

The Fiscal Impact of Property Owned by Washington University

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City of University City, Missouri

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FISCAL IMPACT OF PROPERTY OWNED BY WASHINGTON UNIVERSITY

City of University City, Missouri

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INTRODUCTION

TischlerBise is under contract with the City of University City, Missouri, to evaluate the fiscal impact of property owned by Washington University in the City. The approach used in this evaluation is TischlerBise's Cost of Land Use Fiscal Impact Analysis approach, which evaluates the fiscal impact of specific land use prototypes. In this type of analysis, the characteristics of various residential (i.e., single-family, multi-family, institutional) and nonresidential (i.e., retail, office, industrial, institutional) "prototypes" are defined and a "snapshot" approach is used to determine the annual costs and revenues for each land use prototype to the jurisdiction. Rather than land use prototypes, this analysis models properties that are specifically owned by the University, which TischlerBise categorized by land use. We then determined actual assessed and taxable values and further quantified the land uses using US Census data to determine household size, and Institute of Transportation Engineers data to determine employment density and vehicle trip generation.

In general, a fiscal impact evaluation analyzes revenue generation and operating and capital costs to a jurisdiction associated with the provision of public services and facilities to serve development—residential, commercial, industrial, or other. A fiscal impact analysis is different from an economic impact analysis in that a fiscal impact analysis projects the cash flow to the *public* sector while an economic impact analysis projects the cash flow to the *private* sector, measured in income, jobs, output, indirect impacts, etc.

This report includes the following major sections:

1. Land Uses: Summary of University Owned Properties
2. Summary of Fiscal Findings
3. Revenues: Revenue allocation methodologies and description of the analysis
4. Expenditures: Cost allocation methodologies and description of the analysis
5. Fiscal Findings: For each land use, the results of the fiscal analysis are provided and discussed.
6. Appendices: Further detail on data and methodologies.

LAND USES EVALUATED

TischlerBise worked closely with University City staff to identify a range of land use categories—three residential and four nonresidential—to evaluate for this analysis. Residential, nonresidential, and institutional land use data was provided through the City’s database. Several assumptions are made to provide definition and parameters to evaluate the land uses in the study, with those assumptions based on data from University City wherever possible and noted throughout. As with any analysis of this type, changing any of the assumptions has the potential to change the results accordingly. This section provides further detail on the characteristics of the land use properties and related assumptions.

Washington University-Owned Residential Properties

University-owned residential land uses included in the study are shown below. The land uses are meant to represent a general sample of the types of residential development that exist or could be developed in University City. The residential properties owned by the University evaluated in the study through City property tax records include:

1. Single Family
2. Multifamily
3. Institutional (multifamily units)

Figure 1 summarizes properties owned by Washington University that contain residential units. This was determined using data obtained from the St. Louis County assessment database. From this database, TischlerBise was able to derive the number of residential units by type (e.g., single family, multifamily). Some of the University owned properties were classified as institutional land uses, but contained multifamily units. Figure 1 outlines the residential properties and their associated such as total units, total assessed values, total appraised values, vehicle trips per unit, trip adjustment factor, persons per housing unit, and estimated population. The data below is used to calculate the associated revenue and cost factors in the fiscal impact study.

Figure 1. Summary of University-Owned Residential Properties

University-Owned Residential Uses	Total Units [1]	Total Assessed Value [1]	Average Daily Vehicle Trips [3]	Persons per Housing Unit [2]	Estimated Population
Single Family	6	\$259,530	28	2.32	14
Multifamily	491	\$9,628,820	1,336	3.00	1,473
Institutional	27	\$1,275,370	73	3.00	81

[1] St. Louis County Assessor's Office parcel data

[2] Source: U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates. Multifamily units assume an occupancy of 3 persons based on the fact these units are for University housing, with a limit of 3 persons per unit.

[3] Source: Institute of Transportation Engineers, *Trip Generation*, 10th Edition (2017)

Washington University-Owned Nonresidential Properties

Figure 2 summarizes properties owned by Washington University that can be classified as nonresidential development. Similar to the residential properties discussed above, this was determined using the St. Louis County assessment database and land use codes.

Figure 2. Summary of University-Owned Nonresidential Properties

University-Owned Nonresidential Uses	Floor Area (Sq. Ft.) [2]	Total Assessed Value [2]	Jobs [1]	Average Daily Vehicle Trips [3]
Retail	59,116	\$16,164,570	194	692
Office	15,300	\$107,520	78	75
Industrial	36,080	\$1,470,780	9	89
Institutional	118,140	\$28,539,000	123	633

[1] Based on employment density factors from Trip Generation, Institute of Transportation Engineers, 10th Edition (2017)

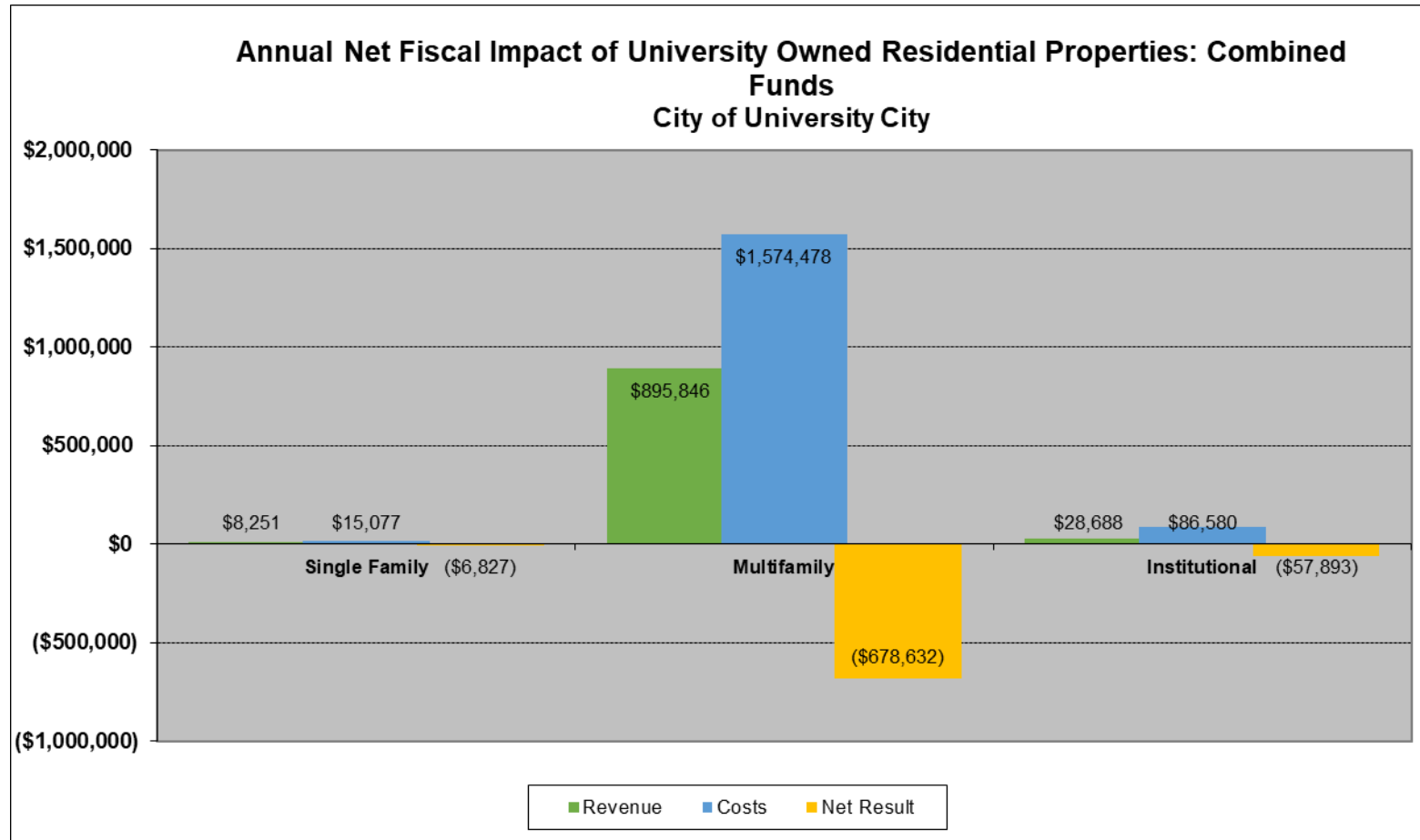
[2] St. Louis County Assessor's Office parcel data

[3] Source: Institute of Transportation Engineers, *Trip Generation*, 10th Edition (2017)

SUMMARY OF FISCAL IMPACT FINDINGS

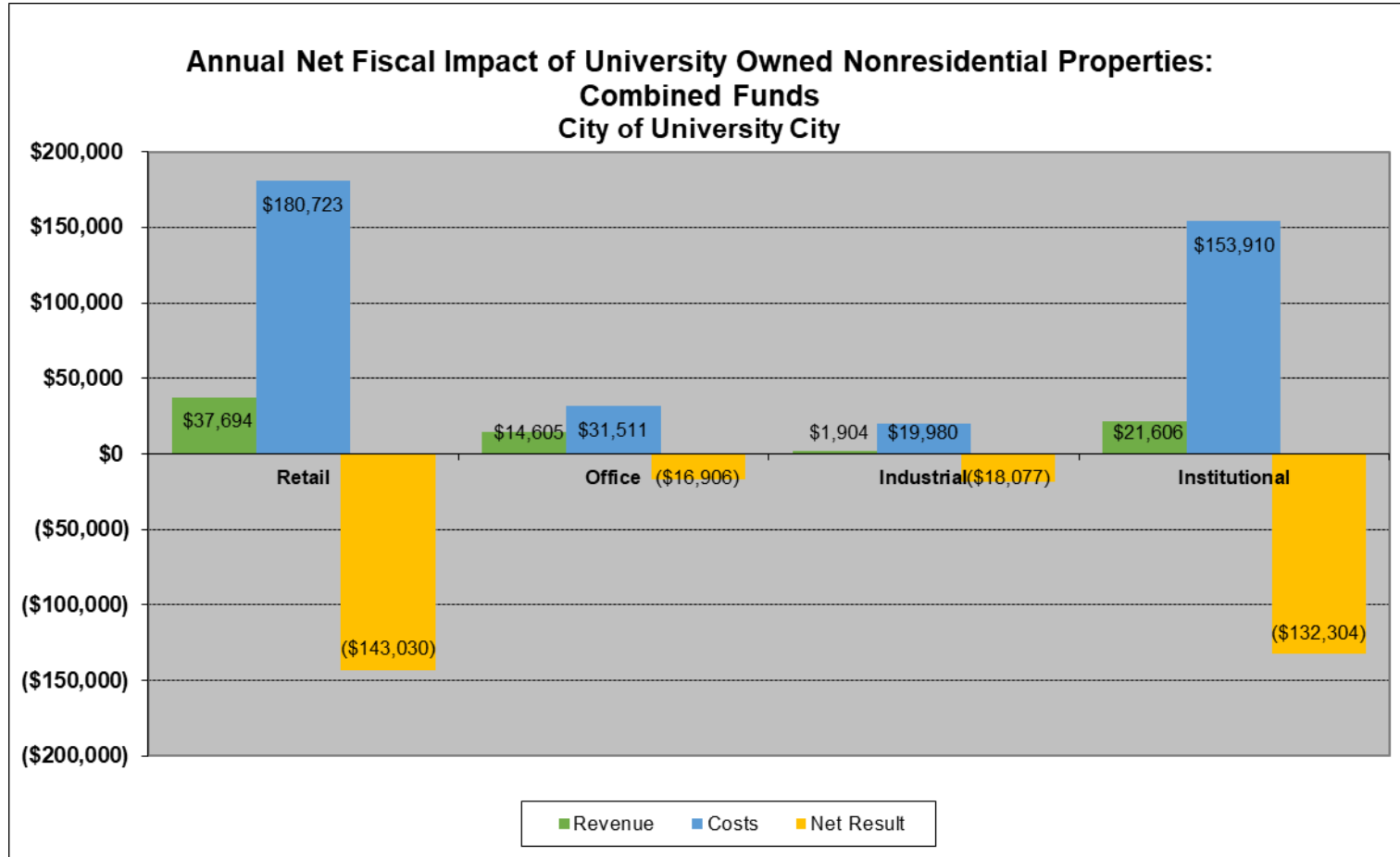
The following figures graphically reflect the results of the Fiscal Impact Analysis for residential and nonresidential properties owned by Washington University. For **residential development**, results are shown in Figure 3 for each land use. All three of the **residential** land use types owned by the University generate annual net deficits to the City, meaning sufficient revenues are not generated to offset the costs associated with providing services and facilities.

Figure 3. Annual Net Fiscal Impact Analysis Results for University-Owned Residential Properties: Combined Funds



The **nonresidential development** results are shown in Figure 4. Data points above the \$0 line represent annual net surpluses; data points below the \$0 line represent annual net deficits. All four of the nonresidential land use types owned by the University also generate annual net deficits to the City.

Figure 4. Annual Net Fiscal Impact Analysis Results for University-Owned Nonresidential Properties: Combined Funds



Annual net results are shown below in Figure 5 for each of the City's tax-supported Funds, as well as the result for all Funds combined. Residential properties owned by the University generate annual net deficits to the General Fund and Public Safety Sales Tax Fund. Nonresidential properties owned by the University generate annual net deficits to the General Fund, Public Safety Sales Tax Fund and Capital Improvement Sales Tax Fund. There are no expenditures within the Park and Stormwater Sales Tax Fund for nonresidential land uses.

Figure 5. Annual Net Fiscal Impact Analysis Results for University City Funds: By Fund

	RESIDENTIAL PROPERTIES				NONRESIDENTIAL PROPERTIES				
	Single Family	Multifamily	Institutional	TOTAL	Retail	Office	Industrial	Institutional	TOTAL
<i>General Fund</i>									
Revenues	\$6,136	\$672,066	\$16,382	\$694,584	\$33,905	\$13,081	\$1,728	\$19,204	\$67,918
Expenditures	\$12,365	\$1,287,427	\$70,795	\$1,370,587	\$152,646	\$26,272	\$16,973	\$130,326	\$326,217
Net Fiscal Result	(\$6,229)	(\$615,360)	(\$54,413)	(\$676,002)	(\$118,741)	(\$13,190)	(\$15,245)	(\$111,123)	(\$258,299)
<i>Public Safety Sales Tax Fund</i>									
Revenues	\$688	\$72,853	\$4,006	\$77,548	\$0	\$0	\$0	\$0	\$0
Expenditures	\$1,477	\$156,340	\$8,597	\$166,414	\$20,552	\$2,214	\$2,658	\$18,812	\$44,237
Net Fiscal Result	(\$789)	(\$83,487)	(\$4,591)	(\$88,867)	(\$20,552)	(\$2,214)	(\$2,658)	(\$18,812)	(\$44,237)
<i>Capital Improvement Sales Tax Fund</i>									
Revenues	\$980	\$103,665	\$5,701	\$110,346	\$0	\$0	\$0	\$0	\$0
Expenditures	\$887	\$93,864	\$5,162	\$99,913	\$7,525	\$3,026	\$349	\$4,771	\$15,671
Net Fiscal Result	\$93	\$9,801	\$539	\$10,433	(\$7,525)	(\$3,026)	(\$349)	(\$4,771)	(\$15,671)
<i>Park and Stormwater Sales Tax Fund</i>									
Revenues	\$447	\$47,262	\$2,599	\$50,307	\$3,789	\$1,523	\$176	\$2,402	\$7,891
Expenditures	\$348	\$36,848	\$2,026	\$39,222	\$0	\$0	\$0	\$0	\$0
Net Fiscal Result	\$98	\$10,414	\$573	\$11,085	\$3,789	\$1,523	\$176	\$2,402	\$7,891
GRAND TOTAL									
Revenues	\$8,251	\$895,846	\$28,688	\$932,785	\$37,694	\$14,605	\$1,904	\$21,606	\$75,809
Expenditures	\$15,077	\$1,574,478	\$86,580	\$1,676,136	\$180,723	\$31,511	\$19,980	\$153,910	\$386,124
Net Fiscal Result	(\$6,827)	(\$678,632)	(\$57,893)	(\$743,351)	(\$143,030)	(\$16,906)	(\$18,077)	(\$132,304)	(\$310,316)

Major Findings

Washington University-owned properties do not pay property taxes to the City of University, as the University is a tax-exempt entity as an institutional land use. Based on the St. Louis County assessment data provided by the City, TischlerBise estimates the City foregoes property tax revenue totaling \$410,736 from these University owned properties. As our analysis indicates, these University-owned properties cost the City approximately \$2.06 million annually. The following bullet points summarize the major findings from our analysis.

- Washington University-owned properties generate a net deficit of \$1.05 million annually to University City, with the majority of this deficit accruing to the General Fund.
- Of the \$1.05 million annual net deficit discussed above, residential land uses owned by Washington University generate the largest net deficits to the City, at \$743,351 annually. This is compared to an annual net deficit of \$310,316 for University-owned nonresidential properties.
- General Fund net deficits total \$676,002 for residential properties owned by the University, compared to \$258,299 for nonresidential properties. Police and Fire expenditures account for the greatest General Fund expenditures, followed by Public Works.
- Public Safety Sales Tax Fund net deficits total \$88,867 for residential properties owned by the University, compared to \$44,237 for nonresidential properties.
- University-owned residential properties generate a net surplus of \$10,433 to the Capital Improvement Sales Tax Fund, while nonresidential properties generate a net deficit of \$15,671. Because this sales tax is pooled, the City receives its distribution based on population, nonresidential development receives no credit for sales tax generation.
- University-owned residential properties also generate a net surplus of \$11,085 to the Park and Stormwater Sales Tax Fund. The total nonresidential Park and Stormwater Sales Tax Fund annual net surplus is \$7,891.
- While it is clear that Washington University has a tremendous *economic* impact on the City of University City, the analysis indicates University's tax-exempt status is placing a significant *fiscal* burden on the City. The proliferation of off-campus University-owned properties represents not only lost revenue, but an opportunity cost in the form of significantly greater revenue from projects funded through private investors that have the possibility of greater intensity and value added amenities.

OVERVIEW OF THE APPROACH

For this analysis, the net fiscal impacts for the residential and nonresidential land uses owned by the City of University City have been determined by subtracting the costs necessary to serve these land uses from the revenues generated by each land use. The cost and revenue factors have been determined based on the *FY2020 Adopted University City Annual Operating Budget* and *current levels of service*. The analysis includes University City's tax supported funds. Only those funds affected by new development were included in the analysis. Enterprise Funds are not included as those funds are assumed to be fully supported by the revenues generated by the respective Fund. The funds modeled are:

- General Fund
- Public Safety Sales Tax Fund
- Capital Improvement Fund
- Park and Stormwater Fund
- Debt Service Fund

To derive the costs, revenues, and service levels, TischlerBise interviewed department staff and reviewed the current budget along with other financial and demographic data. The result of this assessment and the methodologies used to determine costs and revenues are described throughout this document.

Capital improvement costs are included in the analysis using existing debt service costs, which reflect an average annual expense for capital improvements, as well as additional ongoing capital expenditures that are not captured in debt service costs.

REVENUE FACTORS—GENERAL FUND

The following section details the revenue allocation methodologies used in the analysis. Figure 6 provides a snapshot of allocation methodologies for General Fund revenue sources. It is important to note that University-owned do not pay property tax or County Road Fund property tax to the City. However, TischlerBise has calculated the foregone property revenue using a custom methodology discussed later in this document.

Figure 6. Revenue Allocation Methodologies

Revenue Category	FY 2020 Amount	Percent of Total	Allocation Methodology	Residential Share	Nonresidential Share	Residential Divisor	Nonresidential Divisor	Residential Prototype Factor	Nonresidential Prototype Factor
Property Taxes - Current	\$2,961,000	11.51%	Custom	N/A	N/A	N/A	N/A	See Custom Table	See Custom Table
Property Taxes - Delinquent	\$70,000	0.27%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Personal Property- Current	\$383,000	1.49%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Personal Property- Delinquent	\$40,500	0.16%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Intangible Property	\$200	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Railroad and Other Utilities	\$70,000	0.27%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Local Use Tax	\$853,000	3.32%	Population and Jobs	\$673,870	\$179,130	34,372	15,010	\$19.61	\$11.93
Countywide Sales Tax (pool)	\$5,339,000	20.76%	Population	\$5,339,000	N/A	N/A	N/A	N/A	N/A
Fire Sales Tax (Point of Sale)	\$675,000	2.62%	Population and Jobs	\$533,250	\$141,750	34,372	15,010	\$15.51	\$9.44
State Gas Tax	\$957,000	3.72%	Population	\$957,000	N/A	34,372	N/A	\$27.84	N/A
State Motor Vehicle Sales Tax	\$486,000	1.89%	Population	\$486,000	N/A	34,372	N/A	\$14.14	N/A
County Road Fund	\$623,000	2.42%	Custom	N/A	N/A	N/A	N/A	Go To Custom Table	Go To Custom Table
Cigarette Tax	\$110,000	0.43%	Population and Jobs	\$86,900	\$23,100	34,372	15,010	\$2.53	\$1.54
Safer Grant	\$1,276,300	4.96%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Business Licenses	\$501,000	1.95%	Jobs	N/A	\$501,000	N/A	15,010	N/A	\$33.38
Motor Vehicle Fees	\$142,000	0.55%	Population and Jobs	\$112,180	\$29,820	34,372	15,010	\$3.26	\$1.99
Dog Licenses & Redemption Fees	\$2,000	0.01%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Liquor	\$34,000	0.13%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Electric Gross Receipts Tax	\$2,875,000	11.18%	Population and Jobs	\$2,271,250	\$603,750	34,372	15,010	\$66.08	\$40.22
Natural Gas Gross Receipts Tax	\$1,536,000	5.97%	Population and Jobs	\$1,213,440	\$322,560	34,372	15,010	\$35.30	\$21.49
Water Gross Receipts Tax	\$543,000	2.11%	Population and Jobs	\$428,970	\$114,030	34,372	15,010	\$12.48	\$7.60
Telephone Gross Receipts Tax	\$922,000	3.59%	Population and Jobs	\$728,380	\$193,620	34,372	15,010	\$21.19	\$12.90
Cable TV Gross Receipts Tax	\$270,000	1.05%	Population and Jobs	\$213,300	\$56,700	34,372	15,010	\$6.21	\$3.78
Fiber Optic Gross Receipts Tax	\$72,000	0.28%	Population and Jobs	\$56,880	\$15,120	34,372	15,010	\$1.65	\$1.01
ROW Use Gross Receipts Tax	\$92,000	0.36%	Population and Jobs	\$72,680	\$19,320	34,372	15,010	\$2.11	\$1.29
Excavation and Drive Permit/Fees	\$25,000	0.10%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Rental Property Permits/Fees	\$3,200	0.01%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Building and Zoning Permits/Fees	\$838,000	3.26%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Ambulance Service Charges	\$725,000	2.82%	Population and Jobs	\$572,750	\$152,250	34,372	15,010	\$16.66	\$10.14
Weed & Debris Service Charge	\$36,700	0.14%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Police Service Charges	\$198,000	0.77%	Population and Jobs	\$156,420	\$41,580	34,372	15,010	\$4.55	\$2.77
Aquatics Fees	\$100,000	0.39%	Population	\$100,000	N/A	34,372	N/A	\$2.91	N/A
Community Center Fees	\$87,000	0.34%	Population	\$87,000	N/A	34,372	N/A	\$2.53	N/A
Centennial Commons Fees	\$554,000	2.15%	Population	\$554,000	N/A	34,372	N/A	\$16.12	N/A

Revenue Category	FY 2020 Amount	Percent of Total	Allocation Methodology	Residential Share	Nonresidential Share	Residential Divisor	Nonresidential Divisor	Residential Prototype Factor	Nonresidential Prototype Factor
Parking Meter Collections	\$132,000	0.51%	Vehicle Trips	\$81,283	\$50,717	66,516	41,502	\$1.22	\$1.22
Parking Fines	\$160,000	0.62%	Vehicle Trips	\$98,525	\$61,475	66,516	41,502	\$1.48	\$1.48
Court Fines	\$324,000	1.26%	Population and Jobs	\$255,960	\$68,040	34,372	15,010	\$7.45	\$4.53
Court Costs	\$80,000	0.31%	Population and Jobs	\$63,200	\$16,800	34,372	15,010	\$1.84	\$1.12
Misc. Court Receipts	\$500	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Bond Forfeiture	\$15,000	0.06%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Crime Victim Compensation	\$1,500	0.01%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Interest Income	\$26,000	0.10%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Interfund Loan Interest	\$5,336	0.02%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Special Assessment	\$50,000	0.19%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Misc. Operating Revenue	\$16,000	0.06%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Non-Operating Revenue	\$6,100	0.02%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Credit Card Fees	\$10,000	0.04%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Police Officer Std. & Training	\$2,500	0.01%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Police Training Fees	\$6,600	0.03%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Rental of Property	\$1,500	0.01%	Fixed	N/A	N/A	N/A	N/A	NA	NA
False Alarms	\$8,100	0.03%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Transfer In-Pub. Saf. Sales Tax Fund	\$1,264,700	4.92%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Transfer In-Parks & SW Fund	\$41,280	0.16%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Transfer In-Golf Course Fund	\$53,220	0.21%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Transfer In-Parking Garage Fund	\$53,220	0.21%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Transfer In-Sewer Lateral Fund	\$57,240	0.22%	Fixed	N/A	N/A	N/A	N/A	NA	NA
TOTAL	\$25,714,696	100.00%							

Pooled Sales Tax

The City's largest General Fund revenue source is the City's share of a Countywide 1 cent sales tax. The City's share of this sales tax is based on its per capita sales generated within a pool of cities in St. Louis County and unincorporated areas of the County. Therefore, this sales tax is allocated on a per capita, or population basis

Point of Sale Sales Tax

The City's also has several sales taxes that are distributed based on point sale, meaning that sales tax generated within University City stay s in University City. These point of sale sales taxes include the local use tax, park and stormwater sales tax and fire services sales tax. We have found the best way to allocate point of sale-based sales taxes depends on the situation. For example, without retail space in University City, it can be argued the City would derive no point of sale sales tax. However, there are different types of retail space (e.g., regional, neighborhood, etc.), and therefore the sales tax allocation methodology needs to reflect the situation. In the case of regional-scale, auto-dependent retail space the appropriate methodology would be to determine the sales per square foot for the retail space, and then apply the applicable sales tax rate. This

is largely because this type of retail space is necessarily dependent on the surrounding population and employment base. Rather, this type of space draws customers from a large catchment area who travel to purchase what can be termed as “shoppers goods,” such home goods, electronics, furniture, vehicles, construction materials, etc. However, neighborhood-scale retail establishments such as the those in the vicinity of the Delmar Loop cannot be sustained without the patronage of nearby residents and workers. In these cases, a population and jobs allocation is more appropriate for the allocation of point of sale sales tax.

Property Tax

Property tax revenue accounts for approximately 12 percent of University City’s General Fund budget. This currently applies to university-owned properties that aren’t used for university-related activities. TischlerBise determined the foregone property tax revenues for residential and nonresidential uses owned by the University by utilizing assessment data from each property. Details are provided below.

The City of University City provided TischlerBise a citywide parcel database from St. Louis County which we were able ascertain properties owned by Washington University. As shown in the Figure below, University owned properties were sorted by residential and nonresidential land use. The taxable value of residential properties owned by the University total \$11.1 million and nonresidential properties have a taxable value of \$46.3 million. The City has two property taxes. The City’s main property tax is assessed at a rate of \$.61 per \$100 in value. The County Road Fund is also a property tax contained in the City’s General Fund, with a rate of \$.105 per \$100 in value. Since properties owned by the University are exempt from local property taxes, the City foregoes an estimated \$410,736 in tax revenue as a result of Washington University’s tax-exempt status.

Figure 7. Foregone Property Tax to University City

Prototype	Units	Taxable Value [1]	Property Tax [2] 0.61	County Road Tax [2] 0.105	TOTAL
Residential					
Single Family	6	\$259,530	\$1,583	\$273	\$1,856
Multifamily	491	\$9,628,820	\$58,736	\$10,110	\$68,846
Institutional	27	\$1,275,370	\$7,780	\$1,339	\$9,119
Subtotal	524	\$11,163,720	\$68,099	\$11,722	\$79,821
	Floor Area (Sq. Ft.)	Taxable Value	Property Tax [2] 0.61	County Road Tax [2] 0.105	TOTAL
Nonresidential					
Retail	59,116	\$16,164,570	\$98,604	\$16,973	\$115,577
Office	15,300	\$107,520	\$656	\$113	\$769
Industrial	36,080	\$1,470,780	\$8,972	\$1,544	\$10,516
Institutional	118,140	\$28,539,000	\$174,088	\$29,966	\$204,054
Subtotal	228,636	\$46,281,870	\$282,319	\$48,596	\$330,915
TOTAL		\$57,445,590	\$350,418	\$60,318	\$410,736

[1] Based on tax assessment records provided by the City of University City

[2] Per \$100 of assessed valuation.

REVENUE FACTORS—SPECIAL REVENUE FUND

The following section details Special Revenue Fund allocation methodologies used in the analysis. All three Special Revenue Funds are funded through sales taxes.

Figure 8. Revenue Allocation Methodologies

**Public Safety Sales Tax Fund Revenues and Fiscal Factors
University-Owned Property in University City**

Revenue Category	FY 2020 Amount	Percent of Total	Allocation Methodology	Residential Share	Nonresidential Share	Residential Divisor	Nonresidential Divisor	Residential Prototype Factor	Nonresidential Prototype Factor
Sales Tax	\$1,700,000	100.00%	Population	\$1,700,000	N/A	34,372	N/A	\$49.46	N/A
Revenue Type 9	\$0	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	N/A
Revenue Type 10	\$0	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Revenue Type 11	\$0	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Revenue Type 12	\$0	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Revenue Type 13	\$0	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	NA
TOTAL	\$1,700,000	100.00%							

**Capital Improvement Fund Revenues and Fiscal Factors
University-Owned Property in University City**

Revenue Category	FY 2020 Amount	Percent of Total	Allocation Methodology	Residential Share	Nonresidential Share	Residential Divisor	Nonresidential Divisor	Residential Prototype Factor	Nonresidential Prototype Factor
Sales Tax	\$2,419,000	100.00%	Population	\$2,419,000	N/A	34,372	N/A	\$70.38	N/A
Revenue Type 2	\$0	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Revenue Type 3	\$0	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Revenue Type 7	\$0	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Revenue Type 8	\$0	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	NA
TOTAL	\$2,419,000	100.00%							

**Park and Stormwater Fund Revenues and Fiscal Factors
University-Owned Property in University City**

Revenue Category	FY 2020 Amount	Percent of Total	Allocation Methodology	Residential Share	Nonresidential Share	Residential Divisor	Nonresidential Divisor	Residential Prototype Factor	Nonresidential Prototype Factor
Sales Tax	\$1,396,000	5.43%	Population and Jobs	\$1,102,840	\$293,160	34,372	15,010	\$32.09	\$19.53
Revenue Type 2	\$0	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Revenue Type 3	\$0	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	NA
Revenue Type 7	\$0	0.00%	Fixed	N/A	N/A	N/A	N/A	NA	NA
TOTAL	\$1,396,000	5.43%							

REVENUE SUMMARY

General Fund

The main source of General Fund revenue generated by residential development in University City is sales tax. The amount of revenue generated by residential land use corresponds directly with the population and the number of units. Multifamily units generate the most General Fund revenue to the City, estimated at \$672,066 annually. Multifamily units classified as Institutional uses generate estimated revenue of \$35,414. Single family units owned by the University generate \$6,136 in annual General Fund revenue.

The figure below shows also indicates General Fund revenue generated by the nonresidential land uses owned by the University. Because the largest sales tax source (pooled sales taxes) are generated by a population-based formula, the largest sources are related to business licenses and various franchise fees. Retail land uses owned by the University generate the most General Fund revenue to the City, estimated at \$33,905 annually. Institutional uses generate General Fund revenue of \$22,023. Office uses owned by the University generate \$13,081 in annual General Fund revenue. Finally, industrial uses owned by the University generates annual General Fund revenue of \$1,728.

Figure 9. Revenue Generation by University-Owned Properties: General Fund

General Fund Revenues
University-Owned Property in University City

Revenue	RESIDENTIAL PROPERTIES			NONRESIDENTIAL PROPERTIES			
	Single Family	Multifamily	Institutional	Retail	Office	Industrial	Institutional
Property Taxes - Current	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Property Taxes - Delinquent	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Personal Property- Current	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Personal Property- Delinquent	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Intangible Property	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Railroad and Other Utilities	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Local Use Tax	\$272.90	\$28,878.46	\$1,588.02	\$2,315.20	\$930.86	\$107.41	\$1,467.89
Countywide Sales Tax (pool)	\$2,162.19	\$228,800.97	\$12,581.72	\$0.00	\$0.00	\$0.00	\$0.00
Fire Sales Tax (Point of Sale)	\$215.96	\$22,852.24	\$1,256.64	\$1,832.08	\$736.61	\$84.99	\$1,161.58
State Gas Tax	\$387.57	\$41,011.90	\$2,255.24	\$0.00	\$0.00	\$0.00	\$0.00
State Motor Vehicle Sales Tax	\$196.82	\$20,827.36	\$1,145.29	\$0.00	\$0.00	\$0.00	\$0.00
County Road Fund	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Cigarette Tax	\$35.19	\$3,724.07	\$204.79	\$298.56	\$120.04	\$13.85	\$189.29
Safer Grant	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Business Licenses	\$0.00	\$0.00	\$0.00	\$6,475.28	\$2,603.46	\$300.40	\$4,105.46
Motor Vehicle Fees	\$45.43	\$4,807.43	\$264.36	\$385.42	\$154.96	\$17.88	\$244.36
Dog Licenses & Redemption Fees	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Liquor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Electric Gross Receipts Tax	\$919.81	\$97,333.62	\$5,352.36	\$7,803.30	\$3,137.41	\$362.01	\$4,947.45
Natural Gas Gross Receipts Tax	\$491.42	\$52,001.55	\$2,859.56	\$4,169.00	\$1,676.19	\$193.41	\$2,643.23
Water Gross Receipts Tax	\$173.72	\$18,383.36	\$1,010.90	\$1,473.81	\$592.56	\$68.37	\$934.42
Telephone Gross Receipts Tax	\$294.98	\$31,214.47	\$1,716.48	\$2,502.48	\$1,006.15	\$116.09	\$1,586.63
Cable TV Gross Receipts Tax	\$86.38	\$9,140.90	\$502.66	\$732.83	\$294.64	\$34.00	\$464.63
Fiber Optic Gross Receipts Tax	\$23.04	\$2,437.57	\$134.04	\$195.42	\$78.57	\$9.07	\$123.90
ROW Use Gross Receipts Tax	\$29.43	\$3,114.68	\$171.28	\$249.71	\$100.40	\$11.58	\$158.32
Excavation and Drive Permit/Fees	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Rental Property Permits/Fees	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Building and Zoning Permits/Fees	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Ambulance Service Charges	\$231.95	\$24,545.00	\$1,349.73	\$1,967.79	\$791.17	\$91.29	\$1,247.62
Weed & Debris Service Charge	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Police Service Charges	\$63.35	\$6,703.32	\$368.61	\$537.41	\$216.07	\$24.93	\$340.73
Aquatics Fees	\$40.50	\$4,285.46	\$235.66	\$0.00	\$0.00	\$0.00	\$0.00
Community Center Fees	\$35.23	\$3,728.35	\$205.02	\$0.00	\$0.00	\$0.00	\$0.00
Centennial Commons Fees	\$224.36	\$23,741.48	\$1,305.54	\$0.00	\$0.00	\$0.00	\$0.00
Parking Meter Collections	\$34.61	\$28,878.46	\$44.87	\$845	\$91.05	\$109.34	\$773.82
Parking Fines	\$41.95	\$1,978.22	\$108.78	\$1,024.73	\$110.37	\$132.54	\$937.96
Court Fines	\$103.66	\$10,969.08	\$603.19	\$879.40	\$353.57	\$40.80	\$557.56
Court Costs	\$25.59	\$2,708.41	\$148.94	\$217.14	\$87.30	\$10.07	\$137.67
Misc. Court Receipts	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Bond Forfeiture	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Crime Victim Compensation	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Interest Income	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Interfund Loan Interest	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Special Assessment	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Misc. Operating Revenue	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Non-Operating Revenue	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Credit Card Fees	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Police Officer Std. & Training	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Police Training Fees	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Rental of Property	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
False Alarms	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Transfer In-Pub. Saf. Sales Tax Fund	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Transfer In-Parks & SW Fund	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Transfer In-Golf Course Fund	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Transfer In-Parking Garage Fund	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Transfer In-Sewer Lateral Fund	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL	\$6,136	\$672,066	\$35,414	\$33,905	\$13,081	\$1,728	\$22,023

Special Revenue Funds

The City's three Special Revenue Funds are funded through sales tax. As discussed previously, pooled sales taxes are distributed to the City using a population-based formula, therefore only residential land uses generate sales tax to the Public Safety Sales Tax Fund and Capital Improvement Sales Tax Fund. Multifamily units generate the most Special Revenue Fund revenue to the City, estimated at \$223,780 annually. Multifamily units classified as Institutional uses generate estimated revenue of \$12,306. Single family units owned by the University generate \$2,115 in annual Special Revenue Fund revenue.

The figure below shows also indicates Special Revenue Fund revenue generated by the nonresidential land uses owned by the University. Since the Parks and Stormwater Sales Tax Fund is the only Fund with point of sale sales tax, this is the only Fund that nonresidential uses contribute too. Retail land uses owned by the University generate the most Special Revenue Fund revenue to the City, estimated at \$3,789 annually. Institutional uses generate Special Revenue Fund revenue of \$2,402. Office uses owned by the University generate \$1,523 in annual Special Revenue Fund revenue. Finally, industrial uses owned by the University generates annual Special Revenue Fund revenue of \$176.

Figure 10. Revenue Generation by University-Owned Properties: Special Revenue Funds

Summary of Special Revenue Fund Revenue
University-Owned Property in University City

Fund	RESIDENTIAL PROPERTIES			NONRESIDENTIAL PROPERTIES			
	Single Family	Multifamily	Institutional	Retail	Office	Industrial	Institutional
Public Safety Sales Tax Fund	\$688	\$72,853	\$4,006	\$0	\$0	\$0	\$0
Capital Improvement Sales Tax Fund	\$980	\$103,665	\$5,701	\$0	\$0	\$0	\$0
Park and Stormwater Sales Tax Fund	\$447	\$47,262	\$2,599	\$3,789	\$1,523	\$176	\$2,402
TOTAL	\$2,115	\$223,780	\$12,306	\$3,789	\$1,523	\$176	\$2,402

EXPENDITURE FACTORS—GENERAL FUND

The following series of figures details the expenditure allocation methodologies used for each of the University City's General Fund expenditures. Custom allocation analyses—and those where two or more factors are identified—are described at the end of this section.

Figure 11. General Fund Expenditure Allocation Methodologies

Expenditure Category	FY 2020 Amount	Percent of Total	Allocation Methodology	Adj. Factor	Residential Share	Nonres. Share	Residential Divisor	Nonres. Divisor	Residential Cost Factor	Nonres. Cost Factor
City Council	\$221,461	0.88%								
Personnel Services	\$111,816	0.44%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Contractual Services	\$105,305	0.42%	Population and Jobs	100%	\$83,191	\$22,114	34,372	15,010	\$2.42	\$1.47
Commodities	\$4,340	0.02%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Capital Outlay	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
City Manager	\$624,850	2.48%								
Personnel Services	\$301,700	1.20%	Population and Jobs	100%	\$238,343	\$63,357	34,372	15,010	\$6.93	\$4.22
Contractual Services	\$318,150	1.26%	Population and Jobs	100%	\$251,339	\$66,812	34,372	15,010	\$7.31	\$4.45
Commodities	\$5,000	0.02%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Capital Outlay	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Communications	\$258,720	1.03%								
Personnel Services	\$137,115	0.54%	Population and Jobs	100%	\$108,321	\$28,794	34,372	15,010	\$3.15	\$1.92
Contractual Services	\$121,365	0.48%	Population and Jobs	100%	\$95,878	\$25,487	34,372	15,010	\$2.79	\$1.70
Commodities	\$240	0.00%	Population and Jobs	100%	\$190	\$50	34,372	15,010	\$0.01	\$0.00
Capital Outlay	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Information Technology	\$623,940	2.48%								
Personnel Services	\$186,050	0.74%	Population and Jobs	100%	\$146,980	\$39,071	34,372	15,010	\$4.28	\$2.60
Contractual Services	\$332,390	1.32%	Population and Jobs	100%	\$262,588	\$69,802	34,372	15,010	\$7.64	\$4.65
Commodities	\$18,500	0.07%	Population and Jobs	100%	\$14,615	\$3,885	34,372	15,010	\$0.43	\$0.26
Capital Outlay	\$87,000	0.35%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Economic Development	\$134,742	0.54%								
Personnel Services	\$118,397	0.47%	Jobs	100%	N/A	\$118,397	N/A	15,010	N/A	\$7.89
Contractual Services	\$16,345	0.06%	Jobs	100%	N/A	\$16,345	N/A	15,010	N/A	\$1.09
Commodities	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Capital Outlay	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A

Fiscal Impact of Property Owned by Washington University
City of University City, Missouri

Expenditure Category	FY 2020 Amount	Percent of Total	Allocation Methodology	Adj. Factor	Residential Share	Nonres. Share	Residential Divisor	Nonres. Divisor	Residential Cost Factor	Nonres. Cost Factor
Human Resources	\$1,325,980	5.27%								
Personnel Services	\$202,100	0.80%	Population and Jobs	100%	\$159,659	\$42,441	34,372	15,010	\$4.65	\$2.83
Contractual Services	\$89,740	0.36%	Population and Jobs	100%	\$70,895	\$18,845	34,372	15,010	\$2.06	\$1.26
Commodities	\$22,240	0.09%	Population and Jobs	100%	\$17,570	\$4,670	34,372	15,010	\$0.51	\$0.31
Transfers Out	\$1,011,900	4.02%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Finance	\$697,770	2.77%								
Personnel Services	\$479,500	1.90%	Population and Jobs	100%	\$378,805	\$100,695	34,372	15,010	\$11.02	\$6.71
Contractual Services	\$201,520	0.80%	Population and Jobs	100%	\$159,201	\$42,319	34,372	15,010	\$4.63	\$2.82
Commodities	\$16,750	0.07%	Population and Jobs	100%	\$13,233	\$3,518	34,372	15,010	\$0.38	\$0.23
Capital Outlay	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Police	\$9,031,062	35.88%								
Personnel Services	\$8,315,270	33.03%	Custom	100%	N/A	N/A	N/A	N/A	See Custom Table	See Custom Table
Contractual Services	\$573,748	2.28%	Custom	100%	N/A	N/A	N/A	N/A	See Custom Table	See Custom Table
Commodities	\$111,600	0.44%	Custom	100%	N/A	N/A	N/A	N/A	See Custom Table	See Custom Table
Temporary Facility	\$30,444	0.12%	Custom	100%	N/A	N/A	N/A	N/A	See Custom Table	See Custom Table
Fire	\$4,917,849	19.54%								
Personnel Services	\$4,333,250	17.21%	Custom	100%	N/A	N/A	N/A	N/A	See Custom Table	See Custom Table
Contractual Services	\$286,694	1.14%	Custom	100%	N/A	N/A	N/A	N/A	See Custom Table	See Custom Table
Commodities	\$158,305	0.63%	Custom	100%	N/A	N/A	N/A	N/A	See Custom Table	See Custom Table
Capital Outlay	\$139,600	0.55%	Custom	100%	N/A	N/A	N/A	N/A	See Custom Table	See Custom Table
Municipal Court	\$348,720	1.39%								
Personnel Services	\$258,800	1.03%	Population and Jobs	100%	\$204,452	\$54,348	34,372	15,010	\$5.95	\$3.62
Contractual Services	\$85,920	0.34%	Population and Jobs	100%	\$67,877	\$18,043	34,372	15,010	\$1.97	\$1.20
Commodities	\$4,000	0.02%	Population and Jobs	100%	\$3,160	\$840	34,372	15,010	\$0.09	\$0.06
Capital Outlay	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
PW-Administration and Engineering	\$437,135	1.74%								
Personnel Services	\$335,992	1.33%	Population and Jobs	100%	\$265,434	\$70,558	34,372	15,010	\$7.72	\$4.70
Contractual Services	\$94,243	0.37%	Population and Jobs	100%	\$74,452	\$19,791	34,372	15,010	\$2.17	\$1.32
Commodities	\$6,900	0.03%	Population and Jobs	100%	\$5,451	\$1,449	34,372	15,010	\$0.16	\$0.10
Capital Outlay	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
PW-Streets Maintenance	\$1,365,578	5.43%								
Personnel Services	\$656,515	2.61%	Vehicle Trips	100%	\$404,271	\$252,244	66,516	41,502	\$6.08	\$6.08
Contractual Services	\$692,213	2.75%	Vehicle Trips	100%	\$426,254	\$265,959	66,516	41,502	\$6.41	\$6.41
Commodities	\$16,850	0.07%	Vehicle Trips	100%	\$10,376	\$6,474	66,516	41,502	\$0.16	\$0.16
Capital Outlay	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
PW-Facilities Maintenance	\$825,541	3.28%								
Personnel Services	\$485,700	1.93%	Population and Jobs	100%	\$383,703	\$101,997	34,372	15,010	\$11.16	\$6.80
Contractual Services	\$308,441	1.23%	Population and Jobs	100%	\$243,668	\$64,773	34,372	15,010	\$7.09	\$4.32
Commodities	\$21,400	0.09%	Population and Jobs	100%	\$16,906	\$4,494	34,372	15,010	\$0.49	\$0.30
Capital Outlay	\$10,000	0.04%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A

Fiscal Impact of Property Owned by Washington University
City of University City, Missouri

Expenditure Category	FY 2020 Amount	Percent of Total	Allocation Methodology	Adj. Factor	Residential Share	Nonres. Share	Residential Divisor	Nonres. Divisor	Residential Cost Factor	Nonres. Cost Factor
Planning & Development	\$1,529,517	6.08%								
Personnel Services	\$1,335,823	5.31%	Population and Jobs	100%	\$1,055,300	\$280,523	34,372	15,010	\$30.70	\$18.69
Contractual Services	\$182,944	0.73%	Population and Jobs	100%	\$144,526	\$38,418	34,372	15,010	\$4.20	\$2.56
Commodities	\$10,750	0.04%	Population and Jobs	100%	\$8,493	\$2,258	34,372	15,010	\$0.25	\$0.15
Capital Outlay	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Parks Maintenance & Forestry	\$1,468,000	5.83%								
Personnel Services	\$957,150	3.80%	Population	100%	\$957,150	N/A	34,372	N/A	\$27.85	N/A
Contractual Services	\$422,000	1.68%	Population	100%	\$422,000	N/A	34,372	N/A	\$12.28	N/A
Commodities	\$67,850	0.27%	Population	100%	\$67,850	N/A	34,372	N/A	\$1.97	N/A
Capital Outlay	\$21,000	0.08%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Recreation	\$164,581	0.65%								
Personnel Services	\$93,681	0.37%	Population	100%	\$93,681	N/A	34,372	N/A	\$2.73	N/A
Contractual Services	\$65,750	0.26%	Population	100%	\$65,750	N/A	34,372	N/A	\$1.91	N/A
Commodities	\$5,150	0.02%	Population	100%	\$5,150	N/A	34,372	N/A	\$0.15	N/A
Capital Outlay	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Aquatics Programs	\$385,304	1.53%								
Personnel Services	\$263,260	1.05%	Population	100%	\$263,260	N/A	34,372	N/A	\$7.66	N/A
Contractual Services	\$73,544	0.29%	Population	100%	\$73,544	N/A	34,372	N/A	\$2.14	N/A
Commodities	\$48,500	0.19%	Population	100%	\$48,500	N/A	34,372	N/A	\$1.41	N/A
Capital Outlay	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Centennial Commons Rec Center	\$805,502	3.20%								
Personnel Services	\$433,000	1.72%	Population	100%	\$433,000	N/A	34,372	N/A	\$12.60	N/A
Contractual Services	\$287,902	1.14%	Population	100%	\$287,902	N/A	34,372	N/A	\$8.38	N/A
Commodities	\$44,550	0.18%	Population	100%	\$44,550	N/A	34,372	N/A	\$1.30	N/A
Capital Outlay	\$40,050	0.16%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Debt Service and Contingency	\$5,200	0.02%								
Expense	\$1,000	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Interest	\$4,200	0.02%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Transfers	\$0	0.00%								
Personnel Services		0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Contractual Services		0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Capital Outlay		0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL	\$25,171,452	100.00%								

Source: City of University City FY 2020 Budget

For General Fund expenditures allocated to “Population,” costs are allocated 100 percent to residential development and derived based on household size by type of unit. For other services that are allocated to “Population and Jobs,” we use the proportionate share analysis mentioned above to allocate costs to residential and nonresidential development. Figure 43 indicates that 79 percent of demand is from residential development and 21 percent from nonresidential.

Custom Operating Expenditures

Police

To allocate **Police** costs to different land uses, TischlerBise obtained incident offense report data for 2019. The Police Department was able to separate incident offense data separate calls into two categories: total crime incidents and incidents from properties owned by Washington University. This data is used to identify the number of incidents to the land uses in the analysis. Calls from the Washington University properties totals 13 percent of 2019 calls for the University City Police Department. Incidents at properties owned by Washington University accounted for 13% of total calls. Therefore, 13% of the Police Department budget (\$1,132,584) can be attributed as the cost to serve the University-owned properties.

Since police incidents occur at both residential and nonresidential properties owned by the University, functional population is used to determine residential and nonresidential proportionate share factors, which are 79% for residential development and 21% for nonresidential development. Therefore, of the \$1,132,584 Police costs attributed to University-owned properties, \$894,741 can be attributed to residential development and \$237,842 can be attributed to nonresidential development.

Figure 12. University City Police Department Incident Offense Data and Proportionate Share

<i>Land Use</i>	<i>Calls [1]</i>	
Total Crime Incidents	1,220	100%
Washington University Properties	153	13%
Police Department Budget		\$9,031,062
Percentage Attributable to Washington University Properties		\$1,132,584
	<i>% [2]</i>	<i>% of Budget</i>
Residential Proportionate Share	79%	\$894,741.36
Nonresidential Proportionate Share	21%	\$237,842.64
		\$1,132,584.00

[1] University City Police Department. Based on an analysis of calls.

[2] Computed by TischlerBise with U.S. Census data and OnTheMap Application.

Residential costs were allocated based on the percentage of units to total units. For example, 1% of the total residential units are classified as single family units. Therefore, 1% of the residential proportionate share of the budget (\$7,943) is attributed to residential units. For nonresidential land uses owned by the University, average day vehicle trips are used to allocate costs. Vehicle trips are a better reflection of demand for Police services. Trip rates are highest for retail development and lowest for industrial/warehouse development. Office/institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for Police services.

Figure 13. Police Cost Factors

	Population	%	Cost Factor
Single Family	14	1%	\$7,943.52
Multifamily	1473	94%	\$840,574.79
Institutional	81	5%	\$46,223.05
Total	1568	100%	\$894,741.36

	Avg Day Vehicle Trips	%	Cost Factor
Retail	692	46%	\$110,502.34
Office	75	5%	\$11,901.68
Institutional	633	43%	\$101,146.19
Industrial	89	6%	\$14,292.43
Total	1,489	100%	\$237,842.64

Fire

For **Fire**, TischlerBise worked with the Fire Department to identify calls to University-owned property. Unfortunately, the Fire Department is only able to track calls in this manner beginning in 2020, so only a two month sample was available. TischlerBise used this data to project a full year of calls to use as a proxy in this analysis. This methodology indicates calls to University-owned properties account for 3% of total calls for the University City Police Department. Therefore, 3% of the Fire Department budget (\$161,482) can be attributed as the cost to serve the University-owned properties.

Figure 14. University City Fire Department Incident Offense Data and Proportionate Share Factors

Land Use	Calls [1]	
Total Calls for Service	4,020	100%
Washington University Properties	132	3%
Fire Department Budget		\$4,917,849
Percentage Attributable to Washington University Properties		\$161,482
	% [2]	% of Budget
Residential Proportionate Share	79%	\$127,570.47
Nonresidential Proportionate Share	21%	\$33,911.14
		\$161,481.61

[1] University City Fire Department. Based on an analysis of calls for January/February 2020, prorated for a full year.

[2] Computed by TischlerBise with U.S. Census data and OnTheMap Application.

Residential costs were allocated based on the percentage of units to total units. For example, 1% of the total residential units are classified as single family units. Therefore, 1% of the residential proportionate share of the budget (\$1,132) is attributed to residential units. For nonresidential land uses owned by the University, employment is used to allocate costs.

Figure 15. Fire Cost Factors

	Population	%	Cost Factor
Single Family	14	1%	\$1,132.57
Multifamily	1473	94%	\$119,847.51
Institutional	81	5%	\$6,590.39
Total	1568	100%	\$127,570.47

	Employment	%	Cost Factor
Retail	194	48%	\$16,284.06
Office	78	19%	\$6,547.20
Institutional	123	30%	\$10,324.43
Industrial	9	2%	\$755.45
Total	404	100%	\$33,911.14

Public Safety Sales Tax Fund

To allocate **Public Safety Sales Tax Fund** costs to different land uses, TischlerBise utilized the same incidence report data used for the General Fund costs for Police since an examination of expenditures for this Fund indicate that the majority are Police-related. Using this methodology results in 13% of the Public Safety Sales Tax Fund budget (\$210,651) attributable as the cost to serve the University-owned properties.

Figure 16. Public Safety Sales Tax Fund Incident Offense Data and Proportionate Share Factors

<i>Land Use</i>	Calls [1]	
Total Crime Incidents	1,220	100%
Washington University Properties	153	13%
Public Safety Sales Tax Transfer Out		\$1,679,700
Percentage Attributable to Washington University Properties		\$210,651
	% [2]	% of Budget
Residential Proportionate Share	79%	\$166,414.21
Nonresidential Proportionate Share	21%	\$44,236.69
		\$210,650.90

[1] University City Police Department. Based on an analysis of calls.

[2] Computed by TischlerBise with U.S. Census data and OnTheMap Application.

Residential costs were allocated based on the percentage of units to total units. For example, 1% of the total residential units are classified as single family units. Therefore, 1% of the residential proportionate share of the budget (\$1,477) is attributed to residential units. For nonresidential land uses owned by the University, average day vehicle trips are used to allocate costs. Vehicle trips are a better reflection of demand for Police services. Trip rates are highest for retail development and lowest for industrial/warehouse development. Office/institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for Police services.

Figure 17. Public Safety Sales Tax Fund Cost Factors

	Population	%	Cost Factor
Single Family	14	1%	\$1,477
Multifamily	1473	94%	\$156,340
Institutional	81	5%	\$8,597
Total	1568	100%	\$166,414

	Avg Day Vehicle Trips	%	Cost Factor
Retail	692	46%	\$20,552.49
Office	75	5%	\$2,213.61
Institutional	633	43%	\$18,812.32
Industrial	89	6%	\$2,658.27
Total	1,489	100%	\$44,236.69

EXPENDITURE FACTORS—SPECIAL REVENUE FUND

The following series of figures details the expenditure allocation methodologies used for each of University City’s Special Revenue Fund expenditures. Custom allocation analyses—and those where two or more factors are identified—are described at the end of this section.

Figure 18. Special Revenue Fund Expenditure Allocation Methodologies

Public Safety Sales Tax Fund Operating Expenditures and Fiscal Factors
University-Owned Property in University City

Expenditure Category	FY 2020 Amount	Percent of Total	Allocation Methodology	Adj. Factor	Residential Share	Nonres. Share	Residential Divisor	Nonres. Divisor	Residential Cost Factor	Nonres. Cost Factor
Public Safety Sales Tax Fund	\$2,363,770	100.00%								
Personnel Services	\$68,070	100.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Contractual Services	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Transfer Out	\$1,679,700	100.00%	Custom	100%	N/A	N/A	N/A	N/A	Go To Custom Table	Go To Custom Table
Capital Improvement	\$616,000	100.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A

Capital Improvement Sales Tax Fund Operating Expenditures and Fiscal Factors
University-Owned Property in University City

Expenditure Category	FY 2020 Amount	Percent of Total	Allocation Methodology	Adj. Factor	Residential Share	Nonres. Share	Residential Divisor	Nonres. Divisor	Residential Cost Factor	Nonres. Cost Factor
Capital Improvement Sales Tax Fund	\$3,076,828	100.00%								
Personnel Services	\$304,305	100.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Contractual Services	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Commodities	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Capital Outlay	\$2,047,250	100.00%	Population and Jobs	100%	\$1,617,328	\$429,923	34,372	15,010	\$47.05	\$28.64
Other	\$725,273	100.00%	Population and Jobs	100%	\$572,966	\$152,307	34,372	15,010	\$16.67	\$10.15
Transfer Out	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A

Park and Storm Water Sales Tax Fund Operating Expenditures and Fiscal Factors
University-Owned Property in University City

Expenditure Category	FY 2020 Amount	Percent of Total	Allocation Methodology	Adj. Factor	Residential Share	Nonres. Share	Residential Divisor	Nonres. Divisor	Residential Cost Factor	Nonres. Cost Factor
Park and Storm Water Sales Tax Fund	\$1,192,985	100.00%								
Personnel Services	\$291,873	100.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Contractual Services	\$10,300	100.00%	Population	100%	\$10,300	N/A	34,372	N/A	\$0.30	N/A
Capital Outlay	\$459,000	100.00%	Population	100%	\$459,000	N/A	34,372	N/A	\$13.35	N/A
Other	\$390,532	100.00%	Population	100%	\$390,532	N/A	34,372	N/A	\$11.36	N/A
Transfer Out	\$41,280	100.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A

For Special Revenue Fund expenditures allocated to “Population,” costs are allocated 100 percent to residential development and derived based on household size by type of unit. For other services that are allocated to “Population and Jobs,” we use the proportionate share analysis mentioned above to allocate costs to residential and nonresidential development. Figure 43 indicates that 79 percent of demand is from residential development and 21 percent from nonresidential.

Capital Expenditures

TischlerBise evaluated existing debt for capital improvements as well as tax-supported funds for capital improvements. Because this fiscal analysis documents current conditions and the impact of existing land uses on expenditures, existing debt service is used to capture capital cost impacts. The rationale is as follows:

- University City’s existing debt covers a range of infrastructure categories provided by the city.
 - General Government – Facilities Improvements and Energy Efficiency Master Plan
 - Streets Construction – Road Improvements and Construction
 - Police – Police Equipment Upgrades and Police Vehicle Purchasing
 - Fire – Ambulance Purchase
 - Parks – Equipment Replacement and Improvements
 - Miscellaneous Improvement

For capital expenditures allocated to “Population and Jobs,” we use the proportionate share analysis mentioned previously to allocate costs to residential and nonresidential development—79 percent to residential development and 21 percent to nonresidential.

TischlerBise also recognizes that both the Special Revenue Fund and the Tax Supported Capital Improvement Fund has the potential to be double counted and we take the conservative approach when including both Figure 20 and 21 to show these cost allocations.

Figure 19. Capital Expenditures Allocation Methodology

Expenditure Category	FY 2020 Amount	Percent of Total	Allocation Methodology	Adj. Factor	Residential Share	Nonres. Share	Residential Divisor	Nonres. Divisor	Residential Cost Factor	Nonres. Cost Factor
Tax-Supported Capital Improvement	\$3,122,250	100.00%								
General Government	\$530,000	100.00%	Population and Jobs	100%	\$418,700	\$111,300	34,372	15,010	\$12.18	\$7.42
Streets	\$1,152,250	100.00%	Vehicle Trips	100%	\$709,537	\$442,713	66,516	41,502	\$10.67	\$10.67
Police	\$366,000	100.00%	Custom	100%	N/A	N/A	N/A	N/A	Go To Custom Table	Go To Custom Table
Fire	\$250,000	100.00%	Custom	100%	N/A	N/A	N/A	N/A	Go To Custom Table	Go To Custom Table
Parks	\$459,000	100.00%	Population	100%	\$459,000	N/A	34,372	N/A	\$13.35	N/A
Miscellaneous	\$365,000	100.00%	Population and Jobs	100%	\$288,350	\$76,650	34,372	15,010	\$8.39	\$5.11

Custom Capital Expenditures

Police

To allocate **Police** capital expenditures to different land uses, TischlerBise obtained incident offense report data for 2019. The Police Department was able to separate incident offense data separate calls into two categories: total crime incidents and incidents from properties owned by Washington University. This data is used to identify the number of incidents to the land uses in the analysis. Calls from the Washington University properties totals 13 percent of 2019 calls for the University City Police Department. Incidents at properties owned by Washington University accounted for 13% of total calls. Therefore, 13% of the Police capital expenditures (\$45,900) can be attributed as the cost to serve the University-owned properties.

Since police incidents occur at both residential and nonresidential properties owned by the University, functional population is used to determine residential and nonresidential proportionate share factors, which are 79% for residential development and 21% for nonresidential development. Therefore, of the \$45,900 Police capital expenditures attributed to University-owned properties, \$36,261 can be attributed to residential development and \$9,639 can be attributed to nonresidential development.

Figure 20. University City Police Department Incident Offense Data and Proportionate Share Factors

POLICE CAPITAL IMPROVEMENT FUND EXPENDITURES COST ALLOCATION METHODOLOGY

Land Use	Calls [1]	
Total Crime Incidents	1,220	100%
Washington University Properties	153	13%
Police Capital Improvement Fund Expenditure		\$366,000
Percentage Attributable to Washington University Properties		\$45,900
	% [2]	% of Budget
Residential Proportionate Share	79%	\$36,261.00
Nonresidential Proportionate Share	21%	\$9,639.00
		<u>\$45,900.00</u>

[1] University City Police Department. Based on an analysis of calls.

[2] Computed by TischlerBise with U.S. Census data and OnTheMap Application.

Residential costs were allocated based on the percentage of units to total units. For example, 1% of the total residential units are classified as single family units. Therefore, 1% of the residential proportionate share of the budget (\$322) is attributed to residential units. For nonresidential land uses owned by the University, average day vehicle trips are used to allocate costs. Vehicle trips are a better reflection of demand for Police services. Trip rates are highest for retail development and lowest for industrial/warehouse development. Office/institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for Police services.

Figure 21. Police Capital Cost Factors

	Population	%	Cost Factor
Single Family	14	1%	\$322
Multifamily	1473	94%	\$34,066
Institutional	81	5%	\$1,873
Total	1568	100%	\$36,261

	Avg Day Vehicle Trips	%	Cost Factor
Retail	692	46%	\$4,478.31
Office	75	5%	\$482.34
Institutional	633	43%	\$4,099.13
Industrial	89	6%	\$579.23
Total	1,489	100%	\$9,639.00

Fire

For **Fire**, TischlerBise worked with the Fire Department to identify calls to University-owned property. Unfortunately, the Fire Department is only able to track calls in this manner beginning in 2020, so only a two month sample was available. TischlerBise used this data to project a full year of calls to use as a proxy in this analysis. This methodology indicates calls to University-owned properties account for 3% of total calls for the University City Police Department. Therefore, 3% of the Fire capital expenditures (\$8,209) can be attributed as the cost to serve the University-owned properties.

Figure 22. University City Fire Department Incident Offense Data and Proportionate Share Factors

FIRE CAPITAL IMPROVEMENT FUND EXPENDITURE COST ALLOCATION METHODOLOGY

<i>Land Use</i>	Calls [1]	
Total Calls for Service	4,020	100%
Washington University Properties	132	3%
Police Capital Improvement Fund Expenditure		\$250,000
Percentage Attributable to Washington University Properties		\$8,209
	% [2]	% of Budget
Residential Proportionate Share	79%	\$6,485.07
Nonresidential Proportionate Share	21%	\$1,723.88
		<u>\$8,208.96</u>

[1] University City Fire Department. Based on an analysis of calls for January/February 2020, prorated for a full year.

[2] Computed by TischlerBise with U.S. Census data and OnTheMap Application.

Residential costs were allocated based on the percentage of units to total units. For example, 1% of the total residential units are classified as single family units. Therefore, 1% of the residential proportionate share of the budget (\$57.57) is attributed to residential units. For nonresidential land uses owned by the University, employment is used to allocate costs.

Figure 23. Fire Capital Cost Factors

	Population	%	Cost Factor
Single Family	14	1%	\$57.57
Multifamily	1473	94%	\$6,092.48
Institutional	81	5%	\$335.02
Total	1568	100%	\$6,485.07

	Employment	%	Cost Factor
Retail	194	48%	\$827.80
Office	78	19%	\$332.83
Institutional	123	30%	\$524.84
Industrial	9	2%	\$38.40
Total	404	100%	\$1,723.88

EXPENDITURE FACTORS—DEBT SERVICE FUND

Since all expenditures in the Debt Service Fund are funded through a transfer from the Special Revenue Fund, all expenditures are fixed.

Figure 24. Expenditure Allocation Methodologies

Expenditure Category	FY 2020 Amount	Percent of Total	Allocation Methodology	Adj. Factor	Residential Share	Nonres. Share	Residential Divisor	Nonres. Divisor	Residential Cost Factor	Nonres. Cost Factor
Debt Services (Capital Improvement Sales Tax Fund)	\$725,273	100.00%								
Expense	\$0	0.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Principal	\$711,750	100.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A
Interest	\$13,523	100.00%	Fixed	100%	N/A	N/A	N/A	N/A	N/A	N/A

EXPENDITURE SUMMARY

General Fund

General Fund expenditures are shown below. Multifamily properties owned by the University generate the greatest General Fund expenditures at \$1,235,294 annually. This is followed by multifamily units on properties classified as Institutional uses, which generate annual General Fund expenditures of \$67,929, followed by single family properties at \$11,872 annually. Police and Fire expenditures account for the greatest expenditures for the residential properties, followed by Public Works, and Parks.

For the nonresidential land uses owned by the University, retail properties generate the greatest annual General Fund expenditures at \$152,646. This is followed by institutional uses at \$130,326 annually. Office properties generate annual expenditures of \$26,272. Industrial properties generate annual General Fund expenditures of \$16,973. Police and Fire expenditures account for the greatest expenditures for the nonresidential properties, followed by Public Works.

Figure 25. Expenditure Generation by University-Owned Properties: General Fund

Expenditure	RESIDENTIAL PROPERTIES			NONRESIDENTIAL PROPERTIES			
	Single Family	Multifamily	Institutional	Retail	Office	Industrial	Institutional
City Council	\$33.69	\$3,565.12	\$196.05	\$285.82	\$114.92	\$13.26	\$181.21
City Manager	\$198.31	\$20,985.13	\$1,153.97	\$1,682.39	\$676.43	\$78.05	\$1,066.67
Communications	\$82.77	\$8,759.01	\$481.66	\$702.22	\$282.33	\$32.58	\$445.22
Information Technology	\$171.79	\$18,178.20	\$999.62	\$1,457.36	\$585.95	\$67.61	\$923.99
Economic Development	\$0.00	\$0.00	\$0.00	\$1,741.50	\$700.19	\$80.79	\$1,104.15
Human Resources	\$100.49	\$10,633.23	\$584.72	\$852.47	\$342.75	\$39.55	\$540.49
Finance	\$223.24	\$23,623.12	\$1,299.03	\$1,893.88	\$761.46	\$87.86	\$1,200.76
Police	\$7,943.52	\$840,574.79	\$46,223.05	\$110,502.34	\$11,901.68	\$14,292.43	\$101,146.19
Fire	\$1,132.57	\$119,847.51	\$6,590.39	\$16,284.06	\$6,547.20	\$755.45	\$10,324.43
Municipal Court	\$111.57	\$11,805.98	\$649.21	\$946.49	\$380.55	\$43.91	\$600.10
PW-Administration and Engineering	\$139.85	\$14,799.28	\$813.81	\$1,186.47	\$477.03	\$55.04	\$752.24
PW-Streets Maintenance	\$358.03	\$16,883.84	\$928.44	\$8,745.90	\$941.98	\$1,131.20	\$8,005.39
PW-Facilities Maintenance	\$260.92	\$27,610.28	\$1,518.28	\$2,213.53	\$889.98	\$102.69	\$1,403.43
Planning & Development	\$489.35	\$51,782.06	\$2,847.49	\$4,151.40	\$1,669.12	\$192.59	\$2,632.07
Parks Maintenance & Forestry	\$586.01	\$62,010.68	\$3,409.96	\$0.00	\$0.00	\$0.00	\$0.00
Recreation	\$40.02	\$4,235.37	\$232.90	\$0.00	\$0.00	\$0.00	\$0.00
Debt Service and Contingency	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Transfers	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL	\$11,872	\$1,235,294	\$67,929	\$152,646	\$26,272	\$16,973	\$130,326

Special Revenue Funds

Special Revenue Fund expenditures are shown below. Multifamily properties owned by the University generate the greatest Special Revenue Fund expenditures at \$287,052 annually. This is followed by multifamily units on properties classified as Institutional uses, which generate annual Special Revenue Fund expenditures of \$15,785, followed by single family properties at \$2,713 annually. Public Safety Sales Tax Fund expenditures account for the greatest expenditures for the residential properties, followed the Capital Improvement Sales Tax Fund and Parks and Stormwater Fund.

For the nonresidential land uses owned by the University, retail properties generate the greatest annual Special Revenue Fund expenditures at \$28,078. This is followed by institutional uses at \$23,583 annually. Office properties generate annual Special Revenue Fund expenditures of \$5,239. Industrial properties generate annual Special Revenue Fund expenditures of \$3,007. Capital Improvement Fund expenditures account for the greatest expenditures for the nonresidential properties, followed Public Safety. Because the Parks and Stormwater Fund provides park-related activities, there are no nonresidential expenditures generated.

Figure 26. Expenditure Generation by University-Owned Properties: Special Revenue Funds

Summary of Special Revenue Fund Expenditures
University-Owned Property in University City

Fund	RESIDENTIAL PROPERTIES			NONRESIDENTIAL PROPERTIES			
	Single Family	Multifamily	Institutional	Retail	Office	Industrial	Institutional
Public Safety Sales Tax Fund	\$1,477	\$156,340	\$8,597	\$20,552	\$2,214	\$2,658	\$18,812
Capital Improvement Sales Tax Fund	\$887	\$93,864	\$5,162	\$7,525	\$3,026	\$349	\$4,771
Park and Stormwater Sales Tax Fund	\$348	\$36,848	\$2,026	\$0	\$0	\$0	\$0
TOTAL	\$2,713	\$287,052	\$15,785	\$28,078	\$5,239	\$3,007	\$23,583

FISCAL IMPACT FINDINGS

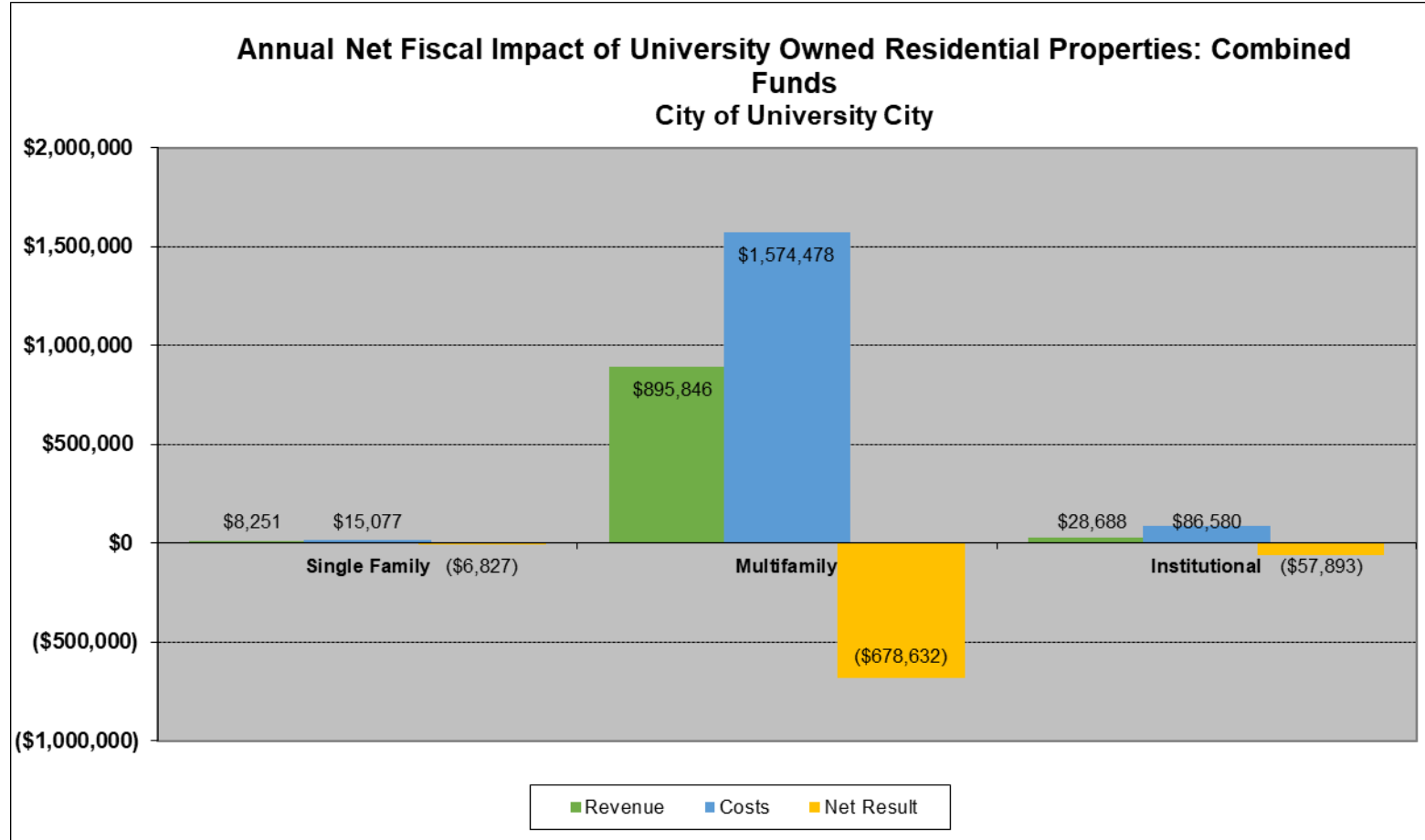
Based on the allocation of costs and revenues discussed in the Sections above, TischlerBise developed the fiscal impact model for this assignment to determine the fiscal impact of properties owned by Washington University on the City of University City.

Combined Funds

All three of the **residential** land use types owned by the University generate annual net deficits to the City, meaning sufficient revenues are not generated to offset the costs associated with providing services and facilities. The total combined net deficit for all three property types is \$743,351. We have noted previously that University-owned properties are not subject to City property tax. If the University-owned residential properties were subject to property tax, none of the land uses would generate sufficient revenue to offset annual expenditures.

Figure 27. Annual Net Fiscal Impact Results for University-Owned Residential Properties: Combined Funds

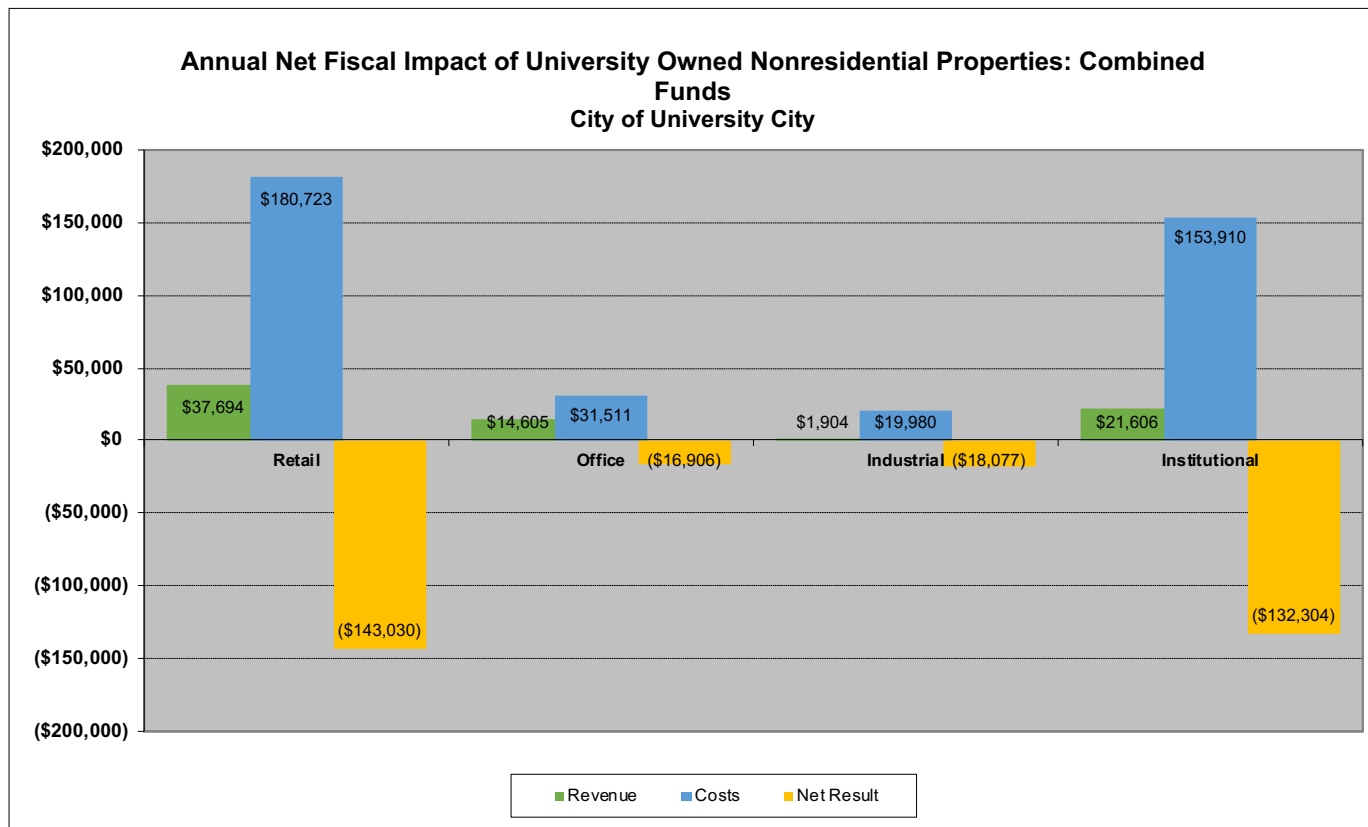
	RESIDENTIAL PROPERTIES			
	Single Family	Multifamily	Institutional	TOTAL
Revenue	\$8,251	\$895,846	\$28,688	\$932,785
Costs	\$15,077	\$1,574,478	\$86,580	\$1,676,136
Net Result	(\$6,827)	(\$678,632)	(\$57,893)	(\$743,351)



All four of the **nonresidential** land use types owned by the University also generate annual net deficits to the City. Similar to the residential uses, the University-owned nonresidential properties are not subject to City property tax. The total combined net deficit for all four nonresidential property types is \$310,316. If these properties were subject to property tax, annual net deficits would be generated for all uses with the exception of Institutional properties owned by the University.

Figure 28. Annual Net Fiscal Impact Results for University-Owned Nonresidential Properties: Combined Funds

	NONRESIDENTIAL PROPERTIES				
	Retail	Office	Industrial	Institutional	TOTAL
Revenue	\$37,694	\$14,605	\$1,904	\$21,606	\$75,809
Costs	\$180,723	\$31,511	\$19,980	\$153,910	\$386,124
Net Result	(\$143,030)	(\$16,906)	(\$18,077)	(\$132,304)	(\$310,316)

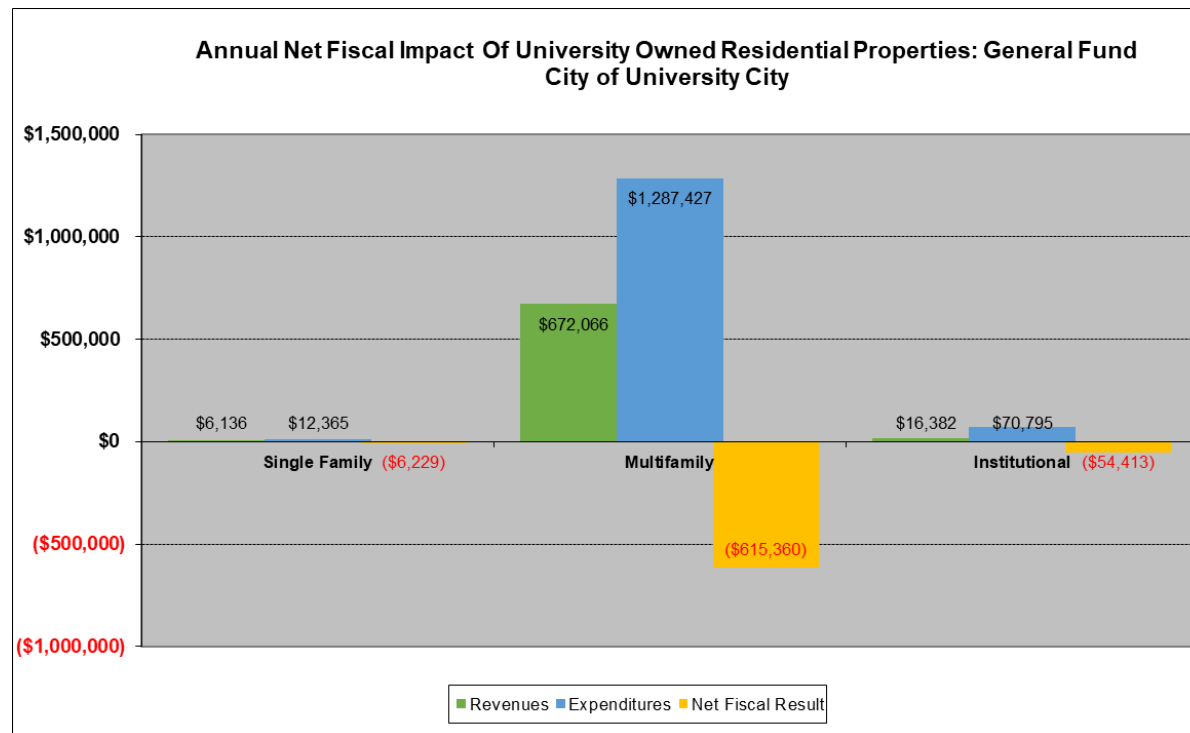


General Fund

The largest annual net deficits are generated in the General Fund, where University-owned residential properties generate a combined annual net deficit of \$676,002. Multifamily properties generate the largest deficit at \$615,360 annually.

Figure 29. Annual Net Fiscal Impact Results for University-Owned Residential Properties: General Fund

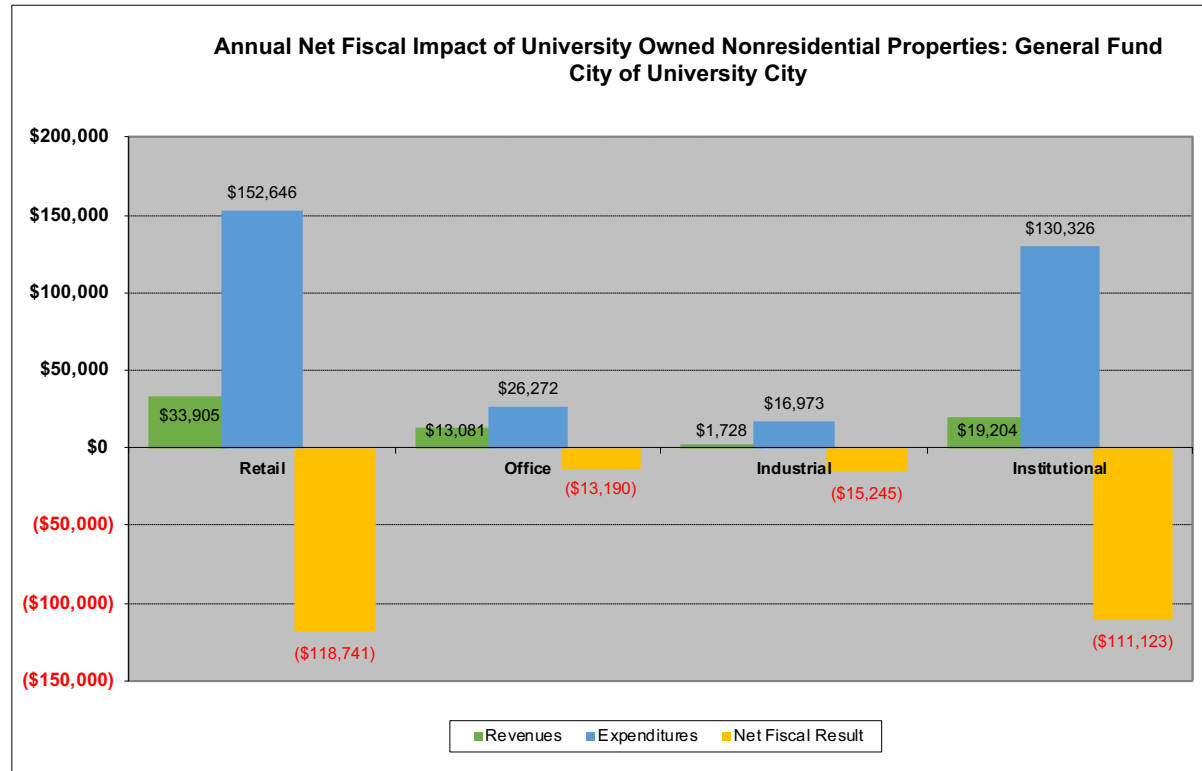
	RESIDENTIAL PROPERTIES			TOTAL
	Single Family	Multifamily	Institutional	
<i>General Fund</i>				
Revenues	\$6,136	\$672,066	\$16,382	\$694,584
Expenditures	\$12,365	\$1,287,427	\$70,795	\$1,370,587
Net Fiscal Result	(\$6,229)	(\$615,360)	(\$54,413)	(\$676,002)



All University-owned **nonresidential** land uses generate an annual net deficit to the General Fund. The total nonresidential annual net deficit is \$258,299. The largest deficits are generated by the retail and institutional uses.

Figure 30. Annual Net Fiscal Impact Results for University-Owned Nonresidential Properties: General Fund

	NONRESIDENTIAL PROPERTIES				TOTAL
	Retail	Office	Industrial	Institutional	
<i>General Fund</i>					
Revenues	\$33,905	\$13,081	\$1,728	\$19,204	\$67,918
Expenditures	\$152,646	\$26,272	\$16,973	\$130,326	\$326,217
Net Fiscal Result	(\$118,741)	(\$13,190)	(\$15,245)	(\$111,123)	(\$258,299)

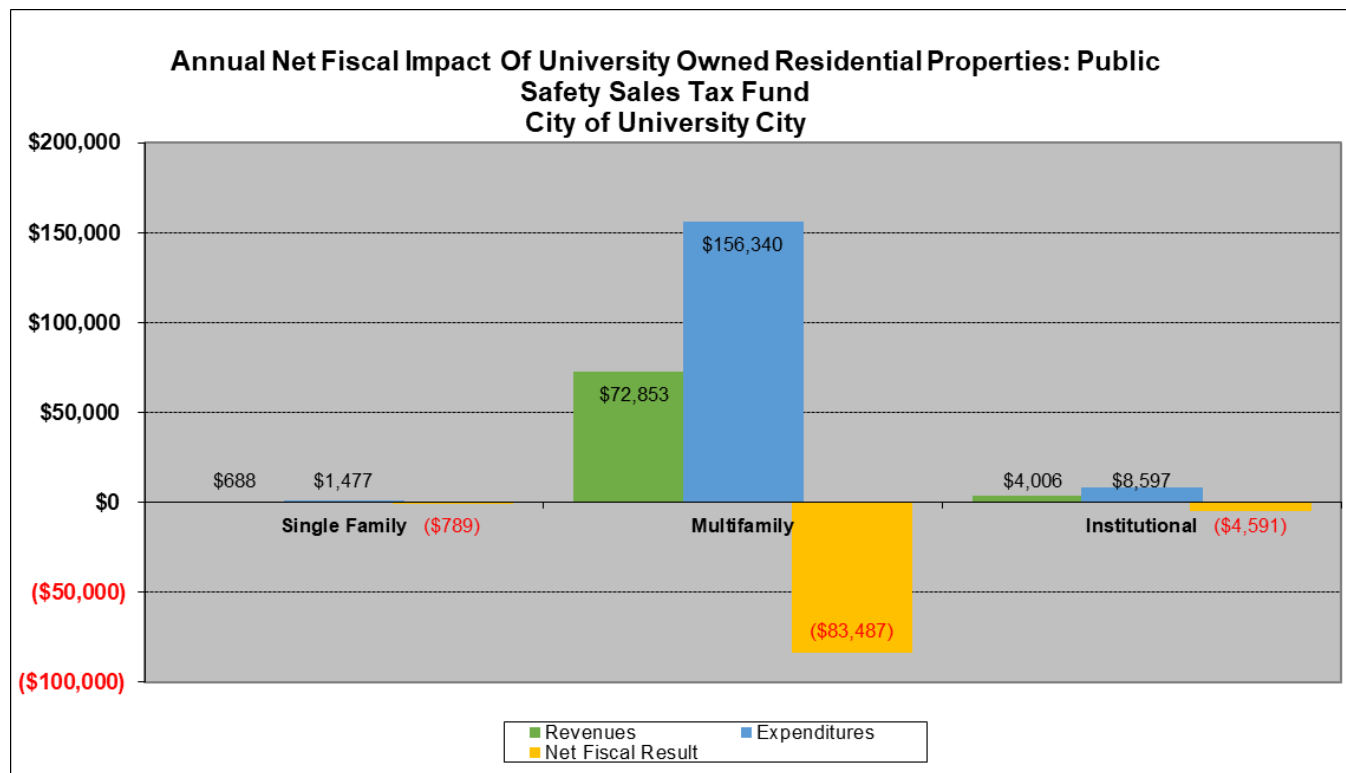


Public Safety Sales Tax Fund

Annual net deficits from University-owned residential properties for the Public Safety Sales Tax Fund total \$88,867. Multifamily properties generate the largest deficit at \$83,487 annually.

Figure 31. Annual Net Fiscal Impact Results for University-Owned Residential Properties: Public Safety Sales Tax Fund

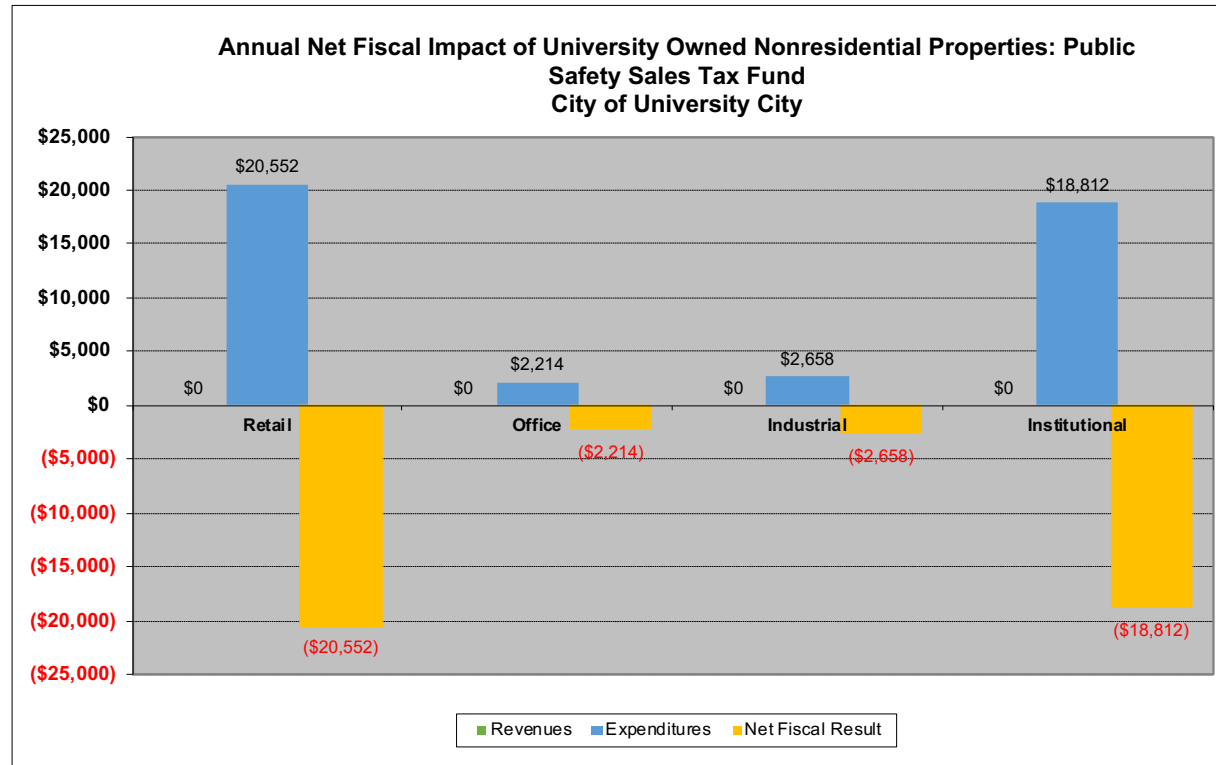
	RESIDENTIAL PROPERTIES			TOTAL
	Single Family	Multifamily	Institutional	
<i>Public Safety Sales Tax Fund</i>				
Revenues	\$688	\$72,853	\$4,006	\$77,548
Expenditures	\$1,477	\$156,340	\$8,597	\$166,414
Net Fiscal Result	(\$789)	(\$83,487)	(\$4,591)	(\$88,867)



All University-owned **nonresidential** land uses generate an annual net deficit to the Public Safety Tax Fund. The total nonresidential Public Safety Sales Tax Fund annual net deficit is \$44,237. The largest deficits are generated by retail and institutional uses.

Figure 32. Annual Net Fiscal Impact Results for University-Owned Nonresidential Properties: Public Safety Sales Tax Fund

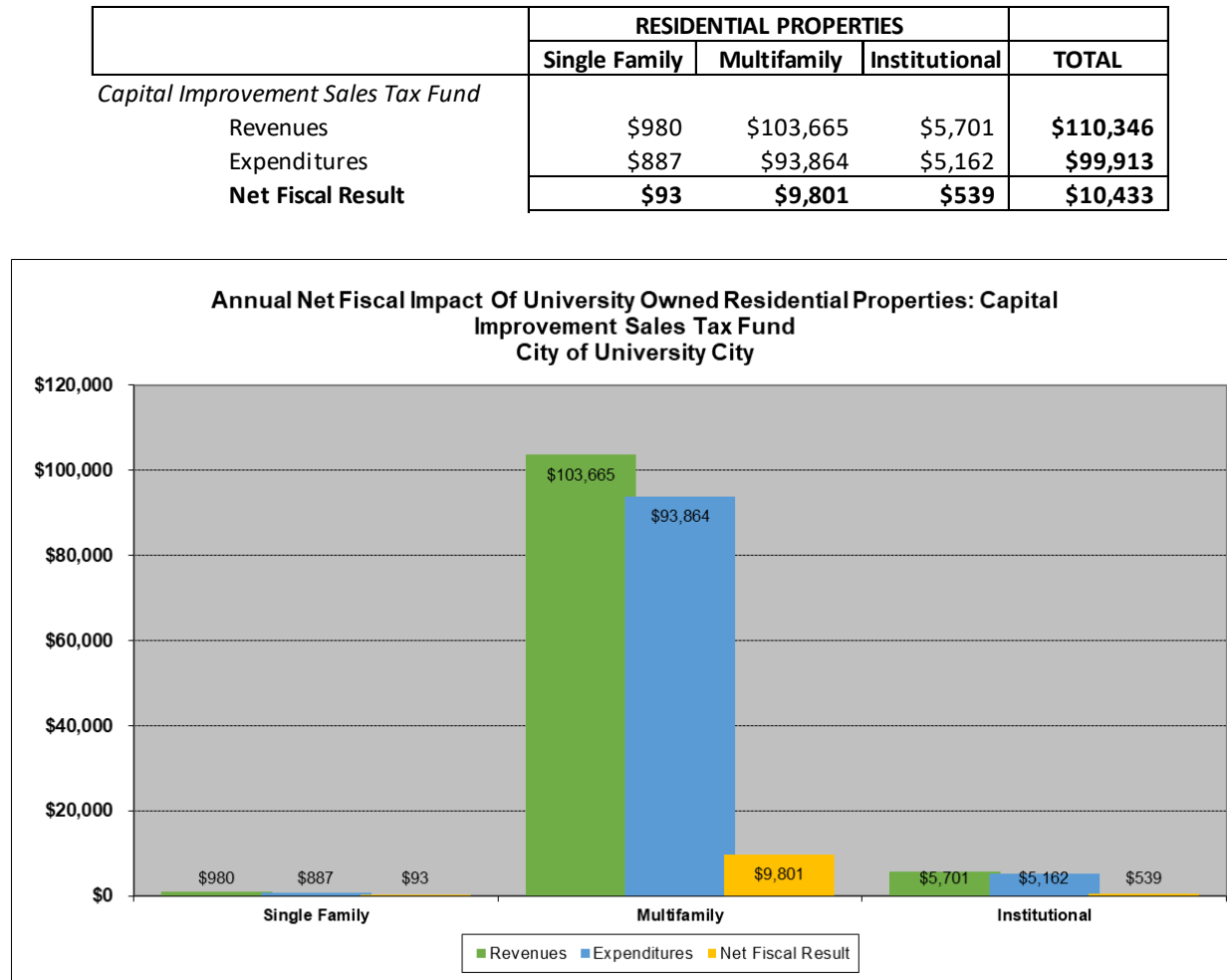
	NONRESIDENTIAL PROPERTIES				TOTAL
	Retail	Office	Industrial	Institutional	
<i>Public Safety Sales Tax Fund</i>					
Revenues	\$0	\$0	\$0	\$0	\$0
Expenditures	\$20,552	\$2,214	\$2,658	\$18,812	\$44,237
Net Fiscal Result	(\$20,552)	(\$2,214)	(\$2,658)	(\$18,812)	(\$44,237)



Capital Improvement Sales Tax Fund

University-owned residential properties generate an annual net surplus of \$10,433 to the Capital Improvement Sales Tax Fund. Multifamily properties generate the largest surplus at \$9,801 annually.

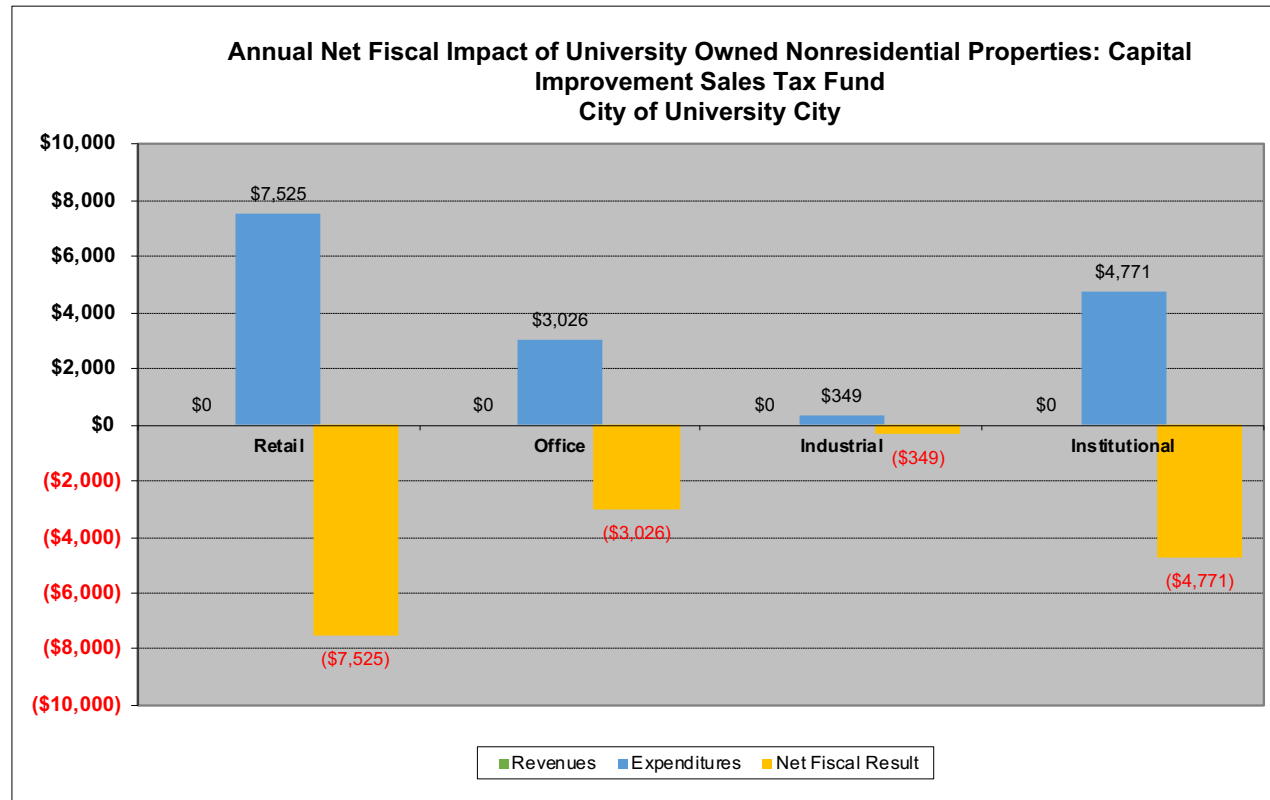
Figure 33. Annual Net Fiscal Impact Results for University-Owned Residential Properties: Capital Improvement Sales Tax Fund



All University-owned **nonresidential** land uses generate an annual net deficit to the Capital Improvement Sales Tax Fund. The total nonresidential Capital Improvement Sales Tax Fund annual net deficit is \$15,671. The largest deficits are generated by retail and institutional uses.

Figure 34. Annual Net Fiscal Impact Results for University-Owned Nonresidential Properties: Capital Improvement Sales Tax Fund

	NONRESIDENTIAL PROPERTIES				TOTAL
	Retail	Office	Industrial	Institutional	
<i>Capital Improvement Sales Tax Fund</i>					
Revenues	\$0	\$0	\$0	\$0	\$0
Expenditures	\$7,525	\$3,026	\$349	\$4,771	\$15,671
Net Fiscal Result	(\$7,525)	(\$3,026)	(\$349)	(\$4,771)	(\$15,671)

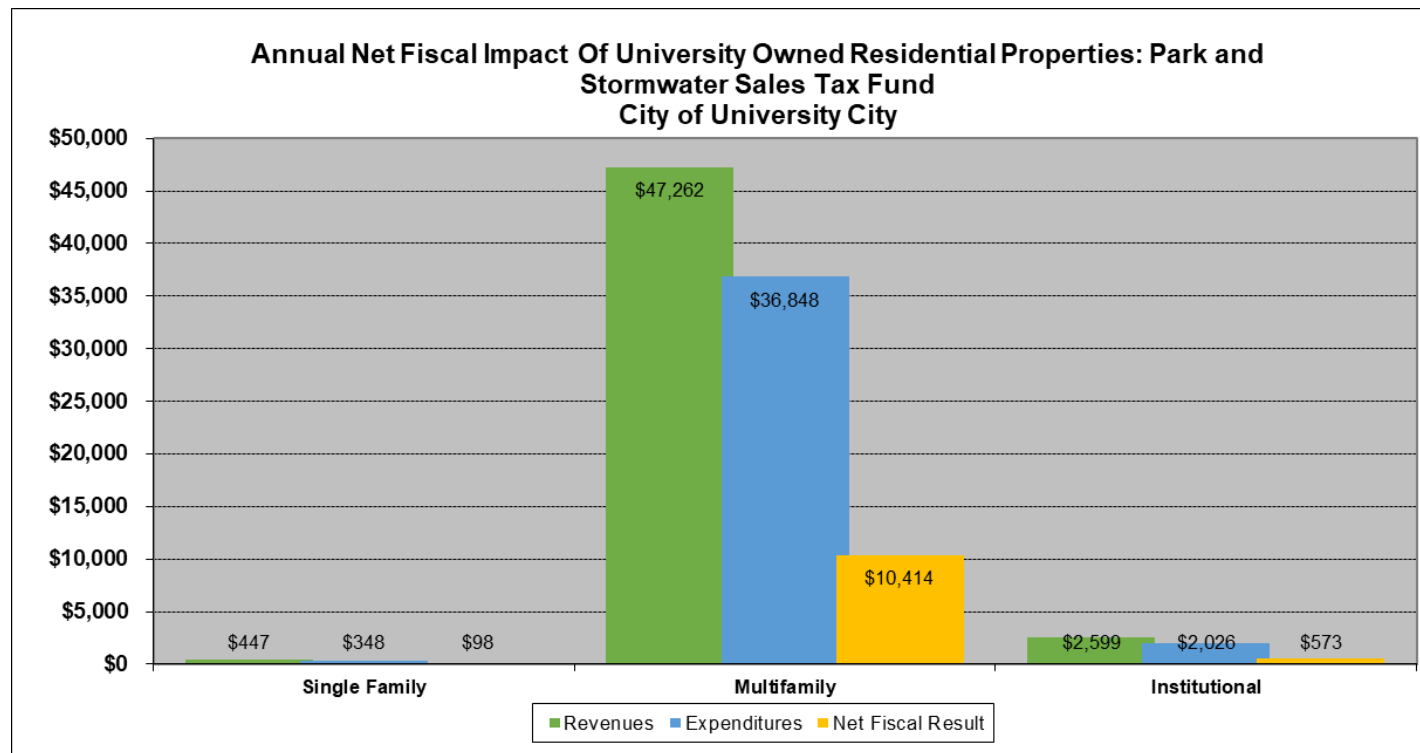


Park and Stormwater Fund Sales Tax Fund

University-owned residential properties generate an annual net surplus of \$11,085 to the Park and Stormwater Sales Tax Fund. Multifamily properties generate the largest surplus at \$10,414 annually.

Figure 35. Fiscal Impact Results for University-Owned Residential Properties: Park and Stormwater Fund

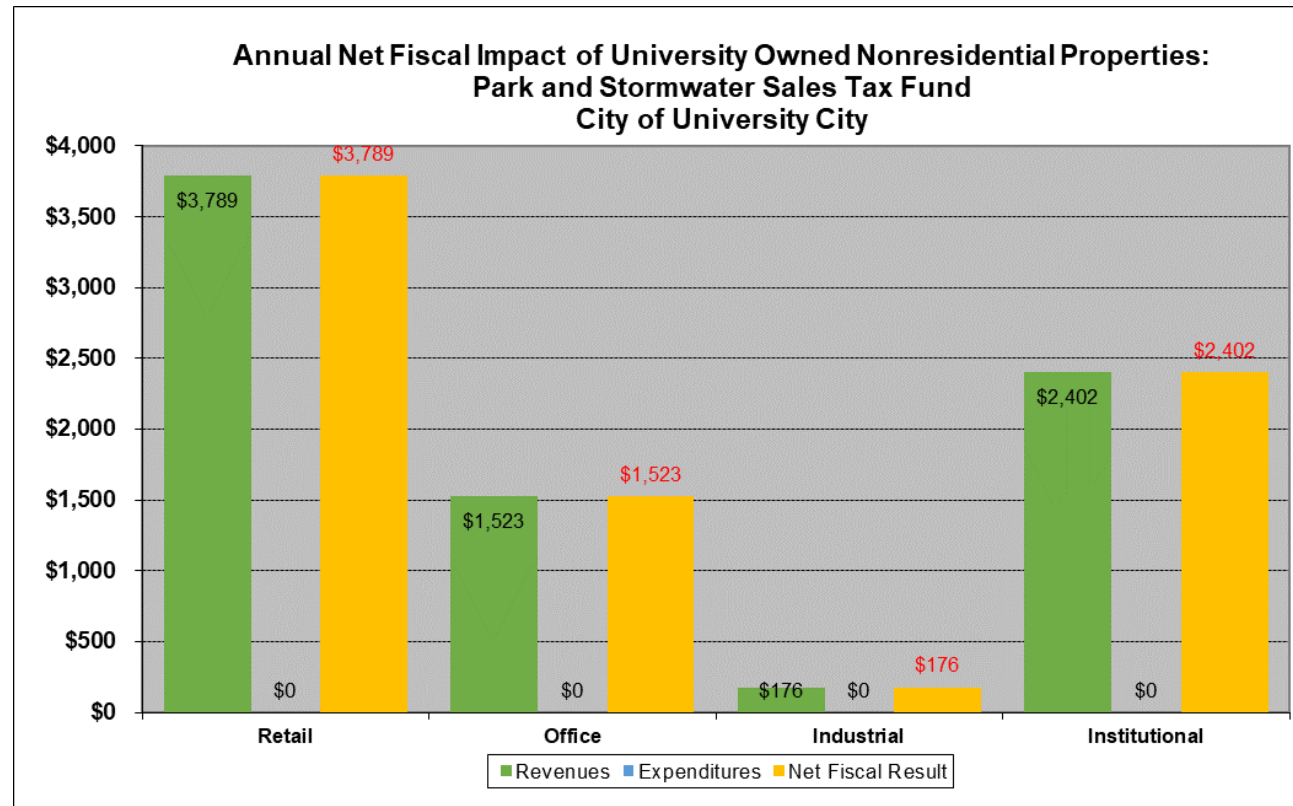
	RESIDENTIAL PROPERTIES			TOTAL
	Single Family	Multifamily	Institutional	
<i>Park and Stormwater Sales Tax Fund</i>				
Revenues	\$447	\$47,262	\$2,599	\$50,307
Expenditures	\$348	\$36,848	\$2,026	\$39,222
Net Fiscal Result	\$98	\$10,414	\$573	\$11,085



All University-owned **nonresidential** land uses generate an annual net surplus to the Park and Stormwater Sales Tax Fund. The total nonresidential Park and Stormwater Sales Tax Fund annual net surplus is \$7,891. The largest surpluses are generated by retail and institutional uses.

Figure 36. Annual Net Fiscal Impact Results for University-Owned Nonresidential Properties: Park and Stormwater Fund

	NONRESIDENTIAL PROPERTIES				TOTAL
	Retail	Office	Industrial	Institutional	
<i>Park and Stormwater Sales Tax Fund</i>					
Revenues	\$3,789	\$1,523	\$176	\$2,402	\$7,891
Expenditures	\$0	\$0	\$0	\$0	\$0
Net Fiscal Result	\$3,789	\$1,523	\$176	\$2,402	\$7,891



APPENDIX A: UNIVERSITY-OWNED PROPERTY DETAILS

University-Owned Residential Properties

Figure 37 summarizes properties owned by Washington University that contain residential units. This was determined using data obtained from the St. Louis County assessment database. From this database, TischlerBise was able to derive the number of residential units by type (e.g., single family, multifamily). Some of the University owned properties were classified as institutional land uses, but contained multifamily units. Figure 37 outlines the residential properties and their associated factors such as total units, total assessed values, average daily vehicle trips, person per housing unit and estimated population. The data below are used to calculate the associated revenue and cost factors in the fiscal impact study. The estimated persons per housing unit for single family units was developed using U.S. Census Bureau 2014-2018 American Community Survey 5-Year Estimates. Persons per housing unit for multifamily units is based on maximum University occupancy of 3 persons per unit. Average daily vehicle trip calculations were derived using the Institute of Transportation Engineers *Trip Generation*, 10th Edition (2017) trip rates for each residential land use with a 50% trip adjustment factor to account for origin and destination. Taxable values are from the St. Louis County assessment database.

Figure 37. Summary of University-Owned Residential Properties

University-Owned Residential Uses	Total Units [1]	Total Assessed Value [1]	Average Daily Vehicle Trips [3]	Persons per Housing Unit [2]	Estimated Population
Single Family	6	\$259,530	28	2.32	14
Multifamily	491	\$9,628,820	1,336	3.00	1,473
Institutional	27	\$1,275,370	73	3.00	81

[1] St. Louis County Assessor's Office parcel data

[2] Source: U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates. Multifamily units assume an occupancy of 3 persons based on the fact these units are for University housing, with a limit of 3 persons per unit.

[3] Source: Institute of Transportation Engineers, *Trip Generation*, 10th Edition (2017)

University-Owned Nonresidential Properties

Figure 38 summarizes properties owned by Washington University that are classified as nonresidential uses, based on data obtained from the St. Louis County assessment database. From this database, TischlerBise was able to derive the amount of nonresidential square footage by type (e.g., retail, office). Figure 38 outlines the nonresidential properties and their associated factor such as square footage, total assessed values, average day vehicle trips, and employment. The data below is used to calculate the associated revenue and cost factors in the fiscal impact study. Average daily vehicle trip calculations were derived using the Institute of Transportation Engineers Trip Generation, 10th Edition (2017) trip rates for each nonresidential land use.

Figure 38. Summary of University-Owned Nonresidential Properties

University-Owned Nonresidential Uses	Floor Area (Sq. Ft.) [2]	Total Assessed Value [2]	Jobs [1]	Average Daily Vehicle Trips [3]
Retail	59,116	\$16,164,570	194	692
Office	15,300	\$107,520	78	75
Industrial	36,080	\$1,470,780	9	89
Institutional	118,140	\$28,539,000	123	633

[1] Based on employment density factors from Trip Generation, Institute of Transportation Engineers, 10th Edition (2017)

[2] St. Louis County Assessor's Office parcel data

[3] Source: Institute of Transportation Engineers, *Trip Generation*, 10th Edition (2017)

APPENDIX B: BASE YEAR DEMOGRAPHIC CHARACTERISTICS

Population was estimated based on the current City estimates and the City retaining its share of the population. Housing units were estimated by converting the 2020 population to units using the Census average household size and distribution between single family and multifamily units. Nonresidential square footage was obtained from the City's databases and jobs were estimated by converting the nonresidential square footage to employment based on average square feet per employee factors. Residential trips were calculated using custom residential trip rates and trip adjustment factors for University City and nonresidential trips were calculated using ITE multipliers. Vehicle trips were calculated using ITE trip rates and trip adjustment factors discussed in Figure 41.

Figure 39. University City Base Year Data Assumptions

Residential		
Housing Units [1]		
Single Family-Detached	9,942	
All Other Residential	7,202	
Total	17,144	
Population [1]	34,372	
Nonresidential		
Nonresidential Square Footage [2]		
Commercial/Retail	1,418,107	
Office	792,386	
Institutional	2,929,826	
Industrial	643,821	
Total Square Footage	5,784,139	
Employment [3]		
Commercial/Retail	3,323	
Office	2,353	
Institutional	8,287	
Industrial	1,047	
Total Employment	15,010	
Population and Jobs	49,382	
Vehicle Trips		
Residential Vehicle Trips	66,516	62%
Nonresidential Vehicle Trips	41,502	38%
Total Vehicle Trips	108,018	

[1] Source: U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates.

[2] Total floor area estimate from the City. Share by use
 (commercial/retail, office/public, institutional and industrial)

[3] Source: ESRI, NAICS Business Summary 2020

Residential Land Use Characteristics

Characteristics of residential development in University City are discussed below. Data for this section were gathered from the U.S. Census American Community Survey and Public Use Micro-Data Samples (PUMS).

Household Size by Type of Unit/ Size of Unit

As shown in Figure 40, ACS estimates indicate University City had 17,144 housing units. Dwellings with a single unit per structure (detached, attached, and mobile homes) averaged 2.32 persons per housing unit. Dwellings in structures with multiple units averaged 1.57 year-round residents per unit. University City averaged 2.00 persons per housing unit.

Figure 40. Household Size by Type of Unit in University City

Housing Type	Persons	Households	Persons per Household	Housing Units	Persons per Housing Unit	Housing Mix	Vacancy Rate
Single-Family Units ¹	23,072	9,290	2.48	9,942	2.32	58.0%	6.60%
Multi-Family Units ²	11,300	6,178	1.83	7,202	1.57	42.0%	14.20%
Total	34,372	15,468	2.22	17,144	2.00	100.0%	9.80%

Source: U.S. Census Bureau, 2014-2018 American Community Survey 5-Year Estimates, Tables B25024, B25032, B25033.

1. Includes detached, attached (i.e. townhouses), and mobile homes.

2. Includes dwellings in structures with two or more units.

Vehicle Trips by Nonresidential Development Type

TischlerBise uses nonresidential vehicle trips as the nonresidential service. Average weekday vehicle trip ends (VTE) for nonresidential development are from the 10th edition of the reference book, *Trip Generation* (2017), by the Institute of Transportation Engineers. A “trip end” represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). Trip ends for nonresidential development are calculated per thousand square feet, and require an adjustment factor to avoid double counting each trip at both the origin and destination points. The trip generation rates and adjustment factors are shown in Figure 41.

With exception to commercial/retail development, the basic trip adjustment factor is 50 percent for nonresidential development. For commercial/retail development, the trip adjustment factor is less than 50 percent because retail uses attract vehicles as they pass by on arterial and collector roads. For an average size shopping center, the ITE (2017) indicates that on average 34 percent of the vehicles that enter a commercial/retail land use are passing by on their way to some other primary destination. The remaining 66 percent of attraction trips have the shopping center as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor ($0.66 \times 0.50 = 0.33$) is 33 percent of the trip ends.

Figure 41. Nonresidential Trip Generation Rates and Building Area Ratios

ITE Code	Land Use	Demand Unit	Wkdy Trip Ends Per Dmd Unit	Wkdy Trip Ends Per Employee	Emp Per Dmd Unit	Sq Ft Per Emp
110	Light Industrial	1,000 Sq Ft	4.96	3.05	1.63	615
130	Industrial Park	1,000 Sq Ft	3.37	2.91	1.16	864
140	Manufacturing	1,000 Sq Ft	3.93	2.47	1.59	628
150	Warehousing	1,000 Sq Ft	1.74	5.05	0.34	2,902
254	Assisted Living	bed	2.60	4.24	0.61	na
520	Elementary School	1,000 Sq Ft	19.52	21.00	0.93	1,076
610	Hospital	1,000 Sq Ft	10.72	3.79	2.83	354
710	General Office (avg size)	1,000 Sq Ft	9.74	3.28	2.97	337
714	Corporate Headquarters	1,000 Sq Ft	7.95	2.31	3.44	291
760	Research & Dev Center	1,000 Sq Ft	11.26	3.29	3.42	292
770	Business Park	1,000 Sq Ft	12.44	4.04	3.08	325
820	Shopping Center (avg size)	1,000 Sq Ft	37.75	16.11	2.34	427
715	Single Tenant Office Building	1,000 Sq Ft	11.25	3.77	2.98	335
750	Office Park	1,000 Sq Ft	11.07	3.54	3.13	320
540	Community College	student	1.15	14.61	0.08	na
565	Day Care	student	4.09	21.38	0.19	na
310	Hotel	room	8.60	14.34	0.60	na
320	Motel	room	3.35	25.17	0.13	na
530	High School	1,000 Sq Ft	14.07	22.25	0.63	1,581
550	University/College	student	1.56	8.89	0.18	na
620	Nursing Home	1,000 Sq Ft	6.64	2.91	2.28	438

Source: Institute of Transportation Engineers, *Trip Generation*, 10th Edition (2017)

Given the above inputs, vehicle trips in University City can be estimated. As shown, residential development accounts for 62 percent of trips generated on an average weekday and nonresidential development generates the remaining 38 percent.

Figure 42: Average Daily Vehicle Trips

PUBLIC WORKS DATA INPUT AREA			
Vehicle Trips on an Average Weekday			
<i>Residential Units</i>	<i>Assumptions</i>		
Single Family-Detached	9,942		
All Other Residential	7,202		
<i>Average Weekday Vehicles Trip Ends Per Unit [1]</i>		<i>Trip Factor</i>	
Single Family-Detached	9.44	50%	
All Other Residential	5.44	50%	
<i>Residential Vehicle Trip Ends on an Average Weekday</i>			
Single Family-Detached	46,926		
All Other Residential	19,589		
TOTAL RESIDENTIAL TRIPS	66,516	62%	
Nonresidential Vehicle Trips on an Average Weekday			
<i>Nonresidential Gross Floor Area (1,000 sq. ft.) [2]</i>	<i>Assumptions</i>		
Commercial/Retail	1,418		
Office	792		
Institutional	2,930		
Industrial	644		
<i>Average Weekday Vehicle Trip Ends per 1,000 Sq. Ft. [1]</i>		<i>Trip Factors</i>	
Commercial/Retail	37.75	38%	
Office	9.74	50%	
Institutional	10.72	50%	
Industrial	4.96	50%	
<i>Nonresidential Vehicle Trips on an Average Weekday</i>			
Commercial/Retail	20,343		
Office	3,859		
Institutional	15,704		
Industrial	1,597		
TOTAL NONRESIDENTIAL TRIPS	41,502	38%	
TOTAL TRIPS	108,018		
[1] Trip rates are from the Institute of Transportation Engineers, Trip Generation, 10th Edition (2017)			
[2] Total floor area estimate from the City. Share by use (commercial/retail, office/public, institutional and industrial)			

Functional Population

TischlerBise recommends functional population to allocate the cost of City services and facilities to residential and nonresidential development. The functional population accounts for people living and working in a jurisdiction. Residents who don't work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents who work in University City are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents who work outside University City are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on this analysis and shown in Figure 43, the recommended cost allocation for residential development is 79 percent, while nonresidential development accounts for 21 percent of the demand for municipal services and facilities.

Figure 43. Functional Population

University City, MO				
Residential			<i>Demand Hours/Day</i>	<i>Person Hours</i>
Population*	34,372			
Residents Not Working	18,593		20	371,860
Employed Residents	15,779			
Employed in University City		673	14	9,422
Employed Outside University City		15,106	14	211,484
Residential Subtotal				592,766
Residential Share =>				79%
Nonresidential				
Non-Working Residents	18,593		4	74,372
Jobs Located in University City	8,233			
Residents Employed in University City		673	10	6,730
Non-Resident Workers (inflow commuters)		7,560	10	75,600
Nonresidential Subtotal				156,702
Nonresidential Share =>				21%
TOTAL				749,468

Source: U.S. Census Bureau, OnTheMap 6.1.1 Application and LEHD Origin-Destination Employment Statistics.

* Source: U.S. Census Bureau, American Community Survey, 2014-2018

University-Owned Residential Properties

Figure 44 summarizes the parcels associated with Washington University that are identified as residential within the St. Louis County parcel database provided by the City. These parcels were classified as either single family units, multifamily units or institutional uses within the database. According to the unit count field within the database there are 6 single family units and 491 multifamily units (27 of these units are classified as institutional uses). Using the persons per housing unit factors from the US Census Bureau, we estimated a total of 1,568 persons associated with this residential units. As shown in Figure 44, these residential properties have an assessed value of \$11.1 million.

Figure 44. Residential Parcel Data for University-Owned Properties

Land Use	Units*	Total Assessed Value*	Persons per Housing Unit	Estimated Population
Single Family	6	\$259,530	2.32	14
Multifamily	491	\$9,628,820	3.00	1,473
Institutional	27	\$1,275,370	3.00	81
TOTAL	524	\$11,163,720		1,568

*St. Louis County Assessor's Office parcel data.

University-Owned Nonresidential Properties

Figure 45 summarizes the parcels associated with Washington University that are identified as nonresidential within the parcel database provided by the City. According to the square footage field within the database there is a total of 228,636 square feet of nonresidential space. As shown in Figure 45, these residential properties have an assessed value of \$46.2 million.

Figure 45. Nonresidential Parcel Data for University-Owned Properties

Land Use	Floor Area (Sq. Ft.) *	Total Assessed Value*
Retail	59,116	\$16,164,570
Office	15,300	\$107,520
Industrial	36,080	\$1,470,780
Institutional	118,140	\$28,539,000
TOTAL	228,636	\$46,281,870

*St. Louis County Assessor's Office parcel data.

Figure 46 summarizes the estimated employment parcels associated with Washington University that are identified as nonresidential within the parcel database provided by the City. To determine employment, we utilized employment density factors from the Institute of Transportation (ITE), Trip Generation, 10th Edition. This results in estimated employment of 404.

Figure 46. Estimate of Existing Employment for University-Owned Properties

Land Use Type	ITE Code*	Sq. Ft.	Sq. Ft. per Emp	Employment
Parking Lot	N/A	0	0	0
Parking Lot	N/A	0	0	0
Parking Lot	N/A	0	0	0
Gym/Rec Center	934	15,216	1076	14
Parking Lot For Gym/Rec Center	N/A	0	0	0
Main Campus Out of Municipal Boundaries	934	N/A	0	N/A
Academy Building	520	12,200	1076	11
Utility	934	0	97	0
Craft Alliance Building	520	5,400	1076	5
Music Center	443	69,780	1076	65
Office Use	934	900	97	9
Office Use	934	3,600	97	37
Blind/Shade Company	820	24,020	427	56
University City Childrens Center	520	36,160	1076	34
Vacant	N/A	0	0	0
Focal Pointe Storage	150	26,500	2902	9
Office Spaces	715	10,800	335	32
New U-City Firehouse	N/A	N/A	N/A	N/A
Wash University School Partnership	530	12,060	1581	8
Restaurant Commercial	932	12,000	97	124
Parking Area	N/A	0	0	0
TOTAL		228,636		404

*ITE Code used for establishing employment density, Institute of Transportation