and is limited to funding arterials and collectors on the TIF list. The TIF cannot be used to address existing capacity deficiencies. The TIF revenue must be spent within the TIF jurisdiction where it is collected, or to the direct benefit of that district.

The TIF is calculated based on the estimated number of weekday trips generated by different land uses, multiplied by a fee and thousand gross square feet of the development. The number of trips per use is based on standard data produced by the Institute of Transportation Engineers, as reported by Washington County.⁸ To estimate TIF revenue, Johnson Gardner made the following assumptions:

- **Retail.** The average number of trips is the average (mean) of weekday average trip rate for “business & commercial”. The calculation of the average number of weekday trips excludes shopping centers larger than 50,000 square feet and those not based on thousand gross square feet of space, such hotels and motels (based on numbers of rooms) and gas stations (based on number of vehicle fueling positions).
- **Office.** The average number of trips is for “general office, under 100,000 gross square feet”.
- **Industrial.** The average number of trips is for “general light industrial”.

In this analysis, we assume that 100% of the TIF generated in the Brookman Addition will be applied to funding improvement in the Brookman Addition.

⁷ The SDC for apartments is slightly higher than the SDC for condominiums and townhouses. This analysis uses the SDC for condominiums and townhouses, to be consistent with other parts of the analysis.

⁸ Washington County memorandum from Kathy Lehtola, “Traffic Impact Fee Rate Increase”, dated April 25, 2007.



Table 5
Washington County TIF Revenue

Land Use	Fee per Average Average Weekda:		Unit	Number of Units	Total TIF Revenue
	Weekday Trip	Trips			
Retail	\$81	65.63	1,000 s.f.	28	\$146,457
Office	\$294	16.31	1,000 s.f.	79	\$376,538
Industrial	\$308	6.97	1,000 s.f.	79	\$168,607
Single Family (medium density-low anc	\$320	10	dwelling unit	943	\$3,017,600
Multi-Family (high density)	\$320	5.86	dwelling unit	296	\$555,059
Total					\$4,264,261

Source: Johnson Gardner based on Washington County TIF and Brookman Concept Plan.

The transportation and TIF generate just under 40% of expected public costs for roads.

B. Water

Costs

Otak provided planning cost estimates for water capital improvement projects to serve the Brookman Addition, summarized in Table 6. Total cost for water infrastructure to service the Brookman Addition is \$10.5 million.

Otak identifies ‘programmed’ and ‘non-programmed’ capital improvements. ‘Programmed’ improvements are those that are in the City’s Water System Master Plan, and can be funded with the City’s SDC for water. The total cost for programmed improvements is \$7.2 million, and non-programmed improvements is \$3.3 million.

Table 6
Water Planning Cost Estimates

Project	Built and Paid		Cost
	for by Developer	Funded by SDC	
Main Reservoir Upgrade		x	\$400,000
Reservoir No. 2		x	\$4,700,000
SW Sherwood PRV		x	\$190,000
12-inch Water Main pipes		x	\$1,931,000
8-inch Water Main pipes	x		\$3,321,000
Total			\$10,542,000
Built and Paid for by Developer			\$3,321,000
Funded by SDC			\$7,221,000

Source: Otak, Technical Memorandum, “Brookman Addition Concept Plan—Water Supply and Sanitary Sewer Infrastructure,” November 28, 2007.

SDC Revenue

Table 7 shows estimated revenue generated by the City’s current water SDC rates. Sherwood’s water SDC includes an improvement and installation charge, which varies by meter size. The



City also charges a per-building fee for fire flow-sprinklered buildings and a single administrative set-up charge. To estimate SDC revenue, Johnson Gardner made the following assumptions:

- **Retail.** The concept plan estimates there will be 27,550 square feet of retail space. This analysis assumes that every 5,000 square feet of built retail space uses a one-inch meter (rounding total square feet to the nearest 5,000). We assume that each 5,000-square foot space has a fire flow sprinkler.⁹
- **Office.** The concept plan estimates there will be 78,525 square feet of office space. This analysis assumes that every 10,000 square feet of built office space uses a one-inch meter (rounding total square feet to the nearest 10,000). Each 10,000-square foot space has a fire flow sprinkler.
- **Industrial.** The concept plan estimates there will 78,540 square feet of industrial space. This analysis assumes that every 20,000 square feet uses a two-inch meter (rounding total square feet to 20,000). Each space has a fire flow sprinkler. Industrial development has widely varied demands for water service dependent upon the nature of industrial user on-site, therefore actual demand could be significantly lower or higher than this assumption.
- **Residential.** All residential units use a 5/8 x 3/4-inch meter.

**Table 7
 Water SDC Revenue**

Land Use	SDC	Unit	Number of Units	Total SDC Revenue
Retail	\$18,976	1" meter	6	\$113,858
Office	\$18,976	1" meter	8	\$151,811
Industrial	\$54,718	2" meter	4	\$218,871
Residential	\$6,484	dwelling unit	1,239	\$8,033,329
Total				\$8,517,869

Source: Johnson Gardner based on City of Sherwood SDCs and Brookman Concept Plan.

SDCs generate more than 100% of expected costs for water infrastructure.

C. Sanitary Sewer

Costs

Otak provided Johnson Gardner with planning cost estimates for sanitary sewer improvements, summarized in Table 8. Total costs for sanitary sewer are about \$10.0 million.

Similar to the water cost estimate, Otak identifies ‘programmed’ and ‘non-programmed’ capital improvements. ‘Programmed’ improvements are those that are in the City’s Sanitary System Master Plan and can be funded by the City’s sanitary sewer SDC. The total cost for programmed improvements is \$1.5 million, and non-programmed improvements is \$8.5 million.

⁹ Square footage figures are based on the number of jobs and square feet per job figures provided by Otak. Square feet per job estimates are: retail, 950; office, 225; industrial, 770.



**Table 8
 Sanitary Sewer Planning Cost Estimates**

Project	Built and Paid for by		Cost
	Developer	Funded by SDC	
Collection System Extension Area 54/55		x	\$1,292,430
Capacity Upgrade Area 54/55		x	\$113,176
Capacity Upgrade Area 54/55		x	\$133,176
Local sewer network	x		\$8,465,000
Total			\$10,003,782
Built and Paid for by Developer			\$8,465,000
Funded by SDC			\$1,538,782

Source: Otak, Technical Memorandum, “Brookman Addition Concept Plan —Water Supply and Sanitary Sewer Infrastructure,” November 28, 2007.

SDC Revenue

Table 9 shows estimated revenue generated by the City’s current sanitary sewer SDC rates. Sherwood’s water SDC includes a connection charge of \$2,700 per dwelling unit equivalent and reimbursement and improvement charge based on estimated gallons of sewerage flow per day. Non-residential developments use the number of fixture units to determine the number of dwelling unit equivalents. There are 16 fixture units in one dwelling unit equivalent. To estimate SDC revenue, Johnson Gardner used the same estimates of the number of units as calculated in the Water section. The analysis uses the following additional assumptions:

- **Retail and Office.** Each unit has 60 fixture units and generates 2,000 gallons of sewerage flow per day.¹⁰
- **Industrial.** Each unit has 200 fixture units and generates 5,000 gallons of sewerage flow per day. Industrial development has widely varied demands for sewer service based on industrial use, therefore actual demand could be significantly lower or higher than this assumption.
- **Residential.** Each residential unit is a dwelling unit equivalent and generates 535 gallons of sewerage flow per day.

¹⁰ Retail, office, and industrial assumptions are based on recent development in Sherwood.



Table 9
Sanitary Sewer SDC Revenue

Land Use	Per Gallon			Total Gallons per Day	Total SDC Revenue
	Connection Charge	Reimbursement & Improvement Charge	Dwelling Equivalent Units		
Retail	\$2,700	0.326	23	12,000	\$64,662
Office	\$2,700	0.326	30	16,000	\$86,216
Industrial	\$2,700	0.326	50	20,000	\$141,520
Residential	\$2,700	0.326	1,239	662,865	\$3,561,394
Total					\$3,853,792

Source: Johnson Gardner based on City of Sherwood SDCs and Brookman Concept Plan.

The City of Sherwood is in the process of evaluating its SDC for sanitary sewer. The current SDC is based on old data, and is likely to be significantly changed. When the revised SDC is established, the SDC revenue estimates in this analysis will be invalid.

Under the current SDC structure, sanitary sewer SDCs revenue exceed cost, leaving no funding gap.

D. Stormwater

Costs

Otak provided Johnson Gardner with planning cost estimates for stormwater infrastructure, summarized in Table 10. Total costs, including construction, engineering, and land acquisition, equal \$7.3 million.

Otak staff reported that the cost items identified as “regional stormwater management facilities” are detention facilities, typically paid for by the developer. Johnson Gardner assumed that developers will pay for the full costs of these detention facilities, plus land acquisition.

Otak estimated base construction items, construction contingencies, engineering, and permitting costs as percents of total construction costs. To identify costs covered by the developer, Johnson Gardner assumed that the same percents for those costs would apply the developer

Total costs to the City of Sherwood are about \$2.0 million.



Table 10
Stormwater Planning Cost Estimates

Project	Built and Paid for by		TotalCost
	Developer	Funded by SDC	
Base Construction Items	\$341,173	\$181,771	\$522,944
Conveyence Infrastructure		\$467,412	\$467,412
Detention Facilities	\$877,301		\$877,301
Construction Contigencies	\$487,389	\$259,673	\$747,063
Engineering & Permitting	\$852,932	\$454,428	\$1,307,360
Land Acquisition	\$2,735,793		\$2,735,793
Staffing & Appraisal		\$601,875	\$601,875
	Total		\$7,259,748
	Built and Paid for by Developer		\$5,294,588
	Funded by SDC		\$1,965,160

Source: Otak, Technical Memorandum, "Brookman Addition Stormwater Infrastructure Plan," April 9, 2008.

SDC Revenue

Table 11 shows estimated revenue generated by current stormwater SDC rates for the City and Clean Water Services. Sherwood's stormwater SDC is \$0.043 per square foot of impermeable surface. Clean Water Service's SDC is \$619 per Equivalent Service Unit (ESU), which equals 2,640 square feet. To calculate impermeable square feet, this analysis uses the following percent impervious for each land use type, as reported by Otak.¹¹

- **Retail, Office, and Industrial.** 85% of land will be impermeable.
- **Medium-density Residential-low.** 55% of land will be impermeable.
- **Medium-density Residential-high.** 60% of both medium-density categories will be impermeable.
- **High-density Residential.** 65% of land will be impermeable.

¹¹ As reported in a Technical Memorandum dated April 9, 2008, subject "Brookman Addition Stormwater Infrastructure Plan," from Ashley Cantlon, EI, and Kevin Timmins, PE.



Table 11
Stormwater SDC Revenue

Land Use	Clean Water			ESU	Total SDC Revenue
	City Charge per S.F.	Services Charge per ESU	Impermeable Square Feet		
Retail, Office, Industrial	\$0.043	\$619	521,696	197.6	\$144,755
Medium-density Residential	\$0.043	\$619	2,886,460	1,093.4	\$800,905
High-Density Residential	\$0.043	\$619	348,828	132.1	\$96,789
Total					\$1,042,449

Source: Johnson Gardner based on City of Sherwood SDCs, Brookman Concept Plan, Otak's impervious area calculations.

The City of Sherwood is in the process of evaluating its SDC for stormwater. The current SDC is based on old data, and is likely to be significantly changed. When the revised SDC is established, the SDC revenue estimates in this analysis will be invalid.

Under the current SDC structure, stormwater SDCs generate just over half of expected costs. The City may be able to apply revenue generated by a parks SDC to stormwater services—open space can provide recreation and stormwater infiltration services. If the open space is designed to do so, parks SDC revenue can help fund the stormwater infrastructure.

E. Parks and Recreation

At the writing of this memorandum, there are no cost estimates for parks infrastructure. Table 12 shows estimated revenue generated by current parks and recreation SDC rates for the City. This analysis used the following assumptions to estimate SDC revenue:

- **Retail, Office, and Industrial.** Sherwood's SDC for non-residential development is \$72 per employee, which we applied to the employment estimates generated by Otak, shown in Table 2.
- **Low and medium-density residential.** All units are detached, single-family homes.
- **High-density residential.** All units are multi-family.

Table 12
Parks and Recreation SDC Revenue

Land Use	SDC	Unit	Number of Units	Total SDC Revenue
Retail, Office, Industrial	\$72	employee	480	\$34,560
Single Family (medium density)	\$6,927	dwelling unit	943	\$6,532,161
Multi-Family (high density)	\$5,199	dwelling unit	296	\$1,538,904
Total				\$8,105,625

Source: Johnson Gardner based on City of Sherwood SDCs and Brookman Concept Plan.

As noted by Otak in its technical memorandum on the Stormwater Infrastructure Plan, stormwater facilities should be integrated to provide habitat or public open space for recreation. If designed to meet the two functions, the City could use combined parks and stormwater SDC revenue to fund stormwater and open space in the Brookman Addition.



IV. PROPERTY TAX REVENUE

Property tax revenue is calculated by multiplying the City's permanent tax rate by total assessed value (i.e., taxable value). Assessed value is based on the real market value of property according to guidelines established by Measure 50. A new building's assessed value is determined by multiplying its market value by the local 'changed property ratio' (CPR). The CPR is the ratio of the assessed value to market value for a land use type (such as residential).

In Oregon, the assessed value is limited to 3% annual growth. Although property prices may grow at a higher rate, assessed value escalation may not exceed 3%, per Measure 50. A local government's tax base increases when new construction comes onto the tax rolls, but the assessed value of new construction is constrained. If market values grow at a higher rate than 3% a year, the CPR becomes a smaller ratio and diminishes over time. As the CPR diminishes, the assessed value of new construction brought onto the tax rolls becomes smaller.

The City of Sherwood's tax rate is \$3.2975 per \$1,000 of assessed value. Property owners in Washington County receive a 3% discount on their property tax if they pay the full amount by November 15. This analysis assumes all property owners in the Brookman Addition pay their taxes by November 15, so total revenue is discounted by 3%.

To estimate real market values for residential units, Johnson Gardner used the median list price (rounded to \$1,000) for detached and attached homes in Sherwood region in January 2008. We applied the CPR for residential property in Washington County, 0.572, to the market value.¹²

To estimate assessed values for non-residential property, Johnson Gardner relied on per-acre assessed values of existing commercial property in the Sherwood area, provided by the Washington County Assessor's Office. We calculated the median assessed value, per acre, and applied those values to the acres of non-residential land in the Concept Plan.

¹² CPR reported by the Washington County Department of Assessment and Taxation in "Summary of Assessment & Tax Roll", Fiscal Year 2006-07.



Table 13
Annual Property Tax Revenue to the City of Sherwood, 2007 dollars

Non-Residential Land Uses	Acres	Assessed Value per Acre	Revenue per Acre (with Discount)	Total Property Tax Revenue (with Discount)	
Retail	2.07	\$599,477	\$1,917	\$3,969	
Office	6.01	\$701,690	\$2,244	\$13,489	
Industrial	6.01	\$385,455	\$1,233	\$7,410	
Non-Residential Total				\$24,868	
Residential Land Uses	Dwelling Units	Market Value per Unit	Assessed Value per Unit	Revenue per Unit (with Discount)	Total Property Tax Revenue (with Discount)
Detached units (medium density)	943	\$485,000	\$277,420	\$887	\$836,770
Attached units (high density)	296	\$230,000	\$131,560	\$421	\$124,558
Residential Total					\$961,328
Total Property Tax Revenue					\$986,196

Table 13 shows the estimated property tax revenue that the Brookman Addition would generate to the City of Sherwood at full build-out. The area is in the jurisdiction of other taxing districts, but this analysis focuses on the City, the jurisdiction with primary responsibility for basic infrastructure provision. The table shows that the developed Brookman Addition will generate about \$990,000 a year in property tax revenue to the City of Sherwood.