



# FINAL – SCHOOL IMPACT FEES

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## EXECUTIVE SUMMARY

TischlerBise was retained by the Jefferson County Commission to recalibrate the County’s school impact fees using current level of service standards for building and site area, school construction and land acquisition costs, and other applicable FY 2013-2014 budget information. This report is an update to the 2011 *School Impact Fees Report* prepared by TischlerBise.

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.

## APPROACH AND METHODOLOGY

There are three basic *methodologies* used to calculate impact fees. The **incremental expansion method** documents the current level of service 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 Jefferson County Schools 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 levels of service (LOS) and project costs for each type of school facility (i.e., elementary, middle, and high), land for school sites, buses, and administrative facilities. The LOS is documented in both quantitative and qualitative measures and the intent is to use fee revenue to provide additional or expanded public school 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 Jefferson County public school student generation rate, a cost by type of residential unit is derived. The term “student generation rate” refers to the average number of public school students per housing unit in the District school system. To proportionately capture the demand over the life of a housing unit, student generation rates are calibrated to reflect the average demand from all units (as opposed to the demand from *new* units) in the District school system.

A general requirement common to impact fee calculations is the evaluation of *credits*. Two types of credits should be considered, **future revenue credits** and **site-specific credits**. Revenue credits may be necessary to avoid potential double payment situations arising from a one-time facility fee plus the payment of other revenues that may also fund growth-related capital improvements. Revenue credits are dependent upon the fee methodology used in the cost analysis.

To avoid this potential double payment situation, future revenue credits are appropriate to account for outstanding debt on County school facilities. A credit is necessary since new residential units that will pay the fee will also contribute to future principal payments on this remaining debt through property taxes. A credit is not necessary for interest payments because interest costs are not included in the costs.

The second type of credit, a **site-specific credit**, is for system improvements that have been included in the fee calculations. Policies and procedures related to site-specific credits for system improvements should be addressed in the ordinance that establishes the County’s impact fees. However, the general concept is that developers may be eligible for site-specific credits or reimbursements *only if they provide system improvements that have been included in the fee calculations*. Project improvements normally required as part of the development approval process are not eligible for credits against impact fees.

## MAXIMUM SUPPORTABLE SCHOOL IMPACT FEES

Figure 1 displays the current impact fees for Jefferson County. As shown below, the current fees include three residential floor area types, including Single Family Detached, Townhome/ Duplex, and Multi-family.

**Figure 1. Current Impact Fees**

Development Type	School
<b>Residential (per housing unit)</b>	
Single Family Detached	\$11,358
Townhome/ Duplex	\$8,560
Multi-family	\$6,306

Figure 2 provides the schedule of *Maximum Supportable School Impact Fees* for Jefferson County Schools. The school impact fees are applied only to residential development and are assessed per housing unit, reflecting the proportionate demand by type of unit. The amounts shown are “maximum supportable” amounts based on the methodologies, level of service, and costs for the 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 capital costs as detailed in this report. The Jefferson County Commission 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 the County’s level of service.

As shown in Figure 2, the categories are “Single Unit” (single-family detached and mobile home), “Townhome / Duplex” (single-family attached and two unit structures), and “Multi-Family” (three or more units).

For a single unit (which includes single-family detached and mobile homes), the maximum supportable fee amount is \$8,143. For a townhome or duplex (single-family attached or structures with two units),

the maximum supportable fee amount is \$9,172. For a unit in a structure with three or more units (which includes apartments and condos), the maximum fee amount is \$5,688. Factors for the differences in the proposed fees compared to the current fees include the following:

- Changes in pupil generation rates:
  - Higher pupil generation rates for units in structures with two or more units in this study compared to the previous study.
- Changes in components:
  - Previous study included buses, portables and indoor/ outdoor equipment. This study does not.
- Changes in costs:
  - Different cost per acre for land in this study compared to previous study.
  - This study includes 61% of the costs for school building will be local, whereas the previous study assumed it would be 100%.

**Figure 2. Maximum Supportable School Impact Fees**

MAXIMUM SUPPORTABLE SCHOOLS IMPACT FEES: Jefferson County Schools								
Housing Unit Type	Land Use Assumptions Category	Elementary	Middle	High	Proposed Fee	Current Fee	Increase (Decrease)	% Change
Single Unit (Single-Family & Mobile Home)	Single Unit	\$3,550	\$2,035	\$2,558	\$8,143	\$11,358	(\$3,215)	-28%
Townhome / Duplex	2 Units	\$5,044	\$2,035	\$2,093	\$9,172	\$8,560	\$612	7%
Multi-Family (Apartments & Condos)	3+ Units	\$2,055	\$610	\$3,023	\$5,688	\$6,306	(\$618)	-10%

## OVERVIEW

### INTRODUCTION TO IMPACT FEES

#### Definition

Impact fees, also known as development fees, are one-time payments used to fund capital improvements necessitated by new growth. Impact fees have been utilized by local governments in various forms for at least fifty years. Impact fees do 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 levels of service in a community. Any community considering facility fees should note the following limitations:

- ⌌ Impact fees can only be used to finance capital infrastructure and cannot be used to finance ongoing operations and/or maintenance and rehabilitation costs;
- ⌌ Impact fees cannot be deposited in the local District School Board’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
- ⌌ 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

*U. S. Constitution.* Like all land use regulations, development exactions—including impact and facility 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 in 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 or facility fees.

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## Required Findings

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 development 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/facility 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 facility 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. However, nothing in the U.S. Constitution or the State enabling Act authorizing the District School Board’s impact fee requires that facilities funded with fee revenues be available *exclusively* to development paying the fees. In other words, existing development may benefit from these improvements as well.

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.

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## Methodologies and Credits

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 facility 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. This methodology is often used for systems that were oversized such as sewer and water facilities. To calculate a fee using the cost recovery approach, the facility cost is divided by ultimate number of demand units the facility will serve.

*Incremental Expansion Fee Calculation.* The incremental expansion method documents the current level of service (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 level of service 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. This approach is utilized for this study.

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



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## JEFFERSON COUNTY SCHOOLS IMPACT FEE OVERVIEW

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The County has seen residential growth over the past several years and with it increased enrollment. Growth is expected to continue in the future. TischlerBise provides detail on land use and demographic assumptions and projections in the Jefferson County Land Use Assumptions document. To ensure that schools have adequate capacity to accommodate growth, the Jefferson County Commission is updating its school impact fee methodology and assumptions.

As mentioned in the previous section, the school impact fee is derived using the incremental expansion approach. This approach determines current level of service standards for school buildings (elementary, middle, and high), land for school sites, and administrative facilities. Level of service standards are derived using *2013-2014 enrollment* and are expressed as follows:

School buildings: Square feet per student by type of school

Land: Acres per student by type of school

Administration facilities: Square feet per student

A credit is included in the impact fee to account for outstanding debt on school improvements. Further detail on the approach, levels of service, costs, and credits is provided in the body of this report.

## PUBLIC SCHOOL STUDENTS

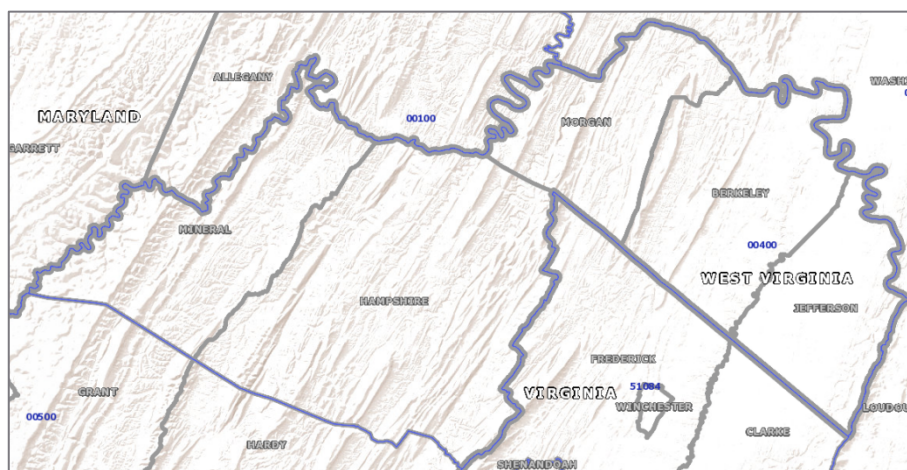
One of the fundamental requirements of impact fees is the concept of proportionate share. Proportionate share is the principle that impact fee amounts must correspond with the demand and cost for additional infrastructure capacity. This relationship is the critical difference which distinguishes impact fees from taxes. The County’s current School Impact Fee is assessed as a flat fee by type of housing unit. Since the County’s residential impact fee schedule differentiates the demand by different types of housing units, this approach is defensible as it demonstrates the proportionate difference in demand created by these different types of residential development.

### PUBLIC SCHOOL PUPIL GENERATION RATES

Student generation rates for Jefferson 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) 5-Year 2008-2012 PUMS data to derive number of students per housing unit by type of unit as well as by size of unit (using number of bedrooms per unit). Because PUMS data are only available for areas of roughly 100,000 persons, Jefferson County is in West Virginia Public Use Micro-data Area (PUMA) 0400, which includes Jefferson County along with Berkeley County, Morgan County, Mineral County, and Hampshire County. Data is first analyzed for the PUMA area and then calibrated to conditions in Jefferson County.

The West Virginia 0400 PUMA map is shown in Figure 3.

**Figure 3. Map of West Virginia 0400 PUMA**



Student generation rates are calculated for the three housing unit types discussed above, given demographic characteristics and potential for future development in the County. (1) Single-family detached and mobile home are calculated as “Single Unit.” (2) Single-family attached and duplex are calculated as “Townhome / Duplex” and (3) structures with three or more units will use the student generation rate for “Multi-Family” (which includes units in structures with three or more units, boats, and RVs). Rates are provided for three school levels: (1) Elementary School (grades K-5), (2) Middle School (6-8), and (3) 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 by bedroom count. As noted above, due to data

availability by geography from the U.S. Census, the first step in estimating student generation rates is to gather aggregated data from the five counties in the PUMS data set, as shown in Figure 4. This is done for each school level (i.e. elementary, middle and high) by housing unit type and by the number of bedrooms. In addition, the total number of housing unit is entered at the bottom of the table. **These totals represent the number of students and housing units for the five-county area.**

**Figure 4. Public School Students by Housing Unit Type and Number of Bedrooms (U.S. Census for WV PUMA 0400)**

**Public School Students  
by Housing Unit Type and Number of Bedrooms  
for PUMA Region 0400**

<i>Elementary School Students (Grades K-5)</i>	<b>Bedrooms</b>				<i>TOTAL</i>
	<b>0-2</b>	<b>3</b>	<b>4</b>	<b>5+</b>	
Single Unit	1,350	7,191	3,246	1,101	12,888
Townhome / Duplex	185	668	289	22	1,164
Multi-Family	304	295	-	-	599
	1,839	8,154	3,535	1,123	14,651

<i>Middle School Students (Grades 6-8)</i>	<b>Bedrooms</b>				<i>TOTAL</i>
	<b>0-2</b>	<b>3</b>	<b>4</b>	<b>5+</b>	
Single Unit	827	6,150	3,036	1,216	11,229
Townhome / Duplex	13	592	147	-	752
Multi-Family	224	96	-	-	320
	1,064	6,838	3,183	1,216	12,301

<i>High School Students (Grades 9-12)</i>	<b>Bedrooms</b>				<i>TOTAL</i>
	<b>0-2</b>	<b>3</b>	<b>4</b>	<b>5+</b>	
Single Unit	1,091	6,661	3,710	1,172	12,634
Townhome / Duplex	67	504	102	-	673
Multi-Family	542	652	-	-	1,194
	1,700	7,817	3,812	1,172	14,501

Grand Total (all grades) 41,453

<i>Housing Units</i>	<b>Bedrooms</b>				<i>TOTAL</i>
	<b>0-2</b>	<b>3</b>	<b>4</b>	<b>5+</b>	
Single Unit	31,399	54,372	16,464	3,925	106,160
Townhome / Duplex	2,952	3,384	681	65	7,082
Multi-Family	7,731	807	121	5	8,664
	42,082	58,563	17,266	3,995	121,906

Source: Cross tabulation by TischlerBise using Census Bureau, Year 2008-2012

5% Public Use Microdata Sample for West Virginia PUMA 0400.

(Includes the counties of Jefferson, Berkeley, Morgan, Mineral, and Hampshire.)

Next, using the totals above, student generation rates by housing unit type and number of bedrooms are calculated by dividing the number of students in each type of unit and bedroom by the total number of housing units and bedrooms. **These student generation rates represent the five-county area.**

**Figure 5. Unadjusted Sample Area Student Generation Rates by Bedroom Range (U.S. Census for WV PUMA 0400)**

### Unadjusted Student Generation Rates by Housing Unit Type and Number of Bedrooms for PUMA Region 0400

#### *Elementary School Students Per Housing Unit*

	0-2 Bdrms	3 Bdrms	4 Bdrms	5+ Bdrms	Wt Avg
Single Unit	0.04	0.13	0.20	0.28	0.12
Townhome / Duplex	0.06	0.20	0.42	0.34	0.16
Multi-Family	0.04	0.37	0.00	0.00	0.07

#### *Middle School Students Per Housing Unit*

	0-2 Bdrms	3 Bdrms	4 Bdrms	5+ Bdrms	Wt Avg
Single Unit	0.03	0.11	0.18	0.31	0.11
Townhome / Duplex	0.00	0.17	0.22	0.00	0.11
Multi-Family	0.03	0.12	0.00	0.00	0.04

#### *High School Students Per Housing Unit*

	0-2 Bdrms	3 Bdrms	4 Bdrms	5+ Bdrms	Wt Avg
Single Unit	0.03	0.12	0.23	0.30	0.12
Townhome / Duplex	0.02	0.15	0.15	0.00	0.10
Multi-Family	0.07	0.81	0.00	0.00	0.14

#### *Total Students Per Housing Unit*

	0-2 Bdrms	3 Bdrms	4 Bdrms	5+ Bdrms	Wt Avg
Single Unit	0.10	0.37	0.61	0.89	0.35
Townhome / Duplex	0.09	0.52	0.79	0.34	0.37
Multi-Family	0.14	1.29	0.00	0.00	0.24

Source: Cross tabulation by TischlerBise using Census Bureau, Year 2008-2012

5% Public Use Microdata Sample for West Virginia PUMA 0400.

(Includes the counties of Jefferson, Berkeley, Morgan, Mineral, and Hampshire.)

The above student generation rates are then calibrated to conditions in Jefferson County using enrollment data for September 2013 for the 2013-2014 school year and estimated housing units as of December 31, 2013, in the County. This is done by applying the unadjusted rates to the current number of housing units in the County to derive an estimated enrollment. These estimated figures are then compared to **actual enrollments** and appropriate adjustments are made. Figure 6 displays the enrollment data for the 2013-2014 school year, as well as the estimated public school students in Jefferson County by housing unit type and number of bedrooms. Figure 6 also displays the estimated number of housing units in Jefferson County at the end of 2013. This estimate is calculated by adding building permit totals in 2012 and 2013 to the 2010-2012 ACS housing unit estimate—building permit totals divided between single unit, townhome / duplex, and multi-family based on 2012 share of total housing units.

**Figure 6. Estimated Public School Students in Jefferson County by Housing Unit Type and Number of Bedrooms**

**Estimated Public School Students  
by Housing Unit Type and Number of Bedrooms  
Jefferson County, WV Public Schools**

	Bedrooms				TOTAL	
	0-2	3	4	5+		
<b>Elementary School Students (Grades K-5)</b>						
Single Unit	185	1,258	621	210	2,274	Jefferson County 2013-2014 FTE  4,418
Townhome / Duplex	67	200	104	7	378	
Multi-Family	49	48	-	-	97	
	302	1,506	725	216	2,749	
<b>Middle School Students (Grades 6-8)</b>						
Single Unit	110	1,082	587	234	2,012	2,147
Townhome / Duplex	5	197	53	-	255	
Multi-Family	37	15	-	-	52	
	151	1,294	640	234	2,319	
<b>High School Students (Grades 9-12)</b>						
Single Unit	164	1,192	718	223	2,298	2,496
Townhome / Duplex	24	155	37	-	216	
Multi-Family	84	107	-	-	191	
	273	1,454	755	223	2,705	
Grand Total (all grades)					7,773	9,061
<b>Housing Units</b>						
Single Unit	5,122	9,817	3,185	754	18,877	End of 2013 Housing Units 18,877 2,291 1,398 22,566
Townhome / Duplex	883	1,154	233	21	2,291	
Multi-Family	1,247	131	19	1	1,398	
	7,252	11,102	3,436	775	22,566	

Source: TischlerBise estimates for Jefferson County using Census Bureau, Year 2008-2012 5% Public Use Microdata Sample for West Virginia PUMA 0400. (Calibrated to Jefferson County 2013-2014 enrollment and 2010-2012 ACS housing unit estimate plus 2012 and 2013 building permits.)

The resulting student generation rates—rounded to two decimal places—for Jefferson County (by school level and number of bedrooms) are shown in Figure 7. The total number of students per housing unit is the sum of the student generation rates for each of the school levels. The average rates are:

- █ Single Unit: 0.40 students per unit
- █ Townhome / Duplex: 0.46 students per unit
- █ Multi-Family: 0.27 students per unit

Detail is provided below. For the purpose of calculating the impact fee, the Single Unit student generation rate will be applied to single-family detached units and mobile homes. The Townhome / Duplex student generation rate will be applied to single-family attached units and structures with two units. Finally, the Multi-Family rate will be applied to structures with three or more units.

**Figure 7. Jefferson County Student Generation Rates by Bedroom Range (Calibrated)**

### Jefferson County Public School Students Per Housing Unit

#### *Elementary School Students Per Housing Unit*

	0-2 Bdrms	3 Bdrms	4 Bdrms	5+ Bdrms	Wt Avg
Single Unit	0.06	0.21	0.31	0.45	0.19
Townhome / Duplex	0.12	0.28	0.72	0.52	0.27
Multi-Family	0.06	0.59	0.00	0.00	0.11

#### *Middle School Students Per Housing Unit*

	0-2 Bdrms	3 Bdrms	4 Bdrms	5+ Bdrms	Wt Avg
Single Unit	0.02	0.10	0.17	0.29	0.10
Townhome / Duplex	0.00	0.16	0.21	0.00	0.10
Multi-Family	0.03	0.11	0.00	0.00	0.03

#### *High School Students Per Housing Unit*

	0-2 Bdrms	3 Bdrms	4 Bdrms	5+ Bdrms	Wt Avg
Single Unit	0.03	0.11	0.21	0.27	0.11
Townhome / Duplex	0.03	0.12	0.15	0.00	0.09
Multi-Family	0.06	0.75	0.00	0.00	0.13

#### *Total Public School Students Per Housing Unit*

	0-2 Bdrms	3 Bdrms	4 Bdrms	5+ Bdrms	Wt Avg
Single Unit	0.11	0.42	0.69	1.01	0.40
Townhome / Duplex	0.15	0.56	1.08	0.52	0.46
Multi-Family	0.15	1.45	0.00	0.00	0.27

Source: TischlerBise estimates for Jefferson County using Census Bureau, Year 2008-2012 5% Public Use Microdata Sample for West Virginia PUMA 0400. (Calibrated to Jefferson County 2013-2014 enrollment and 2010-2012 ACS housing unit estimate plus 2012 and 2013 building permits.)

**PUBLIC SCHOOL STUDENT PROJECTIONS**

Using the above student generation rates and the housing unit projections discussed in the *Land Use Assumptions* document, TischlerBise projected the increase in the number of public school students from new housing units beginning with the 2014-2015 school year to the 2034-2035 school year. As shown below, over 20 years, a total of 2,936 students are projected from growth in the County.

**Figure 8. Projected Public School Students from Growth**

	14-15	15-16	16-17	17-18	18-19	19-20	24-25	29-30	34-35
Elementary	4,491	4,564	4,643	4,723	4,803	4,882	5,253	5,600	5,923
Middle	2,182	2,218	2,257	2,295	2,334	2,373	2,553	2,721	2,878
High	2,537	2,578	2,623	2,668	2,713	2,758	2,968	3,164	3,346
<b>Total Students</b>	<b>9,210</b>	<b>9,360</b>	<b>9,523</b>	<b>9,687</b>	<b>9,850</b>	<b>10,013</b>	<b>10,773</b>	<b>11,485</b>	<b>12,147</b>
<i>Annual Increase</i>	149	149	163	163	163	163	149	141	130

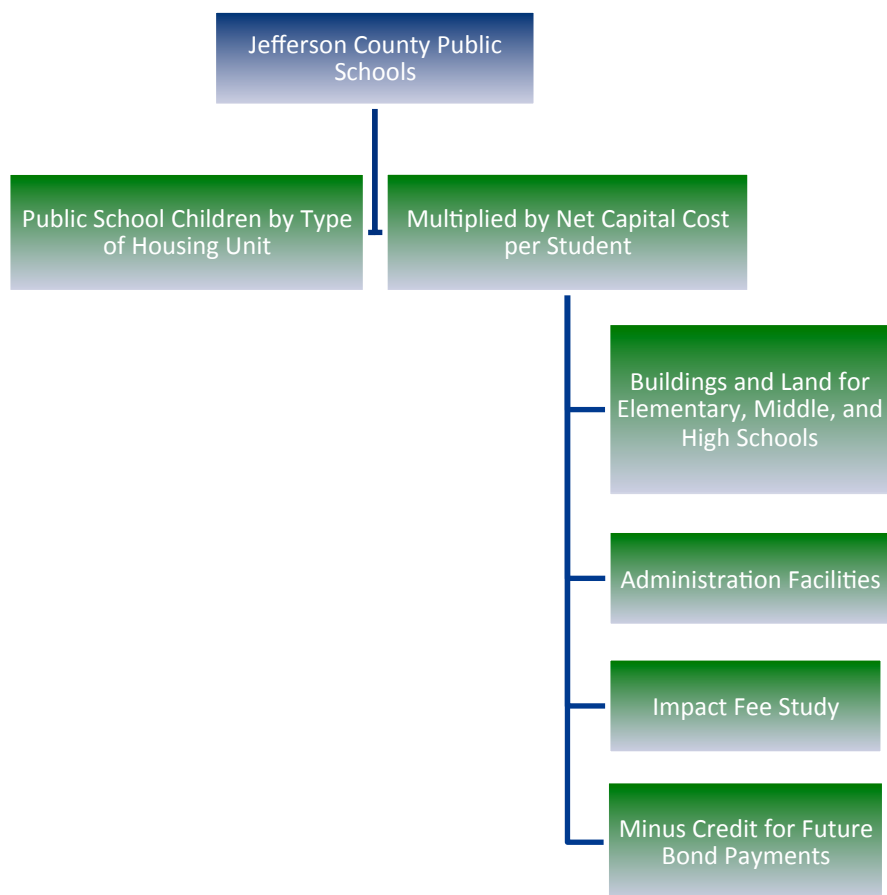
**20 Yr-  
Increase 2,936**

## CAPITAL COSTS PER STUDENT

This section of the report details the current LOS and cost factors which are used in the impact fee calculations.

A diagram of how the school impact fee is calculated is shown in Figure 9. The impact fee includes costs for buildings and land for elementary, middle, and high schools. Since enrollment is currently less than capacity at all three school levels, the levels of service standards are derived using total school-level capacity rather than actual enrollment. School capacity is based on an average classroom size of 25 students. In addition, costs for administrative facilities, and the impact fee study are included. To avoid a potential double payment for school facilities, a credit for future bond payments on existing debt is subtracted from the capital cost per student and is reflected in the impact fees.

**Figure 9. Schools Impact Fee Methodology**





## ELEMENTARY SCHOOLS

The current inventory of elementary schools and their building square feet and total acreage in Jefferson County is shown in the figure below. Levels of service are calculated by dividing the amount of infrastructure by total enrollment and capacity. Since current capacity exceeds elementary enrollment, capacity is used to determine current levels of service on which the fees are based. The elementary schools encompass 504,400 square feet and have a total capacity of 4,697 students which yields a building LOS of 107.4 square feet per student (504,400/ 4,697 students = 107.4 square feet per student.) These schools occupy 177.4 acres which results in an LOS of 0.038 acres per student (177.4 acres/ 4,697 students = 0.038 acres per student.)

**Figure 10. Elementary School LOS Standards**

Facility	Building Sq Feet	Total Acreage	2013-2014 Enrollment	Capacity	Utilization
Blue Ridge and Blue Ridge Primary	49,155	40.0	491	768	64%
CW Shipley Elementary	42,674	15.0	376	357	105%
Driswood Elementary	58,836	15.0	517	500	103%
North Jefferson Elementary	44,891	12.0	268	345	78%
Page Jackson Elementary	58,699	12.4	442	504	88%
Ranson Elementary	35,401	4.2	432	357	121%
Shepherdstown Elementary	40,179	7.8	415	399	104%
South Jefferson Elementary	58,094	15.0	498	591	84%
TA Lowery Elementary	65,594	52.0	588	477	123%
Wright Denny Elementary	50,877	4.0	391	399	98%
<b>Total</b>	<b>504,400</b>	<b>177.4</b>	<b>4,418</b>	<b>4,697</b>	<b>94%</b>

Source: Jefferson County Public Schools.

Level of Service (based on Capacity)	
Building Square Feet per Student	107.4
Acres per Student	0.038

The costs for buildings and land for elementary schools are shown in the figure below. These costs will be multiplied by the above LOS standards to determine the elementary school cost component of the impact fee. The cost per square foot of an elementary school is from the School Building Authority of West Virginia. The cost factor for land is from the Jefferson County Impact Fee Committee.

**Figure 11. Elementary School Capital Costs**

Construction Cost per Square Foot <sup>1</sup>	\$256
Land Cost per Acre <sup>2</sup>	\$57,419

1. School Building Authority of West Virginia.

2. Jefferson County Impact Fee Committee.

## MIDDLE SCHOOLS

The current inventory of middle schools in Jefferson County is shown in the figure below. Levels of service are calculated by dividing the amount of infrastructure by enrollment and capacity. Since current capacity exceeds middle school enrollment, capacity is used to determine current levels of service on which the fees are based. The middle schools encompass 274,176 square feet and have a total capacity of 2,252 students which yields a building LOS of 121.7 square feet per student (274,176/ 2,252 students = 121.7 square feet per student.) These schools occupy 61.7 acres which results in an LOS of 0.027 acres per student (61.7 acres/ 2,252 students = 0.027 acres per student.)

**Figure 12. Middle School LOS Standards**

Facility	Building Sq Feet	Total Acreage	2013-2014 Enrollment	Capacity	Utilization
Charles Town Middle	82,831	13.5	690	712	97%
Harpers Ferry Middle	48,970	10.3	401	520	77%
Shepherdstown Middle	53,375	8.0	411	420	98%
Wildwood Middle	89,000	29.9	645	600	108%
<b>Total</b>	<b>274,176</b>	<b>61.7</b>	<b>2,147</b>	<b>2,252</b>	<b>95%</b>

Source: Jefferson County Public Schools.

Level of Service (based on Current Enrollment)	
Building Square Feet per Student	121.7
Acres per Student	0.027

The costs for buildings and land for middle schools are shown in the figure below. These costs will be multiplied by the above LOS standards to determine the middle school cost component of the impact fee. The cost per square foot of middle schools is from the School Building Authority of West Virginia. The cost factor for land is from the Jefferson County Impact Fee Committee.

**Figure 13. Middle School Capital Costs**

Construction Cost per Square Foot <sup>1</sup>	\$252
Land Cost per Acre <sup>2</sup>	\$68,966

1. School Building Authority of West Virginia.

2. Jefferson County Impact Fee Committee.

## HIGH SCHOOLS

The current inventory of high schools in Jefferson County is shown in the figure below. Levels of service are calculated by dividing the amount of infrastructure by total enrollment and capacity. Since current capacity exceeds high school enrollment, capacity is used to determine current levels of service on which the fees are based. The high schools encompass 397,124 square feet and have a total capacity of 2,716 students which yields a building LOS of 146.2 square feet per student (397,124/ 2,716 students = 146.2 square feet per student.) These schools occupy 122.6 acres which results in an LOS of 0.045 acres per student (122.6 acres/ 2,716 students = 0.045 acres per student.)

**Figure 14. High School LOS Standards**

Facility	Building Sq Feet	Total Acreage	2013-2014 Enrollment	Capacity	Utilization
Jefferson High School	188,124	64.6	1,362	1,406	97%
Washington High School	209,000	58.0	1,134	1,310	87%
<b>Total</b>	<b>397,124</b>	<b>122.6</b>	<b>2,496</b>	<b>2,716</b>	<b>92%</b>

Source: Jefferson County Public Schools.

Level of Service (based on Current Enrollment)	
Building Square Feet per Student	146.2
Acres per Student	0.045

The costs for buildings and land for high schools are shown in the figure below. These costs will be multiplied by the above LOS standards to determine the high school cost component of the impact fee. The cost per square foot of high schools is from the School Building Authority of West Virginia. The cost factor for land is from the Jefferson County Impact Fee Committee.

**Figure 15. High School Capital Costs**

Construction Cost per Square Foot <sup>1</sup>	\$250
Land Cost per Acre <sup>2</sup>	\$26,821

1. School Building Authority of West Virginia.
2. Jefferson County Impact Fee Committee.

## LOCAL SHARE OF SCHOOL BUILDING CONSTRUCTION

The cost factors per square foot to construct school buildings are displayed above (\$256 for elementary schools, \$252 for middle schools, and \$250 for high schools.) These cost factors reflect the total cost of building construction, which must be reduced to the local share for the purpose of deriving school impact fees.

Figure 16 displays local funding compared to School Building Authority in Jefferson County. The column to the far right shows the percent of each project that is funded locally. Based on historical funding trends, it is estimated that Jefferson County will be responsible for 61% of school building costs, and 39% will be provided by the School Building Authority.

**Figure 16. Local Funding of School Buildings**

Year	Project	SBA Funding	Local Funding	Total	% Local
2006	Jefferson High School Renovations	\$9,500,000	\$3,202,334	\$12,702,334	25%
2006	Washington High School	\$9,500,000	\$34,756,689	\$44,256,689	79%
2008	Driswood Elementary	\$6,431,900	\$4,772,823	\$11,204,723	43%
2009	Blue Ridge Primary	\$7,571,500	\$1,510,155	\$9,081,655	17%
2012	North Jefferson Parking Lot	\$0	\$492,352	\$492,352	100%
2011	Shepherdstown Sidewalk	\$0	\$221,832	\$221,832	100%
2011	Ranson Elementary Parking Lot Land	\$0	\$40,000	\$40,000	100%
2013	Harpers Ferry Middle School	\$4,871,862	\$8,440,483	\$13,312,345	63%
2014	New Bus Buildings	\$0	\$3,400,176	\$3,400,176	100%
2013	Washington High School Wall	\$0	\$54,645	\$54,645	100%
2012	Jefferson High School Track	\$0	\$377,699	\$377,699	100%
2011	Harpers Ferry Middle School	\$0	\$933,369	\$933,369	100%
2007	Blue Ridge HVAC	\$0	\$1,273,324	\$1,273,324	100%
2009	Ranson HVAC	\$0	\$549,454	\$549,454	100%
2010	Shepherdstown HVAC	\$0	\$250,000	\$250,000	100%
2009	South Jefferson Addition (MIP)	\$1,000,000	\$912,835	\$1,912,835	48%
<b>Total</b>		<b>\$38,875,262</b>	<b>\$61,188,170</b>	<b>\$100,063,432</b>	<b>61%</b>

## ADMINISTRATION FACILITIES

Figure 17 lists the inventory of existing facilities for administration, maintenance, and transportation. Jefferson County has 17,870 square feet of office facilities and a total capacity of 9,665 students which yields a building LOS of 1.8 square feet per student ( $17,870 / 9,665 = 1.8$  per student.)

**Figure 17. Administration, Maintenance, Transportation Office LOS Standards**

<i>Facility</i>	<i>Building Sq Ft</i>	<i>Capacity</i>
Board of Education Building	16,620	
Maintenance/ Transportation Depts - Office	1,250	
<b>Total</b>	<b>17,870</b>	<b>9,665</b>

<b>Level of Service</b>	
Building Sq Ft per Student	1.8

Figure 18 lists the inventory of existing shop facilities for administration, maintenance and transportation. Jefferson County has 10,300 square feet of shop facilities and a total enrollment of 9,665 students which yields a building LOS of 1.1 square feet per student (10,300 square feet/ 9,665 students = 1.1 per student.)

**Figure 18. Administration, Maintenance, Transportation Office LOS Standards**

<i>Facility</i>	<i>Building Sq Ft</i>	<i>Capacity</i>
Maintenance/ Transportation Depts - Shop	10,300	9,665

<b>Level of Service</b>	
Building Sq Ft per Student	1.1

The costs for these facilities are shown in Figure 19. These costs will be multiplied by the above LOS standards to determine the administration, maintenance, and transportation facilities component of the impact fee. The cost per square foot for office space is \$226 per square foot while the cost per square foot for shop space is \$217 per square foot. Jefferson County, in consultation with Williamson Shriver, Inc. provided these cost factors.

**Figure 19. Administration, Maintenance, Transportation Facility Capital Costs**

Office Construction Cost per Square Foot <sup>1</sup>	\$226
Shop Construction Cost per Square Foot <sup>1</sup>	\$217

1. Costs from 2011 study determined by Jefferson County Schools staff in consultation with Williamson Shriver, Inc.

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**IMPACT FEE CONSULTANT STUDY COST**

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The cost of preparing the School Impact Fee is also included in the fee calculations. This cost (\$19,500) is allocated to the projected increase in students over the next five years (803). On average, the County updates its impact fee methodologies and components every five years. This results in a consultant cost per demand unit of \$24.29 per student ( $\$19,500 / 803 \text{ students} = \$24.29 \text{ per student.}$ )

## GENERAL CREDITS

A general requirement that is common to impact fee methodologies is the evaluation of credits. A revenue credit may be necessary to avoid potential double payment situations arising from the payment of a one-time impact fee plus the payment of other revenues that may also fund growth-related capital improvements. The determination of credits is dependent upon the impact fee methodology used in the cost analysis.

The approach used to calculate the school impact fees for Jefferson County is the incremental expansion cost method. This method documents current LOS standards and it is best suited for public facilities that will be expanded incrementally in the future. Because Jefferson County will continue to provide additional schools that are similar to those already in use, the incremental expansion cost method is appropriate for public schools. Because new development is required to provide front-end funding of school capacity, there is a potential for double payment of capital costs due to future principal payments on existing General Obligation bonds and Certificates of Participation for schools. A credit is not necessary for interest payments because interest costs were not included in the impact fees. This credit calculation is shown in Figure 20. To determine the credit, annual principal payments are divided by the projected number of full-time equivalent students in Jefferson County to yield an annual principal payment per student. A net present value adjustment was used to account for the time value of money, resulting in a principal payment credit of \$929 per student.

**Figure 20. Principal Payment Credit Per Student**

Fiscal Year	Principal Payments	Projected Students	Credit per Student
2014	\$1,300,000	9,210	\$141
2015	\$1,365,000	9,360	\$146
2016	\$1,425,000	9,523	\$150
2017	\$1,495,000	9,687	\$154
2018	\$1,565,000	9,850	\$159
2019	\$1,640,000	10,013	\$164
2020	\$1,720,000	10,177	\$169
<b>Total</b>	<b>\$10,510,000</b>		<b>\$1,083</b>

Discount Rate	3.85%
<b>Net Present Value</b>	<b>\$929</b>

## IMPACT FEES

The figure below displays the variables used to calculate the Schools Impact Fee. The totals at the bottom of the table are the totals of all the cost factors determined above for each type of school.

**Figure 21. School Impact Fee Variables**

	Elementary	Middle	High
<b>Schools</b>			
Sq Ft per Student	107.4	121.7	146.2
Capital Cost per Square Foot	\$256	\$252	\$250
Local Share of Building Construction Cost	61%	61%	61%
<b>Cost per Student</b>	<b>\$16,769.66</b>	<b>\$18,715.07</b>	<b>\$22,298.02</b>
<b>Acres</b>			
Acreage per Student	0.038	0.027	0.045
Capital Cost per Acre	\$57,419	\$68,966	\$26,821
<b>Cost per Student</b>	<b>\$2,168.40</b>	<b>\$1,889.83</b>	<b>\$1,210.20</b>
<b>Admin Office</b>			
Sq Ft per Student	1.8	1.8	1.8
Capital Cost per Sq Ft	\$226	\$226	\$226
<b>Cost per Student</b>	<b>\$417.86</b>	<b>\$417.86</b>	<b>\$417.86</b>
<b>Admin Shop</b>			
Sq Ft per Student	1.1	1.1	1.1
Capital Cost per Sq Ft	\$217	\$217	\$217
<b>Cost per Student</b>	<b>\$231.26</b>	<b>\$231.26</b>	<b>\$231.26</b>
<b>Consultant Fee Cost per Student</b>	<b>\$24.29</b>	<b>\$24.29</b>	<b>\$24.29</b>
<b>Principal Payment Credit Per Student</b>	<b>(\$929)</b>	<b>(\$929)</b>	<b>(\$929)</b>
<b>Total Capital Cost per Student</b>	<b>\$18,682</b>	<b>\$20,349</b>	<b>\$23,252</b>



The number of students per housing unit for each grade level—rounded to two decimal places—is multiplied by the corresponding capital cost per student for that grade level and the subtotal is rounded to the nearest dollar. This is repeated for all grade levels. The three cost factors are then added together, resulting in the School Impact Fee. This calculation is performed for each type of housing unit.

**Figure 22. Proposed School Impact Fees**

<b>Single Unit</b>			
<b>School</b>	<b>Students per Housing Unit</b>	<b>Capital Cost per Student</b>	<b>Subtotal</b>
Elementary	0.19	\$18,682	\$3,550
Middle	0.10	\$20,349	\$2,035
High	0.11	\$23,252	\$2,558

<b>Single Unit Fee</b>	<b>\$8,143</b>
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<b>Townhome / Duplex</b>			
<b>School</b>	<b>Students per Housing Unit</b>	<b>Capital Cost per Student</b>	<b>Subtotal</b>
Elementary	0.27	\$18,682	\$5,044
Middle	0.10	\$20,349	\$2,035
High	0.09	\$23,252	\$2,093

<b>Townhome / Duplex Fee</b>	<b>\$9,172</b>
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<b>Multi-Family (Apartments and Condos)</b>			
<b>School</b>	<b>Students per Housing Unit</b>	<b>Capital Cost per Student</b>	<b>Subtotal</b>
Elementary	0.11	\$18,682	\$2,055
Middle	0.03	\$20,349	\$610
High	0.13	\$23,252	\$3,023

<b>Multi-Family Fee</b>	<b>\$5,688</b>
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