



# EDUCATION FACILITY IMPACT FEE STUDY

*Prepared for*

*Williamson County, Tennessee*

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## Executive Summary

TischlerBise was retained by Williamson County, Tennessee, to calculate impact fees for public schools to meet the demands generated by new residential development for school facilities in the county. The County has been granted authority by the State to implement impact fees for school facilities by private act of the Tennessee General Assembly.

Impact fees are one-time payments used to defray the cost impacts of school facilities necessary to accommodate new development. The payment amount represents new growth's fair share of capital facility needs. TischlerBise evaluated possible methodologies and documented appropriate demand indicators by type of development for the fee amounts. Specific capital costs have been identified using local data and current dollars. Level-of-Service (LOS) standards and cost factors are presented in this report and are the basis for the calculations. It should be noted that although growth affects both capital and operating expenses incurred by schools, the impact fee analysis addresses new development's impact on *capital* facilities only. It is further limited to capital improvements that provide additional capacity as opposed to maintenance or rehabilitation.

Williamson County is served by two school systems, Williamson County Schools (WCS) and the Franklin Special School District (FSSD). Students living in FSSD attend these schools from kindergarten to eighth grade, after which they attend WCS high schools. This report details only impact fees for WCS. New residential construction located in FSSD will be charged for only the high school component of the WCS impact fee, since students generated from these homes will only attend WCS for high school.

**In addition, please note that this report presents two fee schedule options. In the first, fees are determined by dwelling unit type (single family or multifamily). In the second, fees are determined by dwelling unit size (i.e., total heated square footage). The County Board of Commissioners should pick one option for implementation.**

### IMPACT FEE METHODOLOGIES

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There are three basic methodologies used to calculate impact fees. The **incremental expansion method** documents the current LOS for each type of public facility in both quantitative and qualitative measures. The intent is to use fee revenue to expand or provide additional facilities, as needed to accommodate new development, based on the current cost to provide capital improvements. The **plan-based method** is commonly used for public facilities that have adopted plans or engineering studies to guide capital improvements, such as utility systems. A third approach, known as the **cost recovery method**, is based on the rationale that new development is paying for its share of the useful life and remaining unused capacity of an existing facility or land.

Maximum supportable school impact fees for WCS are derived using the incremental expansion approach. For school capital improvements, the most common methodology employed is typically the incremental expansion method when future capacity needs are anticipated. This approach allows for the greatest

flexibility in providing future capacity improvements. Under this methodology, the fees are based on current LOS and costs for each type of school facility (i.e., grades K-8 and grades 9-12), land, support facilities, and buses. The LOS is documented and the intent is to use fee revenue to provide additional or expanded public school and related facilities as needed to accommodate new development.

The current LOS and capital costs for new or expanded facilities are used to derive a cost per student for each type of school facility. Using the cost per student and the average WCS student generation rate **by type of unit or size of unit**, a cost per residential unit is derived. The term “student generation rate” refers to the average number of public school students per housing unit in the WCS system. Further discussion on student generation rate calculations is provided in the body of this report and in Appendix A.

A general requirement common to impact fee calculations is the evaluation of *credits*. Two types of credits should be considered, **credits for offsetting revenue** and **site-specific credits**. Credits for offsetting revenue are necessary to avoid potential double payment situations arising from the payment of a one-time impact fee plus the payment of other revenues (e.g., Adequate School Facility Privilege Tax) that may also fund growth-related capital improvements. Credits for offsetting revenue are dependent upon the fee methodology used in the cost analysis. To avoid this potential double payment situation, credits for offsetting revenue are integrated into the impact fee methodology to account for privilege tax revenue used to retire outstanding debt on WCS school facilities. A credit is necessary since new residential units that will pay the educational facility impact fee will also contribute one-time Adequate School Facility Privilege Tax and Adequate Facilities Privilege Tax revenue used by Williamson County to fund school capacity.

The second type of credit, a site-specific credit, is for school-related land or facilities that have been included in the education facility impact fee calculations. Policies and procedures related to site-specific credits for system improvements should be addressed in the resolution that establishes the County’s education facility impact fees. However, the general concept is that developers may be eligible for site-specific credits or reimbursements *only if they provide land or construct school improvements that have been included in the education facility impact fee calculations*.

## **MAXIMUM SUPPORTABLE EDUCATION FACILITY IMPACT FEES**

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Education facility impact fees are applied only to residential development and are calculated per housing unit, reflecting the proportionate demand by type of unit. The amounts shown are “maximum supportable” amounts based on the methodologies, LOS standards, and costs for the school capital improvements identified herein. The fees represent the highest amount feasible for each type of applicable development, which represent new growth’s fair share of the education facility capital costs as detailed in this report. The County can adopt amounts that are lower than the maximum amounts shown. However, a reduction in fee revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures, and/or a decrease in LOS.

Figure 1 provides the schedule of *maximum supportable education facility impact fees* for residential units *outside* of the Franklin Special School District, **calculated by unit type**. For a single family housing unit, the

maximum supportable education facility impact fee amount is \$7,822. For a multifamily housing unit, the maximum supportable education facility impact fee amount is \$4,149.

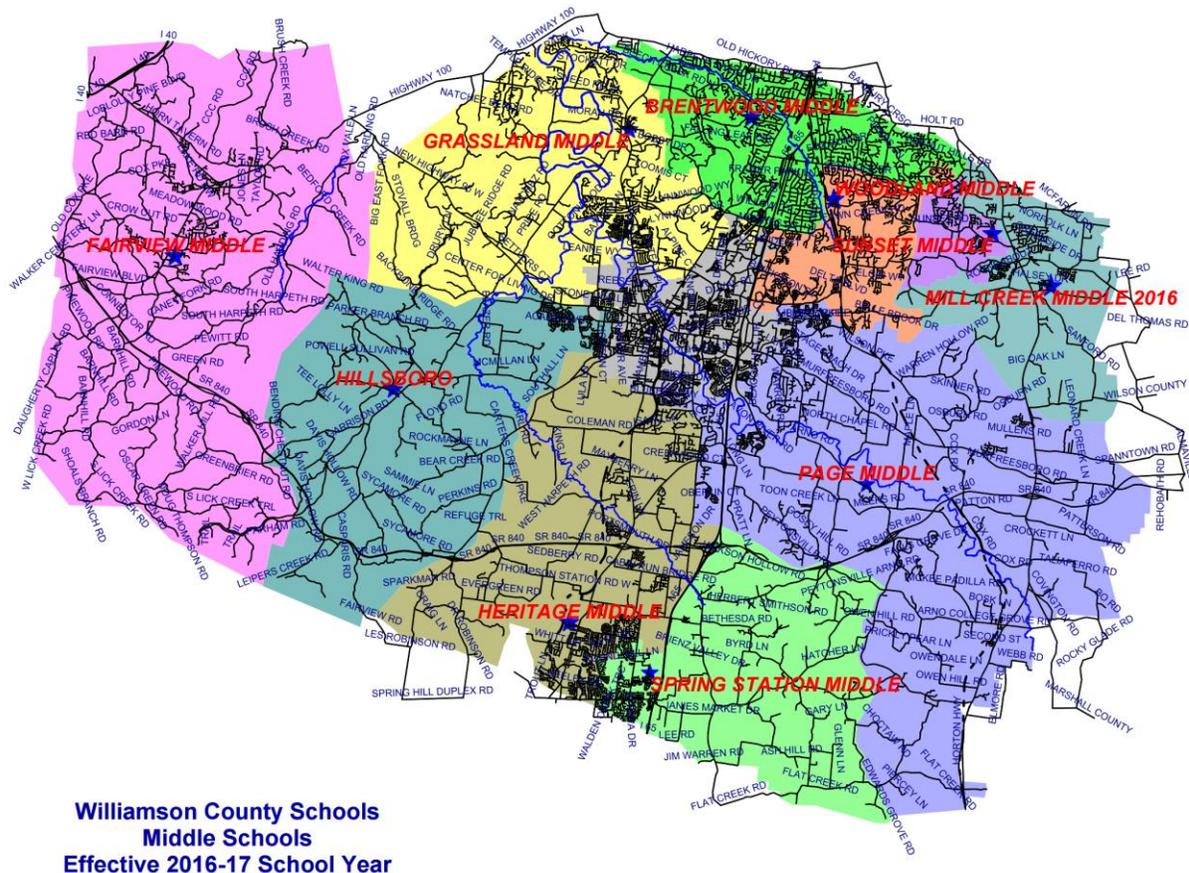
**Figure 1. Maximum Supportable Education Facility Impact Fees: WCS (by Unit Type)**

<b>INPUT VARIABLES: Williamson Co. Schools Impact Fees</b>			
		<b>School Level</b>	
<b>Public School Students per Housing Unit</b>		<i>K-8</i>	<i>9-12</i>
<b>Dwelling Unit Type</b>		<i>Total</i>	
Single Family		0.387	0.167
Multifamily		0.232	0.068
<b>Cost Factors</b>			
Total Net Local Capital Cost per Student		\$13,141.25	\$16,355.29
<b>MAXIMUM ALLOWABLE SCHOOL IMPACT FEES: Williamson Co. Schools</b>			
<b>Impact Fee per Housing Unit*</b>		<i>K-8</i>	<i>9-12</i>
<b>Dwelling Unit Type</b>		<b>TOTAL</b>	
Single Family		\$5,090	\$2,732
Multifamily		\$3,043	\$1,107
			<b>\$7,822</b>
			<b>\$4,149</b>

*\*Fees do not apply to age-restricted units*

As noted above, Williamson County is served by two school systems, WCS and FSSD. Students living in FSSD attend these schools from kindergarten to eighth grade, after which they attend WCS high schools. Figure 2 shows the WCS’s middle school attendance zones. FSSD is shown in gray in the center and is the same for elementary schools.

Figure 2. Franklin Special School District



This report details only education facility impact fees for WCS. New residential construction located in FSSD will be charged for only the high school component of the WCS impact fee, since students generated from these homes will only attend WCS high school facilities. Figure 3 provides the schedule of *maximum supportable education facility impact fees* within FSSD boundaries **by unit type**. For a single family housing unit, the maximum supportable education facility impact fee amount is \$2,732. For a multifamily housing unit, the maximum supportable education facility impact fee amount is \$1,107.

**Figure 3. WCS Maximum Supportable Education Facility Impact Fees in Franklin Special School District (by Unit Type)**

<b>INPUT VARIABLES: Williamson Co. Schools Impact Fees</b> (within Franklin Special School District boundaries)	
<b>Public School Students per Housing Unit</b>	<b>School Level</b>
	<b>9-12</b>
<b>Dwelling Unit Type</b>	
Single Family	<b>0.167</b>
Multifamily	<b>0.068</b>
<b>Cost Factors</b>	
Total Net Local Capital Cost per Student	<b>\$16,355.29</b>
<b>MAXIMUM ALLOWABLE SCHOOL IMPACT FEES: Williamson Co. Schools</b> (within Franklin Special School District boundaries)	
<b>Impact Fee per Housing Unit*</b>	<b>School Level</b>
	<b>9-12</b>
<b>Dwelling Unit Type</b>	
Single Family	<b>\$2,732</b>
Multifamily	<b>\$1,107</b>

*\*Fees do not apply to age-restricted units*

As noted above, TischlerBise was also asked to provide fees based on unit size. Figure 4 provides the schedule of *maximum supportable education facility impact fees* for residential units *outside* of the Franklin Special School District, **calculated by unit size**. The maximum supportable education facility impact fee amount is \$2,827 for a unit of 1,399 square feet or less, \$5,317 for a unit of 1,400 to 1,899 square feet, \$7,220 for a unit of 1,900 to 2,399 square feet, \$8,788 for a unit of 2,400 to 2,899 square feet, \$10,074 for a unit of 2,900 to 3,399 square feet, and \$11,210 for a unit of 3,400 square feet or more.

**Figure 4. Maximum Supportable Education Facility Impact Fees: WCS (by Unit Size)**

<b>INPUT VARIABLES: Williamson Co. Schools Impact Fees</b>			
<b>Public School Students per Housing Unit</b>	<b>School Level</b>		
	<i>K-8</i>	<i>9-12</i>	<i>Total</i>
<b>Dwelling Unit Size</b>			
1,399 square feet or less	0.128	0.070	0.198
1,400 - 1,899 square feet	0.259	0.117	0.376
1,900 - 2,399 square feet	0.359	0.153	0.512
2,400 - 2,899 square feet	0.441	0.183	0.624
2,900 - 3,399 square feet	0.509	0.207	0.716
3,400 square feet or more	0.568	0.229	0.797
<b>Cost Factors</b>			
Total Net Local Capital Cost per Student	\$13,141.25	\$16,355.29	
<b>MAXIMUM ALLOWABLE SCHOOL IMPACT FEES: Williamson Co. Schools</b>			
<b>Impact Fee per Housing Unit*</b>	<i>K-8</i>	<i>9-12</i>	<b>TOTAL</b>
<b>Dwelling Unit Size</b>			
1,399 square feet or less	\$1,682	\$1,145	<b>\$2,827</b>
1,400 - 1,899 square feet	\$3,404	\$1,914	<b>\$5,317</b>
1,900 - 2,399 square feet	\$4,718	\$2,502	<b>\$7,220</b>
2,400 - 2,899 square feet	\$5,795	\$2,993	<b>\$8,788</b>
2,900 - 3,399 square feet	\$6,689	\$3,386	<b>\$10,074</b>
3,400 square feet or more	\$7,464	\$3,745	<b>\$11,210</b>

*\*Fees do not apply to age-restricted units*

Again, this report details only education facility impact fees for WCS. New residential construction located in FSSD will be charged for only the high school component of the WCS impact fee, since students generated from these homes will only attend WCS high school facilities. Figure 5 provides the schedule of *maximum supportable education facility impact fees* within FSSD boundaries **by unit size**. The maximum supportable education facility impact fee amount is \$1,145 for a unit of 1,399 square feet or less, \$1,914 for a unit of 1,400 to 1,899 square feet, \$2,502 for a unit of 1,900 to 2,399 square feet, \$2,993 for a unit of 2,400 to 2,899 square feet, \$3,386 for a unit of 2,900 to 3,399 square feet, and \$3,745 for a unit of 3,400 square feet or more.

**Figure 5. WCS Maximum Supportable Education Facility Impact Fees in Franklin Special School District (by Unit Size)**

<b>INPUT VARIABLES: Williamson Co. Schools Impact Fees</b> (within Franklin Special School District boundaries)	
<b>Public School Students per Housing Unit</b>	<b>School Level</b>
	<b>9-12</b>
<b>Dwelling Unit Size</b>	
1,399 square feet or less	<b>0.070</b>
1,400 - 1,899 square feet	<b>0.117</b>
1,900 - 2,399 square feet	<b>0.153</b>
2,400 - 2,899 square feet	<b>0.183</b>
2,900 - 3,399 square feet	<b>0.207</b>
3,400 square feet or more	<b>0.229</b>
<b>Cost Factors</b>	
Total Net Local Capital Cost per Student	<b>\$16,355.29</b>
<b>MAXIMUM ALLOWABLE SCHOOL IMPACT FEES: Williamson Co. Schools</b> (within Franklin Special School District boundaries)	
<b>Impact Fee per Housing Unit*</b>	<b>School Level</b>
	<b>9-12</b>
<b>Dwelling Unit Size</b>	
1,399 square feet or less	<b>\$1,145</b>
1,400 - 1,899 square feet	<b>\$1,914</b>
1,900 - 2,399 square feet	<b>\$2,502</b>
2,400 - 2,899 square feet	<b>\$2,993</b>
2,900 - 3,399 square feet	<b>\$3,386</b>
3,400 square feet or more	<b>\$3,745</b>

*\*Fees do not apply to age-restricted units*

Please note that education facility impact fees do not apply to age-restricted units (those units in developments that restrict the number of units with occupants aged under 55 years old). All education facility impact fees should be collected when building permits are issued.

A note on rounding: Calculations throughout this report are based on an analysis conducted using Excel software. Most results are discussed in the report using one, two, and three digit places, which represent rounded figures. However, the analysis itself uses figures carried to their ultimate decimal places; therefore, the sums and products generated in the analysis may not equal the sum or product if the reader replicates the calculation with the factors shown in the report (due to the rounding of figures shown, not in the analysis).

## Overview

Impact fees are one-time payments used to fund capital improvements necessitated by new growth. This type of fee has been utilized by local governments in various forms for at least 50 years. Impact fees have limitations and should not be regarded as the total solution for infrastructure financing needs. Rather, they should be considered one component of a comprehensive portfolio to ensure adequate provision of public facilities with the goal of maintaining current LOS in a community in the face of new growth. Any community considering impact fees should note the following limitations:

- Education facility impact fees can only be used to finance school capital infrastructure and cannot be used to finance ongoing school operations and/or maintenance and rehabilitation costs;
- Education facility impact fees cannot be deposited in the local government's General Fund: the funds must be accounted for separately in individual accounts and earmarked for the capital expenses for which they were collected; and
- Education facility impact fees cannot be used to correct existing infrastructure deficiencies unless there is a funding plan in place to correct the deficiency for all current residents and businesses in the community.

## LEGAL FRAMEWORK

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*U.S. Constitution.* Like all land use regulations, development exactions—including impact fees—are subject to the Fifth Amendment prohibition on taking of private property for public use without just compensation. Both state and federal courts have recognized the imposition of impact fees on development as a legitimate form of land use regulation, provided the fees meet standards intended to protect against regulatory takings. To comply with the Fifth Amendment, development regulations must be shown to substantially advance a legitimate governmental interest. In the case of impact fees, that interest is the protection of public health, safety, and welfare by ensuring that development is not detrimental to the quality of essential public services.

There is little federal case law specifically dealing with impact fees, although other rulings on other types of exactions (e.g., land dedication requirements) are relevant. In one of the most important exaction cases, the U. S. Supreme Court found that a government agency imposing exactions on development must demonstrate an “essential nexus” between the exaction and the interest being protected (see *Nollan v. California Coastal Commission*, 1987). In a more recent case (*Dolan v. City of Tigard, OR*, 1994), the Court ruled that an exaction also must be “roughly proportional” to the burden created by development. However, the *Dolan* decision appeared to set a higher standard of review for mandatory dedications of land than for monetary exactions such as impact fees.

## REQUIRED FINDINGS

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There are three reasonable relationship requirements for impact fees that are closely related to “rational nexus” or “reasonable relationship” requirements enunciated by a number of state courts. Although the term “dual rational nexus” is often used to characterize the standard by which courts evaluate the validity of impact fees under the U.S. Constitution, we prefer a more rigorous formulation that recognizes three elements: “impact or need,” “benefit,” and “proportionality.” The dual rational nexus test explicitly addresses only the first two, although proportionality is reasonably implied, and was specifically mentioned by the U.S. Supreme Court in the *Dolan* case. The reasonable relationship language of the statute is considered less strict than the rational nexus standard used by many courts. Individual elements of the nexus standard are discussed further in the following paragraphs.

*Demonstrating an Impact.* All new development in a community creates additional demands on some, or all, public facilities provided by local government. If the supply of facilities is not increased to satisfy that additional demand, the quality or availability of public services for the entire community will deteriorate. Impact fees may be used to recover the cost of development-related facilities, but only to the extent that the need for facilities is a consequence of development that is subject to the fees. The *Nollan* decision reinforced the principle that development exactions may be used only to mitigate conditions created by the developments upon which they are imposed. That principle clearly applies to impact fees. In this study, the impact of development on improvement needs is analyzed in terms of quantifiable relationships between various types of development and the demand for specific facilities, based on applicable level-of-service standards.

*Demonstrating a Benefit.* A sufficient benefit relationship requires that fee revenues be segregated from other funds and expended only on the facilities for which the fees were charged. Fees must be expended in a timely manner and the facilities funded by the fees must serve the development paying the fees. Procedures for the earmarking and expenditure of fee revenues are typically mandated by the State enabling act, as are procedures to ensure that the fees are expended expeditiously or refunded. All of these requirements are intended to ensure that developments benefit from the fees they are required to pay. Thus, an adequate showing of benefit must address procedural as well as substantive issues.

*Demonstrating Proportionality.* The requirement that exactions be proportional to the impacts of development was clearly stated by the U.S. Supreme Court in the *Dolan* case (although the relevance of that decision to impact fees has been debated) and is logically necessary to establish a proper nexus. Proportionality is established through the procedures used to identify development-related facility costs, and in the methods used to calculate impact fees for various types of facilities and categories of development. The demand for facilities is measured in terms of relevant and measurable attributes of development. For example, the need for school improvements is measured by the number of public school-age children generated by development.

## METHODOLOGIES AND CREDITS

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Any one of several legitimate methods may be used to calculate impact fees. The choice of a particular method depends primarily on the service characteristics and planning requirements for the facility type being addressed. Each method has advantages and disadvantages in a particular situation, and to some extent can be interchangeable, because each allocates facility costs in proportion to the needs created by development.

Reduced to its simplest terms, the process of calculating impact fees involves two main steps: (1) determining the cost of development-related capital improvements and (2) allocating those costs equitably to various types of development. In practice, though, the calculation of impact fees can become quite complicated because of the many variables involved in defining the relationship between development and the need for facilities. The following paragraphs discuss three basic methods for calculating impact fees and how those methods can be applied.

*Plan-Based Fee Calculation.* The plan-based method allocates costs for a specified set of improvements to a specified amount of development. The improvements are identified by a facility plan and development is identified by a land use plan. In this method, the total cost of relevant facilities is divided by total demand to calculate a cost per unit of demand. Then, the cost per unit of demand is multiplied by the amount of demand per unit of development (e.g. housing units or square feet of building area) in each category to arrive at a cost per specific unit of development (e.g., single family detached unit).

*Cost Recovery Fee Calculation.* The rationale for the cost recovery approach is that new development is paying for its share of the useful life and remaining capacity of facilities already built or land already purchased from which new growth will benefit. To calculate a fee using the cost recovery approach, the facility cost is divided by ultimate number of demand units (e.g., students) the facility will serve.

*Incremental Expansion Fee Calculation.* The incremental expansion method documents the current LOS for each type of public facility in both quantitative and qualitative measures, based on an existing service standard (such as square feet per student). The LOS standards are determined in a manner similar to the current replacement cost approach used by property insurance companies. However, in contrast to insurance practices, the fee revenues would not be for renewal and/or replacement of existing facilities. Rather, revenue will be used to expand or provide additional facilities, as needed, to accommodate new development. An incremental expansion cost method is best suited for public facilities that will be expanded in regular increments, with LOS standards based on current conditions in the community.

*Credits.* Regardless of the methodology, a consideration of “credits” is integral to the development of a legally valid impact fee methodology. There are two types of “credits” each with specific, distinct characteristics, but both of which should be addressed in the calculation of impact fees. The first is a credit due to possible double payment situations. This could occur when contributions are made by the property owner toward the capital costs of the public facility covered by the impact fee. This type of credit is integrated into the impact fee calculation. The second is a credit toward the payment of a fee for dedication of public sites or improvements provided by the developer and for which the impact fee is

imposed. This type of credit is addressed in the administration and implementation of an impact fee program.

## Williamson County Education Facility Impact Fee Overview

The County has seen significant residential growth over the past several years and with it increased enrollment. Growth is expected to continue in the future, as shown below in the enrollment projections (Figure 6). To ensure that WCS have adequate capacity to accommodate growth, Williamson County is considering implementation of impact fees for schools. The County has been granted authority by the State to implement impact fees for schools by private act of the Tennessee General Assembly.

Williamson County is served by two school systems, Williamson County Schools (WCS) and Franklin Special School District (FSSD). Students living in FSSD attend FSSD schools from kindergarten to eighth grade, after which they attend WCS high schools. This report details only impact fees for WCS. New residential construction located in FSSD will be charged for only the high school component of the WCS impact fee, since students generated from these homes will only attend WCS for high school.

WCS education facility impact fees are derived using the incremental expansion approach. This approach determines current LOS standards for school buildings (elementary and middle schools and high schools), land, support facilities, and buses. LOS standards are expressed as follows:

- School buildings: Square feet per student by type of school;
- Land: Acres per student by type of school;
- Support facilities: Square feet per student; and
- Buses: Number of buses per student.

A credit for offsetting revenue is included in the education facility impact fee to account for other forms of payment for WCS capacity expansion improvements. Further detail on the approach, LOS standards, costs, and credits is provided in the body of this report.

## Enrollment Projections

Enrollment projections were provided from WCS and are based on active developments as of November 2015. As shown in Figure 6, enrollment in WCS in April 2016 was 36,371. By the school year 2020-21, WCS is projected to have a total enrollment of 47,409, a 5-year increase of 2,589 students. This represents an average annual growth rate of approximately 6.1 percent. Yearly detail by school level is provided below.

**Figure 6. Enrollment Projections**

**Enrollment Projections [1]**

	2015-16 [2]	2016-17	2017-18	2018-19	2019-20	2020-21	Total Change	Annual Growth Rate
Elementary and Middle	24,340	25,410	26,859	28,412	30,096	31,910		6.2%
<i>Net Change</i>		1,070	1,449	1,553	1,684	1,814	7,570	
High	12,031	12,701	13,328	14,001	14,724	15,499		5.8%
<i>Net Change</i>		670	627	673	723	775	3,468	
<b>Total</b>	<b>36,371</b>	<b>38,111</b>	<b>40,187</b>	<b>42,413</b>	<b>44,820</b>	<b>47,409</b>		<b>6.1%</b>
<i>Net Change</i>		1,740	2,076	2,226	2,407	2,589	11,038	

[1] Williamson County Schools projections

[2] Actual enrollment from April 6, 2016

## Student Generation Rates

Demand for additional school capacity will come from new residential development. To determine the level of this demand, student generation rates are used. The term “student generation rate” refers to the number of public school students per housing unit in the WCS system. Public school students are a subset of school-aged children, which includes students in private schools and home-schooled children.

Student generation rates are important demographic factors that help account for variations in demand for school facilities by type of housing. Students per housing unit are held constant over the projection period since the impact fees represent a “snapshot approach” of current LOS standards and costs.

### GENERATION RATES BY UNIT TYPE

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Student generation rates **by unit type** for Williamson County can be derived using custom tabulations of demographic data from survey responses provided by the U.S. Census Bureau in files known as Public Use Micro-Data Samples (PUMS). TischlerBise used Census American Community Survey (ACS) 1-Year 2013 PUMS data to derive number of students per housing unit by type of unit. Williamson County is coterminous with Public Use Micro-Data Area (PUMA) 2600.

Student generation rates are calculated for single family and multifamily units, given demographic characteristics and potential for future development in the County. Single-family detached, single family attached (townhomes), and mobile home are calculated as “Single Family.” Duplexes and structures with three or more units will use the student generation rate for “Multi-Family.” Rates are provided for two school levels: elementary and middle school (grades K-8) and high school (grades 9-12).

Using the PUMS data files, TischlerBise first calculated student generation rates based on the number of students in different types of residential units. This was done for each school level (i.e. grades K-8 and grades 9-12) by housing unit type. In addition, the total number of housing units was entered at the bottom of the table. Next, using the totals above, student generation rates by housing unit type were calculated by dividing the number of students in each type of unit by the total number of housing units.

These student generation rates were then calibrated to conditions in Williamson County using enrollment data for fall 2013 for the 2013-2014 school year and estimated housing units in the County by type based on American Community Survey 2013 1-Year Estimates. This was done by applying the unadjusted rates to the current number of housing units in the County to derive an estimated enrollment. These estimated figures were then compared to actual enrollments and appropriate adjustments were made. The resulting student generation rates—rounded to three decimal places—for Williamson County (by school level) are shown in Figure 7.

**Figure 7. Student Generation Rates**

Grades	Public School Students			Grades	Public School Students			Total Williamson County Enrollment (Fall 2013)
	Single Family	Multifamily	Total		Single Family	Multifamily	Total	
K-8	241	11	252	K-8	22,842	1,884	24,726	26,545
9-12	97	3	100	9-12	9,194	514	9,708	11,166
	Grand Total		352		TOTAL		34,434	37,711

Housing Units			Housing Units		
Single Family	Multifamily	Total	Single Family	Multifamily	Total
668	51	719	63,313	8,736	72,049

Source: Cross tabulation by TischlerBise using U. S. Census Bureau 2013 ACS One-Year Public Use Microdata Sample.

Source: TischlerBise using U. S. Census Bureau 2013 ACS One-Year PUMS data for public school students and table B25024 for housing units.

Step 2: Unadjusted Student Generation Rates  
Public School Students per Housing Unit

Grades	Type		Weighted Average
	Single Family	Multifamily	
K-8	0.36	0.22	0.35
9-12	0.15	0.06	0.14
TOTAL	0.51	0.27	0.49

Source: TischlerBise using U. S. Census Bureau 2013 ACS One-Year Public Use Microdata Sample.

Student Generation Rates			
Williamson County, TN			
Public School Students per Housing Unit			
Grades	Type		Weighted Average
	Single Family	Multifamily	
K-8	0.387	0.232	0.368
9-12	0.167	0.068	0.155
TOTAL	0.554	0.299	0.523

Source: TischlerBise using U. S. Census Bureau 2013 ACS One-Year Public Use Microdata Sample. (calibrated to 2013 enrollment and housing units)

<= Step 4: Adjusted SGR

As shown above, a single family unit is estimated to generate a total of 0.554 students (with 0.387 in grades K-8 and 0.167 in grades 9-12). A multifamily unit is estimated to generate a total of 0.299 students (with 0.232 in grades K-8 and 0.068 in grades 9-12).

### GENERATION RATES BY UNIT SIZE

Student generation rates **by unit size** for Williamson County can be derived using custom tabulations of demographic data from survey responses provided by the U.S. Census Bureau in files known as Public Use Micro-Data Samples (PUMS). TischlerBise used Census American Community Survey (ACS) 1-Year 2013 PUMS data to derive number of students per housing unit by type of unit. Williamson County is coterminous with Public Use Micro-Data Area (PUMA) 2600.

Using the PUMS data files, TischlerBise first calculated student generation rates based on the number of students in residential units of different bedroom sizes. This was done for each school level (i.e. grades K-8 and grades 9-12) by housing unit type. Unadjusted student generation rates by housing unit size were calculated by dividing the number of students in each type of unit by the number of units in each size category from the sample. These rates were then adjusted using control totals based on 2013 Williamson County enrollment figures and American Community Survey housing unit estimates (Figure 8).

**Figure 8: Student Generation Rates by Bedroom Count**

<b>Public School Students by Bedroom Range</b>					
<b>Williamson County 2013 PUMS Survey Results</b>					
<i>Bedroom Range</i>	<i>Grades K-8 Students (1)</i>	<i>Housing Units (1)</i>	<i>Housing Mix</i>	<i>Unadjusted Students/HU</i>	<i>Adjusted Students/HU (2)</i>
two or less	9	97	13.5%	0.09	0.097
three	62	259	36.0%	0.24	0.251
four or more	181	363	50.5%	0.50	0.524
<b>Total</b>	<b>252</b>	<b>719</b>		<b>0.35</b>	<b>0.368</b>
<i>Bedroom Range</i>	<i>Grades 9-12 Students (1)</i>	<i>Housing Units (1)</i>	<i>Housing Mix</i>	<i>Unadjusted Students/HU</i>	<i>Adjusted Students/HU (2)</i>
two or less	6	97	13.5%	0.06	0.069
three	22	259	36.0%	0.08	0.095
four or more	72	363	50.5%	0.20	0.221
<b>Total</b>	<b>100</b>	<b>719</b>		<b>0.14</b>	<b>0.155</b>

(1) American Community Survey, Public Use Microdata Sample for TN PUMA 2600 (2013 One-Year unweighted data).  
 (2) Adjusted multipliers are scaled to make the average PUMS values match control totals based on 2013 Williamson County total Fall enrollment and housing unit estimates from ACS table B25024.

To convert bedroom count rates to rates by home size, TischlerBise used data from the U.S. Census Bureau’s Survey of Construction Microdata (2013) for Region 6 (East South Central). These data indicated that dwelling units in this region averaged 1,264 square feet for two-bedroom units, 1,967 square feet for three bedroom units, and 3,438 square feet for units with four or more bedrooms. These averages were then used to conduct a fitted curve analysis to determine the student generation rates for various square footage totals. This analysis was repeated for both the grades K-8 school level (Figure 9) and the grades 9-12 school level (Figure 10).

Figure 9: Student Generation Rates for Grades K-8 by Unit Size

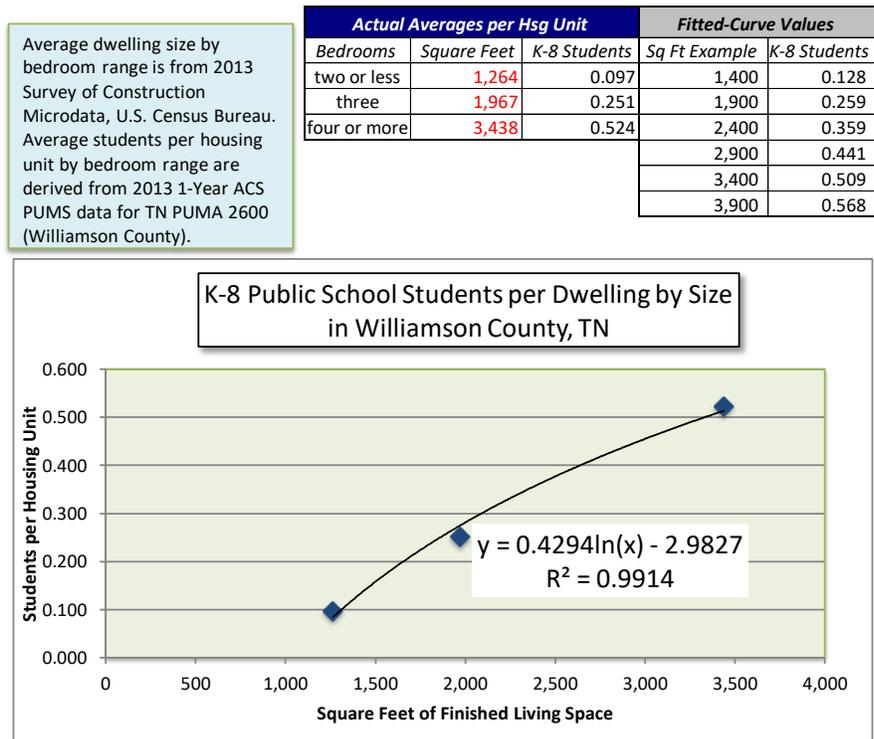
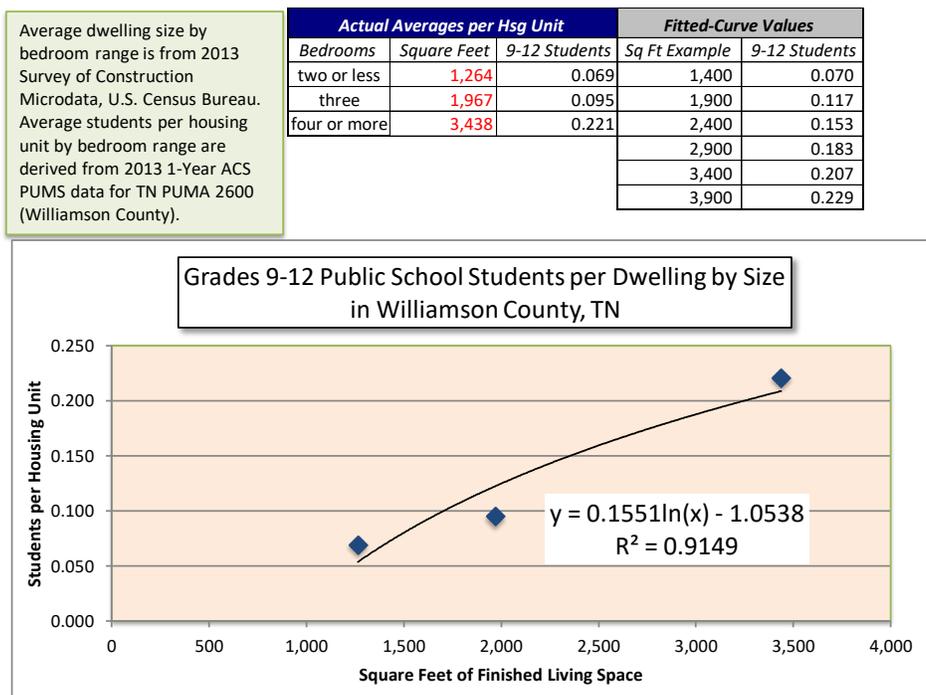


Figure 10: Student Generation Rates for Grades 9-12 by Unit Size



Student generation rates by unit size were derived by adding the student generation rates for each school level. As such, the student generation rates are 0.198 for a unit of 1,399 square feet or less, 0.376 for a unit of 1,400 to 1,899 square feet, 0.512 for a unit of 1,900 to 2,399 square feet, 0.624 for a unit of 2,400 to 2,899 square feet, 0.716 for a unit of 2,900 to 3,399 square feet, and 0.797 for a unit of 3,400 square feet or more. These rates are shown below in Figure 11.

**Figure 11: Student Generation Rates by Unit Size**

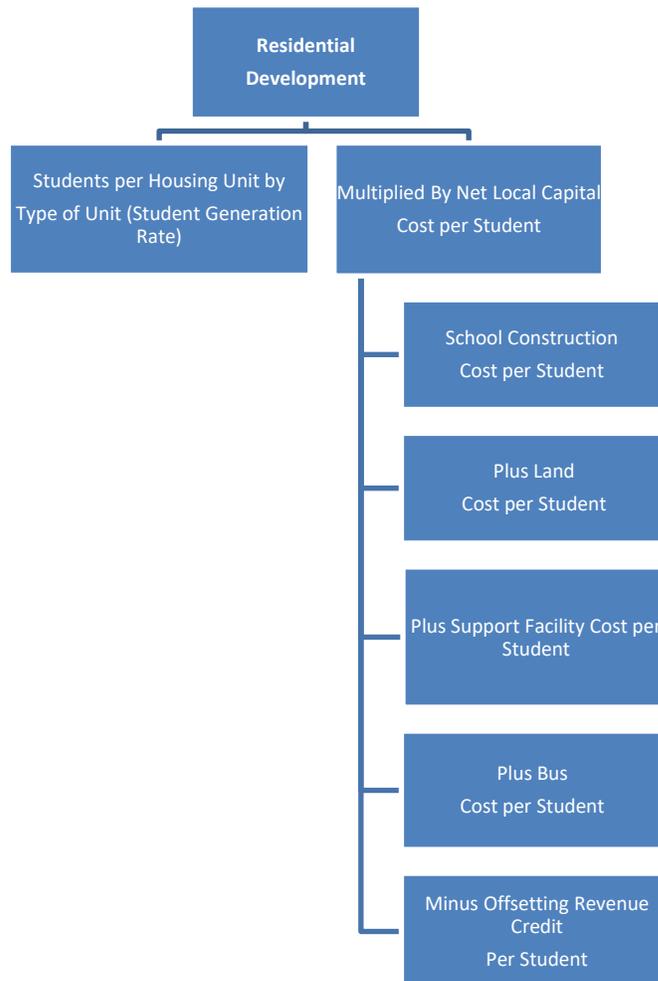
<b>Dwelling Unit Size</b>	<b>School Level</b>		
	<i>K-8</i>	<i>9-12</i>	<i>Total</i>
<i>1,399 square feet or less</i>	0.128	0.070	0.198
<i>1,400 - 1,899 square feet</i>	0.259	0.117	0.376
<i>1,900 - 2,399 square feet</i>	0.359	0.153	0.512
<i>2,400 - 2,899 square feet</i>	0.441	0.183	0.624
<i>2,900 - 3,399 square feet</i>	0.509	0.207	0.716
<i>3,400 square feet or more</i>	0.568	0.229	0.797

## Education Facility Impact Fees: Williamson County Schools

### METHODOLOGY

The WCS education facility impact fee methodology is based on current average public school student generation rates, LOS standards, and local costs. Figure 12 illustrates the methodology used to calculate the fee. The education facility impact fees use an incremental expansion approach, which documents the current LOS for public facilities in both quantitative and qualitative measures. The intent is to use impact fee revenue to expand or provide additional facilities, as needed to accommodate new development, based on the current LOS standards and costs to provide capital improvements. All school levels are included in the fees. Costs for school buildings, land, support facilities, and buses are included in the fee. Finally, a credit for offsetting revenue is also included.

Figure 12. Impact Fee Methodology Chart



## **BUILDING LEVEL OF SERVICE STANDARDS**

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This section provides current inventories of elementary, middle, and high schools in the WCS system. The data contained in these tables are used to determine infrastructure standards for school buildings and sites on which the impact fees are based.

### *WCS Elementary and Middle Schools (K-8)*

The inventory and current LOS for WCS elementary and middle schools are shown below in Figure 13. Elementary and middle school buildings have a total of 3,356,418 square feet of floor area on 800.5 acres of land. In April 2016, total enrollment in all elementary and middle schools was 24,340, 84% of permanent capacity (28,888). LOS factors for WCS elementary and middle schools are also shown in Figure 13. Since enrollment is presently lower than capacity, capacity is used to determine the LOS standards for elementary and middle school buildings and acreage highlighted in the figure below. The LOS factors on which the impact fees are based are 116.19 square feet and 0.028 acres per student.

**Figure 13. Elementary and Middle Schools LOS (K-8)**

<b>ELEMENTARY AND MIDDLE SCHOOLS (Grades K-8) [1]</b>					
<b>Inventory, Enrollment, and Utilization</b>					
<b>Facility</b>	<b>Site Acreage</b>	<b>Building Square Footage</b>	<b>Permanent Capacity</b>	<b>Enrollment (4/6/2016) [1]</b>	<b>Utilization</b>
Allendale ES	25.00	118,000	890	932	105%
Bethesda ES	22.00	84,102	780	610	78%
Brentwood MS	25.00	119,395	1,105	1,226	111%
Chapman's Retreat ES	20.00	86,600	805	730	91%
Clovercroft ES	22.72	118,000	890	783	88%
College Grove ES	20.00	48,150	460	394	86%
Crockett ES [2]	15.16	93,182	870	687	79%
Edmondson ES	20.00	85,221	825	809	98%
Fairview ES	11.50	58,581	715	447	63%
Fairview MS	10.00	99,112	764	538	70%
Grassland ES	25.00	90,000	870	527	61%
Grassland MS	32.00	139,820	1,160	911	79%
Heritage ES	30.00	82,000	805	675	84%
Heritage MS	41.00	118,000	1,185	1,053	89%
Hillsboro EMS	37.00	113,152	597	567	95%
Hunters Bend ES	20.00	68,625	780	524	67%
Kenrose ES	20.00	92,048	910	934	103%
Lipscomb ES	26.00	78,435	780	764	98%
Longview ES	21.00	121,000	890	803	90%
Mill Creek EMS [3]	45.52	234,000	1,600	0	0%
Nolensville ES	16.90	118,000	890	984	111%
Oak View ES	20.00	73,800	695	713	103%
Page MS	25.00	118,500	1,052	1,128	107%
Pearre Creek ES	14.00	118,000	890	706	79%
Scales ES	25.00	65,095	715	824	115%
Spring Station MS	35.00	137,200	971	1,051	108%
Sunset ES [4]	33.00	97,144	805	803	100%
Sunset MS [4]	40.36	118,806	869	920	106%
Trinity ES	21.00	86,661	870	684	79%
Walnut Grove ES	19.00	97,474	780	663	85%
Westwood ES	22.00	86,805	805	569	71%
Winstead ES	22.90	84,310	890	482	54%
Woodland MS [2]	17.44	107,200	975	899	92%
<b>Total</b>	<b>800.50</b>	<b>3,356,418</b>	<b>28,888</b>	<b>24,340</b>	<b>84%</b>

**Elementary and Middle School Levels of Service**

	<i>Demand Units (Permanent Capacity)</i>	<i>Site Acreage</i>	<i>Building Square Footage</i>
LOS per Student based on Capacity	28,888	0.028	116.19

[1] Does not include PK/EC

[2] Shared campus. Acreage is derived as a percentage of shared campus building square footage devoted to each school level.

[3] Slated to open in Fall 2016. Located on same land as Nolensville High; acreage derived as a percentage of square footage.

[4] Shared campus. Acreage is derived as a percentage of shared campus building square footage devoted to each school level.

## WCS High Schools

The inventory and current LOS for WCS high schools are shown below in Figure 14. High school buildings have a total of 2,112,236 square feet of floor area on 487.87 acres of land. In April 2016, total enrollment in all high schools was 12,031, 85% of permanent capacity (14,168). LOS factors for WCS high schools are also shown in Figure 14. Since enrollment is presently lower than capacity, capacity is used to determine the LOS standards for high school buildings and acreage, highlighted in the figure below. The LOS factors on which the impact fees are based are 149.08 square feet and 0.034 acres per student.

**Figure 14. High Schools LOS**

<b>HIGH SCHOOLS (Grades 9-12) [1]</b>					
<b>Inventory, Enrollment, and Utilization</b>					
<i>Facility</i>	<i>Site Acreage</i>	<i>Building Square Footage</i>	<i>Permanent Capacity</i>	<i>Enrollment (4/6/2016) [1]</i>	<i>Utilization</i>
Brentwood HS	32.00	215,892	1,628	1,755	108%
Centennial HS	55.00	244,500	1,758	1,657	94%
Fairview HS	34.00	166,300	1,042	690	66%
Franklin HS	39.40	255,535	1,584	1,766	111%
Independence HS	83.55	253,482	1,671	1,546	93%
Nolensville HS [2]	50.48	259,495	1,800	0	0%
Page HS	40.00	187,550	1,215	1,043	86%
Ravenwood HS	80.00	253,482	1,649	2,104	128%
Renaissance HS	1.72	17,000	150	151	101%
Summit HS	71.73	259,000	1,671	1,319	79%
<b>Total</b>	<b>487.87</b>	<b>2,112,236</b>	<b>14,168</b>	<b>12,031</b>	<b>85%</b>

### High School Levels of Service

	<i>Demand Units (Permanent Capacity)</i>	<i>Site Acreage</i>	<i>Building Square Footage</i>
LOS per Student based on Capacity	14,168	0.034	149.08

[1] Does not include EC

[2] Slated to open in Fall 2016. Located on same land as Mill Creek EMS; acreage derived as a percentage of square footage.

## LAND ACQUISITION COSTS

WCS will need to purchase land for future school sites to accommodate school capital needs brought about by growth in the County. As shown below, WCS has acquired 297.26 acres since 2010 at a total cost of \$12,452,390. This results in an average cost per acre of \$55,346.80. Figure 15 provides further detail on land costs.

**Figure 15. Land Acquisition Costs**

Facility	Year	Acreage	Cost	Cost per Acre
Allendale Elementary	2010	25.00	\$1,133,711	\$45,348
Spring Station Middle	2010	35.00	\$1,750,685	\$50,020
Clovercroft Elementary	2011	22.70	\$1,230,209	\$54,194
Summit High	2011	71.70	\$4,400,694	\$61,376
Nolensville High and Mill Creek Elementary and Middle [1]	2013	96.00	\$4,010,577	\$41,777
Thompson's Station Elementary and Middle [2]	2016	46.86	\$3,926,514	\$83,792
<i>Total</i>		<i>297.26</i>	<i>\$16,452,390</i>	<i>\$55,346.80</i>

[1] Slated to open in Fall 2016

[2] Slated to open in Fall 2018

## SCHOOL CONSTRUCTION COSTS

TischlerBise analyzed costs for school construction in the WCS system. Costs for completed and planned school projects in WCS were provided by the County and WCS. TischlerBise adjusted previous costs to 2016 Q1 dollars where appropriate, using the Turner Building Index, a well-known and widely available nonresidential construction price index. Current school costs represent the average costs to construct elementary and middle schools and high schools in the WCS system. As shown in Figure 16, construction costs average between \$118.18 and \$179.74 per square foot. The average costs are \$156.79 per square foot for elementary and middle schools and \$166.96 per square foot for high schools.

**Figure 16. School Project Costs**

Facility	Year	Square Footage	Cost	Cost per Square Foot	Cost Adjustment Factor [2]	Adjusted Cost	Adjusted Cost per Square Foot
Allendale Elementary	2010	118,000	\$13,943,404	\$118.16	1.21	\$16,927,537	\$143.45
Spring Station Middle	2010	137,200	\$21,336,066	\$155.51	1.21	\$25,902,358	\$188.79
Clovercroft Elementary	2011	118,000	\$15,261,675	\$129.34	1.19	\$18,231,311	\$154.50
[1]	2016	234,000	\$34,140,875	\$145.90	1.00	\$34,140,875	\$145.90
<i>Total</i>		<i>607,200</i>	<i>\$84,682,020</i>	<i>\$139.46</i>		<i>\$95,202,081</i>	<i>\$156.79</i>
Summit High	2011	259,000	\$33,422,520	\$129.04	1.19	\$39,925,917	\$154.15
Nolensville High [1]	2013	259,495	\$46,640,476	\$179.74	1.00	\$46,640,476	\$179.74
<i>Total</i>		<i>518,495</i>	<i>\$80,062,996</i>	<i>\$154.41</i>		<i>\$86,566,393</i>	<i>\$166.96</i>

[1] Slated to open in Fall 2016

[2] Adjusted using the Turner Building Cost Index, 1st Quarter 2016

## SUPPORT FACILITIES LOS AND COSTS

The impact fees also include costs to provide support facilities such as administrative office space, maintenance facilities, and storage buildings. The WCS support facilities are shown below in Figure 17 and total 56,673 square feet. This figure is divided by WCS's April 2016 enrollment of 36,371 to yield a LOS of 1.56 square feet per student. This LOS standard is then multiplied by a replacement cost estimate of \$165 per square foot (provided by WCS staff), resulting in a cost per student of \$257.10.

**Figure 17. Support Facilities LOS and Costs**

Facility	Square Footage
Operations Support Bldg.	28,012
Textbook Bldg.	8,871
Transportation	13,674
Equipment Shed.	6,116
<i>Total</i>	<i>56,673</i>
Cost per sq. ft.*	\$165
Total Replacement Cost	\$9,351,045
Enrollment (4/6/2016)	36,371
Square Feet per Student	<b>1.56</b>
Cost per Student	<b>\$257.10</b>

*\*Provided by County Staff*

## BUS LOS AND COSTS

Another infrastructure component included in the impact fee is buses. New buses, both regular and those designed to serve students with special needs, will need to be purchased to accommodate increased enrollment. WCS currently owns a fleet of 223 regular buses and 40 special education buses. Total current value of the fleet is estimated at approximately \$21,097,500, which equates to a current cost of \$580.06 per student ( $\$21,097,500 / 36,371$  enrollment). LOS and costs are provided below in Figure 18 for the WCS fleet.

**Figure 18. Buses LOS and Costs**

Type	Units	Unit Cost	Total
Regular	223	\$78,500	\$17,505,500
Special Education	40	\$89,800	\$3,592,000
<i>Total</i>	<i>263</i>		<i>\$21,097,500</i>
<i>Average</i>		\$80,219	
Enrollment (4/6/2016)			36,371
Buses per Student			0.007
<b>Cost Per Student</b>			<b>\$580.06</b>

## CREDIT FOR OFFSETTING REVENUES

Because the County imposes two privilege taxes on new development, a credit is necessary since new residential units that will pay the education facility impact fee will also contribute to future school capacity projects through the payment of one-time privilege taxes.

The County has two privilege taxes, one dedicated to schools with 30% going to the municipalities, and another which the County has sole discretion on its use, including allocating revenue to schools. In addition, the County allocates varying percentages of privilege tax to debt service, meaning there is an annual fluctuation of revenue from both privilege tax and General Fund revenue that could potentially be construed as a “double payment.” There is also General Fund and privilege tax revenue that can potentially be used for non-debt expenditures on capacity and/or technology, etc. Rather than devise a complicated credit system requiring annual adjustments, based on budgeted expenditures or some other alternative, we are proposing a rather straightforward method, which is conservative in nature, meaning we are probably overestimating the credit.

As shown in Figure 19, the majority of growth-related capital costs for growth-related schools are funded through bonded debt. Conversations with Williamson County indicates suggest that we include a credit for offsetting revenue for existing principal and interest on existing debt service payments shown in Figure 19. Annual principal payments are divided by projected student enrollment in each year to get a per student credit. (For example, in FY 2018, the total amount of K-8 principal and interest to be paid of \$24,481,258 is divided by projected enrollment of 26,859 for a payment per student of \$911.47.) To account for the time value of money, annual payments per student are discounted using a net present value formula based on an average current interest rate of 2.32 percent. The total net present value of future principal payments per student is \$7,446.45. This amount is subtracted from the gross capital cost per student amount to derive a net capital cost per student for school facilities. The same calculation is completed for Grades 9-12, resulting in a credit of \$11,278.53.

**Figure 19. Credit for Offsetting Revenues**

Grades K-8				Grades 9-12			
Year	Principal and Interest	Projected Enrollment [1]	Payment per Student	Year	Principal and Interest	Projected Enrollment [1]	Payment per Student
2017	\$23,796,211	25,410	\$936.49	2017	\$18,368,903	12,701	\$1,446.26
2018	\$24,481,258	26,859	\$911.47	2018	\$19,033,739	13,328	\$1,428.10
2019	\$23,324,632	28,412	\$820.94	2019	\$18,900,155	14,001	\$1,349.91
2020	\$21,512,658	30,096	\$714.80	2020	\$18,656,245	14,724	\$1,267.06
2021	\$21,378,358	31,910	\$669.96	2021	\$15,975,645	15,499	\$1,030.75
2022	\$21,557,034	33,424	\$613.54	2022	\$13,172,667	16,193	\$813.50
2023	\$20,506,884	34,938	\$580.11	2023	\$13,122,573	16,886	\$777.12
2024	\$20,268,037	36,452	\$556.02	2024	\$12,842,056	17,580	\$730.50
2025	\$19,548,499	37,966	\$514.89	2025	\$12,031,862	18,273	\$658.44
2026	\$17,281,367	39,480	\$437.72	2026	\$10,703,566	18,967	\$564.33
2027	\$15,457,835	40,994	\$377.08	2027	\$10,218,350	19,661	\$519.74
2028	\$13,440,524	42,508	\$316.19	2028	\$9,959,740	20,354	\$489.32
2029	\$11,762,359	44,022	\$267.19	2029	\$9,270,651	21,048	\$440.46
2030	\$10,026,375	45,536	\$220.19	2030	\$8,791,169	21,741	\$404.35
2031	\$8,221,563	47,050	\$174.74	2031	\$6,605,079	22,435	\$294.41
2032	\$8,208,394	48,564	\$169.02	2032	\$6,587,470	23,129	\$284.82
2033	\$8,244,525	50,078	\$164.63	2033	\$6,591,669	23,822	\$276.70
2034	\$8,228,375	51,592	\$159.49	2034	\$6,579,913	24,516	\$268.39
2035	\$2,016,900	53,106	\$37.98	2035	\$1,345,500	25,209	\$53.37
2036	\$1,004,250	54,620	\$18.39				
<b>Total</b>	<b>\$300,266,035</b>		<b>\$8,660.85</b>	<b>Total</b>	<b>\$218,756,948</b>		<b>\$13,097.54</b>
		Discount Rate [2]	2.32%			Discount Rate [2]	2.32%
		<b>Net Present Value</b>	<b>\$7,446.45</b>			<b>Net Present Value</b>	<b>\$11,278.53</b>

[1] Enrollment beyond SY 2020-21 projected using expected annual growth rates from SY 2015-16 and SY 2020-21  
 [2] Interest rate at which the District has recently issued debt (Series 2016B)

[1] Enrollment beyond SY 2020-21 projected using expected annual growth rates from SY 2015-16 and SY 2020-21  
 [2] Interest rate at which the District has recently issued debt (Series 2016B)

## EDUCATION FACILITY IMPACT FEE INPUT VARIABLES

Factors used to derive the WCS impact fee are summarized in Figure 20. Education facility impact fees are based on student generation rates (i.e., public school students per housing unit) and are only implemented on residential development. LOS standards are based on current costs per student for school buildings, land, support facilities, and buses, as described in the previous sections and summarized below.

The total gross capital cost per student is the sum of the boxed cost components. For example, for the elementary and middle school component, the calculation is as follows:  $\$18,216.85$  [building construction] +  $\$1,533.69$  [land acquisition] +  $\$257.10$  [support facilities] +  $\$580.06$  [buses] =  $\$20,587.70$  total gross cost per student. The credit for offsetting revenue ( $\$7,446.45$ ) is then subtracted from the gross local capital cost per student to derive the net local capital cost per student ( $\$13,141.25$ ) for elementary and middle schools. The same approach is followed for high schools.

**Figure 20. Education Facility Impact Fee Input Variables: WCS**

<b>Current Level of Service Standards</b>			
		<i>K-8</i>	<i>9-12</i>
	Square Feet per Student	116.19	149.08
	Cost per Sq. Ft.	\$156.79	\$166.96
	<b>Building Construction Cost per Student</b>	<b>\$18,216.85</b>	<b>\$24,890.79</b>
	Acres per Student	0.028	0.034
	Cost per Acre	\$55,346.80	\$55,346.80
	<b>Land Cost per Student</b>	<b>\$1,533.69</b>	<b>\$1,905.87</b>
	Support Facilities per Student (Sq. Ft.)	1.56	1.56
	Cost per Sq. Ft.	\$165	\$165
	<b>Support Facilities Cost per Student</b>	<b>\$257.10</b>	<b>\$257.10</b>
	Buses/Vehicles per Student	0.007	0.007
	Weighted Average Cost per Bus/Vehicle	\$80,218.63	\$80,218.63
	<b>Bus/Vehicle Cost per Student</b>	<b>\$580.06</b>	<b>\$580.06</b>
	<b>Total Gross Cost Per Student</b>	<b>\$20,587.70</b>	<b>\$27,633.82</b>
	Credit for Offsetting Revenue per Student	(\$7,446.45)	(\$11,278.53)
	<b>Total Net Capital Cost per Student</b>	<b>\$13,141.25</b>	<b>\$16,355.29</b>

## MAXIMUM SUPPORTABLE EDUCATION FACILITY IMPACT FEES FOR WILLIAMSON COUNTY SCHOOLS BY UNIT TYPE

Figure 21 shows the schedule of maximum supportable impact fees for WCS **by unit type**. The fees are calculated by multiplying the student generation rate for each housing type (shown at the top of Figure 21) by the net capital cost per student for both types of school. Each component is then added together to derive the total public school impact fee.

For example, for a single family detached unit, the K-8 school portion of the fee is calculated by multiplying the student generation rate of 0.387 by the net local capital cost per K-8 student of \$13,141.25, which results in a fee of \$5,090 (truncated). This calculation is repeated for high schools (grades 9-12). The two portions of the fee are added together to calculate the total fee by type of residential unit (i.e., for single family detached: \$5,090 + \$2,732 = \$7,822.)<sup>1</sup>

**Figure 21. Maximum Supportable Education Facility Impact Fees by Unit Type: WCS**

<b>INPUT VARIABLES: Williamson Co. Schools Impact Fees</b>				
<b>Public School Students per Housing Unit</b>	<b>Dwelling Unit Type</b>	<b>School Level</b>		
		<i>K-8</i>	<i>9-12</i>	<i>Total</i>
	Single Family	0.387	0.167	0.554
	Multifamily	0.232	0.068	0.299
<b>Cost Factors</b>				
	Total Net Local Capital Cost per Student	\$13,141.25	\$16,355.29	
<b>MAXIMUM ALLOWABLE SCHOOL IMPACT FEES: Williamson Co. Schools</b>				
<b>Impact Fee per Housing Unit*</b>	<b>Dwelling Unit Type</b>	<i>K-8</i>	<i>9-12</i>	<b>TOTAL</b>
	Single Family	\$5,090	\$2,732	<b>\$7,822</b>
	Multifamily	\$3,043	\$1,107	<b>\$4,149</b>

*\*Fees do not apply to age-restricted units*

As noted above, Williamson County is served by two school systems, WCS and FSSD. Students living in FSSD attend these schools from kindergarten to eighth grade, after which they attend WCS high schools. This report details only impact fees for WCS. New residential construction located in FSSD will be charged for only the high school component of the WCS impact fee, since students generated from these homes will only attend WCS for high school. Figure 22 provides the schedule of *maximum supportable school impact fees* within FSSD boundaries **by unit type**. For a single family housing unit, the maximum

<sup>1</sup> Because the analysis uses figures carried to their ultimate decimal places, the sums and products shown may not equal the sum or product if the reader replicates the calculation with the factors shown in the report.

supportable fee amount is \$2,732. For a multifamily housing unit, the maximum supportable fee amount is \$1,107.

**Figure 22. WCS Maximum Supportable Education Facility Impact Fees by Unit Type within Franklin Special School District**

<b>INPUT VARIABLES: Williamson Co. Schools Impact Fees</b> (within Franklin Special School District boundaries)	
<b>Public School Students per Housing Unit</b>	<b>School Level</b>
	<b>9-12</b>
<b>Dwelling Unit Type</b>	
Single Family	<b>0.167</b>
Multifamily	<b>0.068</b>
<b>Cost Factors</b>	
Total Net Local Capital Cost per Student	<b>\$16,355.29</b>
<b>MAXIMUM ALLOWABLE SCHOOL IMPACT FEES: Williamson Co. Schools</b> (within Franklin Special School District boundaries)	
<b>Impact Fee per Housing Unit*</b>	<b>School Level</b>
	<b>9-12</b>
<b>Dwelling Unit Type</b>	
Single Family	<b>\$2,732</b>
Multifamily	<b>\$1,107</b>

*\*Fees do not apply to age-restricted units*

**MAXIMUM SUPPORTABLE EDUCATION FACILITY IMPACT FEES FOR WILLIAMSON COUNTY SCHOOLS BY UNIT SIZE**

Figure 23 shows the schedule of maximum supportable impact fees for WCS **by unit size**. The fees are calculated by multiplying the student generation rate for each housing type (shown at the top of Figure 23) by the net capital cost per student for both types of school. Each component is then added together to derive the total public school impact fee.

For example, for a unit sized 1,400 to 1,899 square feet, the grades K-8 school portion of the fee is calculated by multiplying the student generation rate of 0.259 by the net local capital cost per K-8 student of \$13,141.25, which results in a fee of \$3,404 (truncated). This calculation is repeated for high schools

(grades 9-12). The two portions of the fee are added together to calculate the total fee by type of residential unit (i.e., for single family detached: \$3,404 + \$1,914 = \$5,317.)<sup>2</sup>

**Figure 23. Maximum Supportable Education Facility Impact Fees by Unit Size: WCS**

<b>INPUT VARIABLES: Williamson Co. Schools Impact Fees</b>			
<b>Public School Students per Housing Unit</b>	<b>School Level</b>		
	<i>K-8</i>	<i>9-12</i>	<i>Total</i>
<b>Dwelling Unit Size</b>			
1,399 square feet or less	0.128	0.070	0.198
1,400 - 1,899 square feet	0.259	0.117	0.376
1,900 - 2,399 square feet	0.359	0.153	0.512
2,400 - 2,899 square feet	0.441	0.183	0.624
2,900 - 3,399 square feet	0.509	0.207	0.716
3,400 square feet or more	0.568	0.229	0.797
<b>Cost Factors</b>			
Total Net Local Capital Cost per Student	\$13,141.25	\$16,355.29	
<b>MAXIMUM ALLOWABLE SCHOOL IMPACT FEES: Williamson Co. Schools</b>			
<b>Impact Fee per Housing Unit*</b>	<i>K-8</i>	<i>9-12</i>	<b>TOTAL</b>
<b>Dwelling Unit Size</b>			
1,399 square feet or less	\$1,682	\$1,145	<b>\$2,827</b>
1,400 - 1,899 square feet	\$3,404	\$1,914	<b>\$5,317</b>
1,900 - 2,399 square feet	\$4,718	\$2,502	<b>\$7,220</b>
2,400 - 2,899 square feet	\$5,795	\$2,993	<b>\$8,788</b>
2,900 - 3,399 square feet	\$6,689	\$3,386	<b>\$10,074</b>
3,400 square feet or more	\$7,464	\$3,745	<b>\$11,210</b>

\*Fees do not apply to age-restricted units

As noted above, Williamson County is served by two school systems, WCS and FSSD. Students living in FSSD attend these schools from kindergarten to eighth grade, after which they attend WCS high schools. This report details only impact fees for WCS. New residential construction located in FSSD will be charged for only the high school component of the WCS impact fee, since students generated from these homes will only attend WCS for high school. Figure 22 provides the schedule of *maximum supportable school impact fees* within FSSD boundaries **by unit type**. For example, for a unit sized 1,400 to 1,899 square feet, the fee is \$1,914.

<sup>2</sup> Because the analysis uses figures carried to their ultimate decimal places, the sums and products shown may not equal the sum or product if the reader replicates the calculation with the factors shown in the report.

**Figure 24. WCS Maximum Supportable Education Facility Impact Fees by Unit Size within Franklin Special School District**

<b>INPUT VARIABLES: Williamson Co. Schools Impact Fees</b>	
<i>(within Franklin Special School District boundaries)</i>	
<b>Public School Students per Housing Unit</b>	<b>School Level</b>
	<b>9-12</b>
<b>Dwelling Unit Size</b>	
1,399 square feet or less	<b>0.070</b>
1,400 - 1,899 square feet	<b>0.117</b>
1,900 - 2,399 square feet	<b>0.153</b>
2,400 - 2,899 square feet	<b>0.183</b>
2,900 - 3,399 square feet	<b>0.207</b>
3,400 square feet or more	<b>0.229</b>
<b>Cost Factors</b>	
Total Net Local Capital Cost per Student	<b>\$16,355.29</b>
<b>MAXIMUM ALLOWABLE SCHOOL IMPACT FEES: Williamson Co. Schools</b>	
<i>(within Franklin Special School District boundaries)</i>	
<b>Impact Fee per Housing Unit*</b>	<b>School Level</b>
	<b>9-12</b>
<b>Dwelling Unit Size</b>	
1,399 square feet or less	<b>\$1,145</b>
1,400 - 1,899 square feet	<b>\$1,914</b>
1,900 - 2,399 square feet	<b>\$2,502</b>
2,400 - 2,899 square feet	<b>\$2,993</b>
2,900 - 3,399 square feet	<b>\$3,386</b>
3,400 square feet or more	<b>\$3,745</b>

*\*Fees do not apply to age-restricted units*

## Implementation and Administration

### ACCOUNTING

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Impact fees should be paid at time of building permit. Certain accounting procedures should be followed by the County. For example, monies received should be placed in a separate fund and accounted for separately and may only be used for the purposes authorized in the impact fee ordinance. Interest earned on monies in the separate fund should be credited to the fund.

### COST UPDATES

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All costs in the impact fee calculations are given in current dollars with no assumed inflation over time. Necessary cost adjustments can be made as part of the recommended annual evaluation and update of the fees. One approach is to adjust for inflation in construction costs by means of an index specific to construction as opposed to the consumer price index (CPI), which is more general in nature. TischlerBise recommends using the Marshall Swift Valuation Service, which provides comparative cost multipliers for various geographies and types of construction. The multipliers can be applied against the calculated impact fee. If cost estimates or other factors change significantly the County should redo the fee calculations. A full update is recommended every 3 to 5 years to reflect changes in development trends, infrastructure capacities, costs, funding formulas, etc.

### SITE-SPECIFIC CREDITS

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A site-specific credit should be considered for contributions of system improvements that have been included in the impact fee calculations. If a developer constructs the type of system improvements included in the fee calculations, it will be necessary to either reimburse the developer or provide a credit against the fees for that portion of the fee. The latter option is more difficult to administer because it creates unique fees for specific geographic areas. Based on TischlerBise's experience, it is better for the County to establish a reimbursement agreement with the developer constructing the system improvement. The reimbursement agreement should be limited to a payback period of no more than ten years and the County should not pay interest on the outstanding balance. The developer must provide sufficient documentation of the actual cost incurred for the system improvement. The County should only agree to pay the lesser of the actual construction cost or the estimated cost used in the impact fee analysis. If the County pays more than the cost used in the fee analysis, there will be insufficient fee revenue. Reimbursement agreements should only obligate the County to reimburse developers annually according to actual fee collections from the benefiting area.

### COLLECTION AND EXPENDITURE ZONES

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The reasonableness of impact fees is determined in part by their relationship to the local government's burden to provide necessary public facilities. The need to show a substantial benefit usually requires communities to evaluate collection and expenditure zones for public facilities that have distinct

geographic service areas. For the County School system, one area is appropriate because capacity improvements are needed at all levels throughout the County system and County schools will occasionally re-district to accommodate growth and available capacity.

## Appendix A: Housing Unit Types

For the purposes of school impact fee analysis and calculations, the following housing type categories were used. A brief description of each housing category is provided.

**Single Family Detached:** a detached building located on a single lot containing one dwelling unit. In situations where an accessory dwelling unit (i.e., a “mother-in-law suite” or “granny flat”) is located on the same lot, the principal dwelling is categorized as a Single Family Detached dwelling.

Examples of single family detached dwellings are site-built houses and modular houses.

**Single Family Attached:** a group of dwelling units which share a common floor-to-ceiling wall or share the wall of an attached garage or porch with an adjacent dwelling and in which all units have a ground-floor living space. Units are individually owned or intended to be individually owned after initial sales are complete.

Examples of single family attached dwellings are duplexes, triplexes, townhouses, row houses, and condominiums in which all units have a ground-floor living space.

**Multifamily:** a group of dwelling units which share a common floor-to-ceiling wall with an adjacent dwelling. All units may not have a ground-floor living space. Units may be individually owned (as is the case with condominiums) or may be owned by one entity and rented/leased to tenants. Also included in this category are dwelling units located above ground-floor non-residential (i.e., retail or office) uses. In situations where an accessory dwelling unit (i.e., a mother-in-law suite, granny flat, or efficiency apartment) is located on the same lot as a principal dwelling, the accessory dwelling unit is categorized as a multifamily dwelling provided the accessory dwelling unit is categorized as such by the local zoning code (i.e., less than 750-800 square feet, depending on the specifics of the local code).

Examples of multifamily dwellings include apartments, condominiums in a multi-story building in which all units do not have a ground-floor living space, mother-in-law suites and granny flats located on a lot containing a separate principal dwelling, and dwellings located above non-residential uses.

**Manufactured home:** a dwelling built in a factory in accordance with the federal Manufactured Home Construction and Safety Standards, commonly referred to as the 'HUD' Code.

Examples of manufactured homes are single-wide, double-wide, and triple-wide “mobile” homes.