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# Sumter County and The Villages FIRE IMPACT FEE UPDATE STUDY

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**DRAFT REPORT**

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## I. Introduction

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Sumter County implemented its fire impact fee program four years ago, based on a technical study prepared in 2005. The County's fire impact fee program consists of separate fire impact fee schedules for the two fire districts within Sumter County. Fire services within the County, excluding The Villages Community Center Development District (VCCDD), are provided by Sumter County Fire Rescue (SCFR). Fire services within The VCCDD are provided by The Villages Public Safety Department (VPSD).

Sumter County has been experiencing steady growth between 2006 and 2009, with a countywide population increase of 15 percent since the last impact fee study was completed, with a significant portion of that growth occurring in The Villages. According to population projections developed by Sumter County, The Villages is projected to be built-out by 2020, while the portion of Sumter County excluding The Villages is projected to increase by approximately 45 percent during this same period. In accordance with the Fire Impact Fee Ordinance and to address the infrastructure costs associated with new growth, the County retained Tindale-Oliver & Associates (TOA) to update the fire impact fee schedules for both Sumter County and The Villages. This report contains the data analysis and assumptions used to update the fee schedules for both fire impact fee programs.

The principal purpose of an impact fee is to maintain the current level of service standard established by the County, as well as to assist in funding the implementation of projects that have been or will be identified in the Five-Year Capital Improvements Program (CIP) or other master planning documents for the respective fire programs.

The impact fees recommended in this technical study must pass a dual rational-nexus test by demonstrating that the need for capital facilities created by new development is proportionate to the amount of the fee charged, and the expenditure of impact fee funds creates a reasonable benefit to the new development paying the fees.

The purpose of this study is to create a legally defensible and technically supportable set of impact fees for these two fire impact fee programs. It is important to note that, whenever possible, the most current and local data available was utilized, pursuant to State legislature.



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This report identifies the methodology upon which the impact fees will be based, including the service area, level of service, demand, cost, and credit components. The remainder of this report is organized in the following sections:

<i>Section</i>	<i>Title</i>
II	Service Area Population and Demand
III	Sumter County Fire Impact Fee Calculations
IV	The Villages Fire Impact Fee Calculations
V	Indexing
VI.	Standard Operating Procedures

Appendix A – Population Estimates & Functional Population - Supplemental Information

Appendix B – Land Replacement Values – Supplemental Information

In addition, Sections III and IV are organized in the following manner:

- Inventory
- Population
- Level of Service
- Cost Component
- Credit Component
- Net Impact Fee Cost
- Calculated Impact Fee Schedule
- Impact Fee Schedule Comparison

Section V, Indexing, outlines the indexing methodology, as well as the application of indexing to each of the proposed impact fee schedules. Section VI, Standard Operating Procedures, outlines a process for conducting alternative impact fee studies, as well as a process for requesting County consideration for Fire Impact Fee developer credits.



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## II. Service Area Population and Demand

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### Service Area and Population

As previously mentioned, Sumter County Fire Rescue (SCFR) provides fire rescue services to all areas of Sumter County, including the municipalities, with the exception of The Villages Community Center Development Districts (VCCDD). Within The VCCDD, fire protection services are provided by The Villages Public Safety Department (VPSD). VPSD also provides fire services to the area within Sumter County outside of the VCCDD known as Oxville as part of a contract agreement with Sumter County. The VCCDD is located at the intersection of Sumter, Marion, and Lake Counties and, in its entirety, the VCCDD encompasses portions of all three counties.

For purpose of this impact fee study:

- **References to The Villages refers to only the population of The VCCDD service area that is located within Sumter County, as well as the infrastructure (i.e., stations and equipment) serving The Villages within Sumter County. The area within VPSD's service area is referred to as the VPSD District.**
- **References to Sumter County, unless otherwise noted, refer to Sumter County, including the municipalities, but excluding the portion of the county that is within the VPSD District. The area within SCFR's service area is referred to as the SCFR District.**

Both Sumter County and The Villages fire impact fee programs require the use of population data in calculating current levels of service and performance standards. Therefore, to accurately determine the demand for fire protection services, this report considers not only the resident or permanent population within the SCFR District and VPSD District, but also the number of seasonal residents and visitors as well. Therefore, for purposes of this technical analysis, the weighted seasonal population will be used in all population estimates and projections. Appendix A, Tables A-1 thru A-3 provide the detailed calculations of the population analysis pertaining to both Sumter County and The Villages.



Table II-1 presents the population trends for the two fire service areas from 2000 thru 2020, based on population estimates provided by Sumter County for fire planning purposes.

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**Table II-1**  
**Weighted Seasonal Population Estimates & Projections**

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Year	Annual Weighted Population	
	Sumter County	The Villages
2000	41,276	8,963
2001	42,879	10,841
2002	44,095	13,113
2003	42,381	15,860
2004	42,833	19,182
2005	46,622	23,201
2006	50,211	28,062
2007	51,246	33,941
2008	47,835	41,042
2009	44,797	46,111
2010	43,229	50,826
2011	43,820	54,375
2012	44,412	57,923
2013	44,630	61,856
2014	45,597	65,019
2015	46,189	68,568
2016	47,281	72,116
2017	51,300	72,655
2018	55,319	73,194
2019	59,338	73,733
2020	63,359	74,269

Source: Appendix A, Table A-3



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It should be noted that the impact fee is based on existing conditions (as of 2009) and therefore the population projections presented in Table II-1 are only used in the impact fee analysis only to calculate the average annual capital expenditure and debt service credits.

### Apportionment of Demand by Residential Unit Type and Size

The residential land uses to be used for both Sumter County and The Villages fire impact fee calculations include the following:

- Single Family Detached
- Multi-Family
- Mobile Home
- Retirement Community/Senior Adult Housing (Sumter County only)

Table II-2 presents the number of residents per housing unit for the residential categories identified above in Sumter County, while Table II-3 presents the number of residents per housing unit for the residential categories identified above in The Villages. The residents per housing unit figures are based on Census 2000 data and it is recognized that The Villages has increased considerably in size since the 2000 Census was completed. However, due to the unique demographics of The Villages (i.e., age-restricted retirement community), it is not appropriate to apply the countywide persons per household to The Villages. Since the residents per housing unit figure calculated for The Villages using the 2000 Census is a ratio, it is still considered valid for use in the impact fee study, despite the increase in population. In addition, because The Villages is already an age-restricted community, a retirement community/senior adult housing land use is not included in The Villages' impact fee schedule, as it is for Sumter County.



**Table II-2**  
**Sumter County Persons per Housing Unit**

Housing Type	Population <sup>(1)</sup>	Housing Units <sup>(2)</sup>	Ratio <sup>(3)</sup>	Residents / Housing Unit <sup>(3)</sup>
Single Family Detached	20,545	9,515		2.16
Multi Family	1,615	790		2.04
Mobile Home	17,965	9,453		1.90
Retirement Community/Senior Adult Housing <sup>(4)</sup>				1.27

- (1) Source: 2000 Census, Table H-33, adjusted for seasonal population based on the ratio of permanent to seasonal population in 2000 from Appendix A, Table A-3 (4.7%)  
 (2) Source: 2000 Census, Table H-30  
 (3) Total population (Item 1) divided by total housing units (Item 2) for each type of land use

**Table II-3**  
**The Villages Persons per Housing Unit**

Housing Type	Population <sup>(1)</sup>	Housing Units <sup>(2)</sup>	Ratio <sup>(3)</sup>	Residents / Housing Unit <sup>(3)</sup>
Single Family Detached	8,826	4,963		1.78
Multi Family	79	54		1.46
Mobile Home	17	42		0.40

- (1) Source: 2000 Census, Table H-33, adjusted for seasonal population based on the ratio of permanent to seasonal population in 2000 from Appendix A, Table A-3 (7.1%)  
 (2) Source: 2000 Census, Table H-30  
 (3) Total population (Item 1) divided by total housing units (Item 2) for each type of land use

### Functional Population

The traditional method for estimating the current and future demand for certain facilities is to use the permanent population as the basis. Yet, communities with high volumes of nonresidents may need to provide more infrastructure to effectively meet facility service delivery. Moreover, it is not enough to simply add resident population to the number of employees, since the service-demand characteristics of employees can vary considerably by type of industry.

For many facilities, there is a logical method to rationally attribute demand by land use and to estimate aggregate demand for a community. This method is called functional population. Functional population is the equivalent number of people occupying space



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within a community on a 24-hours-per-day, 7-days-per-week basis. A person living and working in the community will have a functional population coefficient of 1.0. A person living in the community but working elsewhere may spend only 16 hours per day in the community on weekdays and 24 hours per day on weekends for a functional population coefficient of 0.76 (128-hour presence divided by 168 hours in one week). A person commuting into the community to work five days per week would have a functional population coefficient of 0.30 (50-hour presence divided by 168 hours in one week). Similarly, a person traveling into the community to shop at stores, perhaps averaging 8 hours per week, would have a functional population coefficient of 0.05.

Functional population thus tries to capture the presence of all people within the community, whether residents, workers, or visitors, to arrive at a total estimate of effective population needing to be served.

### Residential Functional Population

Developing the residential component of functional resident population is simpler than developing the nonresidential component. It is generally estimated that people spend one-half to three-fourths of their time at home and the rest of each 24-hour day away from their place of residence. In developing the residential component of Sumter County and The Villages' functional population, an analysis of population and employment characteristics within each geographic area was conducted. Based on this analysis, it was estimated that people in Sumter County, spend, on average, 15.6 hours, or 65 percent, of each 24-hour day at their place of residence and the other 35 percent away from home. Further, it was estimated that people in The Villages, spend, on average, 18.1 hours, or 75 percent, of each 24-hour day at their place of residence and the other 25 percent away from home. This analysis is presented in Appendix A, Tables A-4 and A-5, for Sumter County, and Table A-6 and A-7 for The Villages, with the resulting residential functional population coefficients displayed in Table II-4.



**Table II-4  
General Functional Population Coefficients**

Population/ Employment Category	ITE	LUC	Employee Hours In-Place <sup>(1)</sup>	Trips per Employee <sup>(2)</sup>	One-Way Trips per Employee <sup>(3)</sup>	Journey-to-Work Occupants per Trip <sup>(4)</sup>	Daily Occupants per Trip <sup>(5)</sup>	Visitors per Employee <sup>(6)</sup>	Visitor Hours per Trip <sup>(1)</sup>	Days per Week <sup>(7)</sup>	Functional Population Coefficient <sup>(8)</sup>
<b>Residential:</b>											
Residential Coefficient - Sumter County											0.650
Residential Coefficient - The Villages											0.754
<b>NonResidential:</b>											
Industrial			9.00	2.80	1.40	1.32	1.38	0.08	1.00	6.00	0.324
<i>Natural Resources</i>	<i>N/A</i>		<i>9.00</i>	<i>3.02</i>	<i>1.51</i>	<i>1.32</i>	<i>1.38</i>	<i>0.09</i>	<i>1.00</i>	<i>7.00</i>	<i>0.379</i>
<i>Construction</i>	<i>110</i>		<i>9.00</i>	<i>3.02</i>	<i>1.51</i>	<i>1.32</i>	<i>1.38</i>	<i>0.09</i>	<i>1.00</i>	<i>7.00</i>	<i>0.379</i>
<i>Manufacturing</i>	<i>140</i>		<i>9.00</i>	<i>2.13</i>	<i>1.07</i>	<i>1.32</i>	<i>1.38</i>	<i>0.06</i>	<i>1.00</i>	<i>5.00</i>	<i>0.270</i>
<i>Transportation, Communication, Utilities</i>	<i>110</i>		<i>9.00</i>	<i>3.02</i>	<i>1.51</i>	<i>1.32</i>	<i>1.38</i>	<i>0.09</i>	<i>1.00</i>	<i>5.00</i>	<i>0.271</i>
Commercial			9.00	27.67	13.84	1.27	1.61	4.71	1.17	5.67	0.490
<i>Wholesale Trade</i>	<i>150</i>		<i>9.00</i>	<i>3.89</i>	<i>1.95</i>	<i>1.32</i>	<i>1.38</i>	<i>0.12</i>	<i>1.00</i>	<i>5.00</i>	<i>0.271</i>
<i>Retail Trade</i>	<i>820</i>		<i>9.00</i>	<i>75.79</i>	<i>37.89</i>	<i>1.24</i>	<i>1.73</i>	<i>18.57</i>	<i>1.50</i>	<i>7.00</i>	<i>1.536</i>
<i>Finance, Insurance, Real Estate</i>	<i>710</i>		<i>9.00</i>	<i>3.32</i>	<i>1.66</i>	<i>1.24</i>	<i>1.73</i>	<i>0.81</i>	<i>1.00</i>	<i>5.00</i>	<i>0.292</i>
Services			9.00	19.65	9.83	1.24	1.73	4.82	1.00	6.50	0.535
<i>Services<sup>(9)</sup></i>	<i>N/A</i>		<i>9.00</i>	<i>27.35</i>	<i>13.68</i>	<i>1.24</i>	<i>1.73</i>	<i>6.70</i>	<i>1.00</i>	<i>6.00</i>	<i>0.561</i>
<i>Government<sup>(10)</sup></i>	<i>730</i>		<i>9.00</i>	<i>11.95</i>	<i>5.98</i>	<i>1.24</i>	<i>1.73</i>	<i>2.93</i>	<i>1.00</i>	<i>7.00</i>	<i>0.497</i>

Note: Calculations for the broader nonresidential categories of Industrial, Commercial, and Services are calculated using an average of the data for a subset of nonresidential categories (shaded grey and italicized).

(1) Assumed

(2) Trips per employee based on Institute of Transportation Engineers (ITE) Trip Generation Eighth Edition as follows:

ITE Code 110 at 3.02 weekday trips per employee (Natural Resources assumed to be the same)

ITE Code 140 at 2.13 weekday trips per employee

ITE Code 150 at 3.89 weekday trips per employee

ITE Code 710 at 3.32 weekday trips per employee

ITE Code 730 at 11.95 weekday trips per employee

ITE Code 820 based on blended average of trips by retail center size calculated below



## Table II-4 (Continued) General Functional Population Coefficients

(2) Continued Trips per retail employee from the following table:

<i>Retail Scale</i>	<i>Assumed Center Size</i>	<i>Trip Rate</i>	<i>Share</i>	<i>Weighted Trips</i>
Neighborhood <50k sq.ft.	25	110.32	50.0%	55.16
Community 50k - 250k sq.ft.	150	58.93	40.0%	23.57
Regional 250k - 500k sq.ft.	375	42.76	10.0%	4.28
Super Reg. 500k-1000k sq.ft.	750	33.55	0.0%	0.00
Sum of Weighted Trips/1k sq.ft.				83.01
Square Feet per Retail Employee <sup>(11)</sup>				913
Employees per 1,000 square feet				1.095
Trips per employee				75.79

(3) Trip per employee (Item 2) multiplied by 0.5.

(4) Journey-to-Work Occupants per Trip from 2001 Nationwide Household Travel Survey (FHWA 2001) as follows:  
 1.32 occupants per Construction, Manufacturing, TCU, and Wholesale trip  
 1.24 occupants per Retail Trade, FIRE, and Services trip

(5) Daily Occupants per Trip from 2001 Nationwide Household Travel Survey (FHWA 2001) as follows:  
 1.38 occupants per Construction, Manufacturing, TCU, and Wholesale trip  
 1.73 occupants per Retail Trade, FIRE, and Services trip

(6) [Daily occupants per trip (Item 5) multiplied by one-way trips per employee (Item 3)] - [(Journey-to-Work occupants per trip (Item 4) multiplied by one-way trips per employee (Item 3)]

(7) Typical number of days per week that indicated industries provide services and relevant government services are available.

(8) The equation to determine the Functional Population Coefficient per Employee for all land-use categories except residential includes the following:  

$$\frac{((\text{Days per Week} \times \text{Employee Hours in Place}) + (\text{Visitors per Employee} \times \text{Visitor Hours per Trip} \times \text{Days per Week}))}{(24 \text{ Hours per Day} \times 7 \text{ Days per Week})}$$

(9) Trips per employee for the services category is the average trips per employee for the following service related land use categories: quality restaurant, high-turnover restaurant, supermarket, hotel, motel, elementary school, middle school, high school, hospital, medical office, and church. Source for the trips per employee figure from ITE, 7th ed., when available, or else derived from the square feet per employee for the appropriate land use category from the Energy Information Administration (2002) from Table B-1 of the Commercial Energy Building Survey (1999).

(10) Includes Federal Civilian Government, Federal Military Government, and State and Local Government categories.

(11) Square feet per retail employee from the Energy Information Administration from Table B-1 of the Commercial Energy Building Survey, 1999



## Nonresidential Functional Population

Given the varying characteristics of nonresidential land uses, developing estimates of functional residents for nonresidential land uses is more complicated than developing estimates of functional residents for residential land uses. Nelson and Nicholas originally introduced a method for estimating functional resident population, now used internationally.<sup>1</sup> This method uses trip generation data from the Institute of Transportation Engineers' (ITE) Trip Generation Manual and TOA's Trip Characteristics Database, information on passengers per vehicle, workers per vehicle, length of time spent at the land use, and other variables. Specific calculations include:

- Total one-way trips per employee (ITE trips multiplied by 50 percent to avoid double counting entering and exiting trips as two trips).
- Visitors per impact unit based on occupants per vehicle (trips multiplied by occupants per vehicle less employees).
- Worker hours per week per impact unit (such as nine worker hours per day multiplied by five days in a work week).
- Visitor hours per week per impact unit (visitors multiplied by number of hours per day times relevant days in week such as five for offices and seven for retail shopping).

Functional population coefficients per employee are developed by estimating time spent by employees and visitors at each land use. Table II-4 also presents the functional population coefficients for nonresidential uses/categories in both the Sumter County and The Villages fire impact fee calculations. The functional population coefficients in this table were used to estimate 2009 functional population figures for both Sumter County and The Villages, which is presented in Tables II-5 and II-6, respectively.

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<sup>1</sup> Arthur C. Nelson and James C. Nicholas, "Estimating Functional Population for Facility Planning," *Journal of Urban Planning and Development* 118(2): 45-58 (1992).



**Table II-5**  
**Sumter County Functional Population – Year 2009**

Population Category	2009 Baseline Population <sup>(1)</sup>	Functional Resident Coefficient <sup>(2)</sup>	2009 Functional Population <sup>(3)</sup>
Total Weighted Population	44,797	0.650	29,118
Employment by Category			
Industrial	4,866	0.324	1,577
Commercial	5,179	0.490	2,538
Services	10,392	0.535	5,560
Total Employment by Category <sup>(4)</sup>			9,675
<b>2009 Total Functional Population<sup>(5)</sup></b>			<b>38,793</b>
Ratio of Functional Population to Residential Population			86.6%

- (1) Sources: Table II-1 for the 2009 population figure. The 2009 employment figure by employment category is from the socioeconomic employment data developed for the Lake-Sumter Metropolitan Planning Organization 2035 Long Range Transportation Plan (LRTP). The 2035 LRTP socioeconomic employment data were developed for years 2005 and 2035; therefore, to determine the 2009 employment figures, the 2005 and 2035 data for each Traffic Analysis Zone (TAZ) within the SCFR District were interpolated.
- (2) Source: Table II-4
- (3) 2009 functional population is calculated by multiplying the 2009 baseline data (Item 1) by the respective functional resident coefficient (Item 2)
- (4) Sum of the functional population for the three employment categories (e.g., industrial, commercial, services)
- (5) The total functional population is the sum of the 2009 functional population (29,118) and total employment (9,675)



**Table II-6**  
**The Villages Functional Population – Year 2009**

Population Category	2009 Baseline Population <sup>(1)</sup>	Functional Resident Coefficient <sup>(2)</sup>	2009 Functional Population <sup>(3)</sup>
Total Weighted Population	46,111	0.754	34,768
Employment by Category			
Industrial	711	0.324	230
Commercial	1,415	0.490	693
Services	2,573	0.535	1,377
Total Employment by Category <sup>(4)</sup>			2,300
<b>2009 Total Functional Population<sup>(5)</sup></b>			<b>37,068</b>
Ratio of Functional Population to Residential Population			80.4%

(1) Sources: Table II-1 for the 2009 population figure. The 2009 employment figure by employment category is from the socioeconomic employment data developed for the Lake-Sumter MPO 2035 LRTP. The 2035 LRTP socioeconomic employment data were developed for years 2005 and 2035; therefore, to determine the 2009 employment figures, the 2005 and 2035 data for each Traffic Analysis Zone (TAZ) within the VPSD District were interpolated.

(2) Source: Table II-4

(3) 2009 functional population is calculated by multiplying the 2009 baseline data (Item 1) by the respective functional resident coefficient (Item 2)

(4) Sum of the functional population for the three employment categories (e.g., industrial, commercial, services)

(5) The total functional population is the sum of the 2009 functional population (34,768) and total employment (2,300)

Appendix A, Table A-8 presents the annual functional population figures from 2000 through 2020 for both Sumter County and The Villages, based on the 2009 functional population figures from Tables II-5 and II-6, respectively, and the annual population growth rates from the population figures previously presented in Table II-1.

### Functional Residents by Specific Land Use Category

When a wide range of land uses impact services, an estimate of that impact is needed for each land use. This section presents functional population estimates by residential and non-residential land uses. These coefficients by land use create the demand component for the fire impact fee program and will be used in the calculation of the cost per unit for each land use category in the fire impact fee schedule.



## **Residential and Transient Land Uses**

As previously discussed, the average number of residents per housing unit in Sumter County and The Villages was calculated for the single family, multi family, and mobile home land uses, based on information obtained from the 2000 Census. In addition, the residents per housing unit for the Retirement Community/Senior Adult Housing land use was calculated for Sumter County since The Villages, in its entirety, is already an age restricted development.

Besides the residential land uses, transient land uses such as hotels, motels, nursing homes, and adult living facilities (ALF) are also included in the impact fee schedule. Secondary sources, such the Lake-Sumter Metropolitan Planning Organization's 2035 Long Range Transportation Plan (LRTP) and the U.S. Department of Health, are used to determine the occupancy rate for hotel, motel, and nursing homes land uses.

The functional population coefficients developed for the residential and transient land uses are displayed in Table II-7 for Sumter County and Table II-8 for The Villages.

## **Nonresidential Land Uses**

A similar approach is used to estimate functional residents for nonresidential land uses. Table II-9 presents the functional population coefficients developed for the nonresidential land uses using data such as trips per unit, trips per employee, employees per impact unit, one-way trips per impact unit, worker hours, occupants per vehicle trip, visitors (patrons, etc.) per impact unit, visitor hours per trip, and days per week for nonresidential land uses. The nonresidential coefficients calculated for the land uses in Table II-9 do not vary by fire service area and are therefore applied to both the Sumter County and The Villages impact fee calculations.



**Table II-7  
Sumter County  
Functional Resident Coefficients for Residential and Transient Land Uses**

Residential Land Use	Impact Unit	ITE LUC <sup>(1)</sup>	Residents Per Unit <sup>(2)</sup>	Occupancy Rate <sup>(3)</sup>	Adjusted Residents Per Unit <sup>(4)</sup>	Hours at Place <sup>(5)</sup>	Workers Per Unit <sup>(6)</sup>	Work Day Hours <sup>(7)</sup>	Days Per Week <sup>(8)</sup>	Work Week Residents Per Unit <sup>(9)</sup>
<b>Residential</b>										
Single Family Detached	du	210	2.16							1.40
Multi Family	du	220	2.04							1.33
Mobile Home	du	240	1.90							1.24
Retirement Community/Age-Restricted Single Family	du	251	1.27							0.83
<b>Transient/Assisted, Group</b>										
Hotel	room	310	1.75	80%	1.40	12	0.57	9	7	0.91
Motel	room	311	1.75	80%	1.40	12	0.44	9	7	0.87
Nursing Home	bed	620	1.00	84%	0.84	16	0.36	9	7	0.70
Assisted Living Facility (ALF)	du	253	1.27	84%	1.07	16	0.30	9	7	0.82
<p>(1) Land use code from the Institute of Transportation Engineers, 8th Edition</p> <p>(2) Estimates for the single family, multi-family, and mobile home park land use from Table II-2; estimates for the hotel/motel land use assume that there is one person per room for all business-related trips (estimated at 25% of total hotel/motel occupancies) and 2 people per room for leisure trips (estimated at 75% of total hotel/motel occupancies). One person per bed is assumed for nursing homes.</p> <p>(3) Occupancy rate for hotel and motel land uses consistent with the occupancy rate used to develop the hotel/motel population for Sumter County for the Lake-Sumter MPO 2035 LRTP. Occupancy rate for the Nursing Home land use from the National Department of Health's National Study of Assisted Living for the Frail Elderly, Exhibit 5.</p> <p>(4) Residents per unit (Item 2) multiplied by the occupancy rate (Item 3)</p> <p>(5), (7), (8) Estimated</p> <p>(6) Adapted from ITE Trip Generation, Eighth Edition.</p> <p>(9) For residential this is Residents Per Unit times 0.650. For Transient, Assisted, and Group it is:  <math display="block">\frac{[(\text{Adjusted Residents per Unit} \times \text{Hours at Place} \times \text{Days per Week}) + (\text{Workers Per Unit} \times \text{Work Hours Per Day} \times \text{Days per Week})]}{(24 \text{ Hours per Day} \times 7 \text{ Days per Week})}</math> </p>										



**Table II-8  
The Villages  
Functional Resident Coefficients for Residential and Transient Land Uses**

Residential Land Use	Impact Unit	ITE LUC <sup>(1)</sup>	Residents Per Unit <sup>(2)</sup>	Occupancy Rate <sup>(3)</sup>	Adjusted Residents Per Unit <sup>(4)</sup>	Hours at Place <sup>(5)</sup>	Workers Per Unit <sup>(6)</sup>	Work Day Hours <sup>(7)</sup>	Days Per Week <sup>(8)</sup>	Work Week Residents Per Unit <sup>(9)</sup>
<b>Residential</b>										
Single Family Detached	du	210	1.78							1.34
Multi Family	du	220	1.46							1.10
Mobile Home	du	240	0.40							0.30
<b>Transient/Assisted, Group</b>										
Hotel	room	310	1.75	80%	1.40	12	0.57	9	7	0.91
Motel	room	311	1.75	80%	1.40	12	0.44	9	7	0.87
Nursing Home	bed	620	1.00	84%	0.84	16	0.36	9	7	0.70
Assisted Living Facility (ALF)	du	253	1.05	84%	0.88	16	0.30	9	7	0.70
<p>(1) Land use code from the Institute of Transportation Engineers, 8th Edition</p> <p>(2) Estimates for the single family, multi-family, and mobile home park land use from Table II-3; estimates for the hotel/motel land use assume that there is one person per room for all business-related trips (estimated at 25% of total hotel/motel occupancies) and 2 people per room for leisure trips (estimated at 75% of total hotel/motel occupancies). One person per bed is assumed for nursing homes.</p> <p>(3) Occupancy rate for hotel and motel land uses consistent with the occupancy rate used to develop the hotel/motel population for Sumter County for the Lake-Sumter MPO 2035 LRTP. Occupancy rate for the Nursing Home land use from the National Department of Health's National Study of Assisted Living for the Frail Elderly, Exhibit 5.</p> <p>(4) Residents per unit (Item 2) multiplied by the occupancy rate (Item 3)</p> <p>(5), (7), (8) Estimated</p> <p>(6) Adapted from ITE Trip Generation, Eighth Edition.</p> <p>(9) For residential this is Residents Per Unit times 0.754. For Transient, Assisted, and Group it is:  <math display="block">\frac{[(\text{Adjusted Residents per Unit} \times \text{Hours at Place} \times \text{Days per Week}) + (\text{Workers Per Unit} \times \text{Work Hours Per Day} \times \text{Days per Week})]}{(24 \text{ Hours per Day} \times 7 \text{ Days per Week})}</math> </p>										



**Table II-9**  
**Functional Resident Coefficients for Nonresidential Land Uses**

Land Use	Impact Unit	ITE LUC <sup>(1)</sup>	Trips Per Unit <sup>(2)</sup>	Trips Per Employee <sup>(3)</sup>	Employees Per Unit <sup>(4)</sup>	One-Way Factor @ 50% <sup>(5)</sup>	Worker Hours <sup>(6)</sup>	Occupants Per Trip <sup>(7)</sup>	Visitors <sup>(8)</sup>	Visitor Hours Per Trip <sup>(9)</sup>	Days Per Week <sup>(10)</sup>	Functional Resident Coefficient <sup>(11)</sup>
<b>Recreational</b>												
General Recreation/County Park	acre	412	2.28	N/A	0.10	1.14	9	2.39	2.62	1.50	7	0.20
RV Park	site	416	2.22	N/A	1.20	1.11	9	2.39	1.45	1.50	7	0.54
Golf Course	hole	430	35.74	20.52	1.74	17.87	9	2.39	40.97	0.25	7	1.08
Bowling Alley/Health/Fitness Club	1,000 sf	437	33.33	N/A	1.74	16.67	9	2.39	38.10	1.50	7	3.03
Movie Theater	screen	444	106.63	53.12	2.01	53.32	9	2.39	125.42	1.00	7	5.98
<b>Institutions</b>												
Elementary School (Private)	Student	520	1.29	15.71	0.08	0.65	9	1.11	0.64	2.00	5	0.06
Middle School (Private)	Student	522	1.62	16.39	0.10	0.81	9	1.11	0.80	2.00	5	0.07
High School (Private)	Student	530	1.71	19.74	0.09	0.86	9	1.11	0.86	2.00	5	0.08
University/Junior College with 7,500 or fewer students (Private)	Student	540/550	2.00	12.34	0.16	1.00	9	1.11	0.95	2.00	5	0.10
University/Junior College with more than 7,500 students (Private)	Student	540/550	1.50	12.34	0.12	0.75	9	1.11	0.71	2.00	5	0.07
Church	1,000 sf	560	9.11	20.64	0.44	4.56	9	1.90	8.22	1.00	7	0.51
Day Care Center	1,000 sf	565	75.07	28.13	2.67	37.54	9	1.11	39.00	0.15	5	0.89
Hospital	1,000 sf	610	16.50	5.20	3.17	8.25	9	1.42	8.55	1.00	7	1.55
Veterinary Clinic	1,000 sf	N/A	32.80	N/A	1.00	16.4	9	1.52	23.93	1.00	6	1.18
<b>Office</b>												
General Office 50,000 SF or less <sup>(12)</sup>	1,000 sf	710	15.65	3.32	4.71	7.83	9	1.28	5.31	1.00	5	1.42
General Office 50,001 - 100,000 SF <sup>(13)</sup>	1,000 sf	710	13.34	3.32	4.02	6.67	9	1.28	4.52	1.00	5	1.21
General Office 100,001 - 200,000 SF <sup>(14)</sup>	1,000 sf	710	11.37	3.32	3.42	5.69	9	1.28	3.86	1.00	5	1.03
General Office 200,001 - 400,000 SF <sup>(15)</sup>	1,000 sf	710	9.70	3.32	2.92	4.85	9	1.28	3.29	1.00	5	0.88
General Office greater than 400,000 SF <sup>(16)</sup>	1,000 sf	710	8.83	3.32	2.66	4.42	9	1.28	3.00	1.00	5	0.80
Medical Office/Clinic	1,000 sf	720	35.95	8.91	4.03	17.98	9	1.42	21.50	1.00	5	1.72



**Table II-9 (Continued)**  
**Functional Resident Coefficients for Nonresidential Land Uses**

Land Use	Impact Unit	ITE LUC <sup>(1)</sup>	Trips Per Unit <sup>(2)</sup>	Trips Per Employee <sup>(3)</sup>	Employees Per Unit <sup>(4)</sup>	One-Way Factor @ 50% <sup>(5)</sup>	Worker Hours <sup>(6)</sup>	Occupants Per Trip <sup>(7)</sup>	Visitors <sup>(8)</sup>	Visitor Hours Per Trip <sup>(9)</sup>	Days Per Week <sup>(10)</sup>	Functional Resident Coefficient <sup>(11)</sup>
<b>Retail</b>												
Building Materials and Lumber Store	1,000 sf	812	45.16	32.12	1.41	22.58	9	1.73	37.65	0.65	7	1.55
Discount Superstore	1,000 sf	813	53.17	N/A	2.50	26.59	9	1.73	43.50	0.65	7	2.12
Discount Store Free-Standing	1,000 sf	815	56.02	28.84	1.94	28.01	9	1.73	46.52	0.50	7	1.70
Hardware/Paint Store	1,000 sf	816	51.29	53.21	0.96	25.65	9	1.73	43.41	0.50	7	1.26
Nursery/Garden Center	1,000 sf	817	36.08	22.13	1.63	11.07	9	1.73	17.52	0.50	7	0.98
Shopping Center 50,000 or Less SF GLA <sup>(12)</sup>	1,000 sf gla	820	86.56	N/A	2.50	43.28	9	1.73	72.37	0.50	7	2.45
Shopping Center 50,001 to 200,000 SF GLA <sup>(14)</sup>	1,000 sf gla	820	53.28	N/A	2.50	26.64	9	1.73	43.59	0.65	7	2.12
Shopping Center 200,001 to 400,000 SF GLA <sup>(15)</sup>	1,000 sf gla	820	41.80	N/A	2.50	20.90	9	1.73	33.66	1.00	7	2.34
Shopping Center over 400,000 SF GLA <sup>(16)</sup>	1,000 sf gla	820	36.27	N/A	2.50	18.14	9	1.73	28.88	1.00	7	2.14
Factory Outlet Center	1,000 sf	823	26.59	N/A	2.50	13.30	9	1.73	20.51	1.00	7	1.79
New and Used Auto Sales	1,000 sf	841	29.85	21.14	1.41	14.93	9	1.73	24.42	1.00	7	1.55
Automobile Part Sales	1,000 sf	843	61.91	N/A	2.50	30.96	9	1.73	51.06	0.50	7	2.00
Tire Store	1,000 sf	848	24.87	30.24	0.82	12.44	9	1.73	20.70	1.00	7	1.17
Tire Superstore	1,000 sf	849	20.36	30.24	0.67	10.18	9	1.73	16.94	1.00	7	0.96
Supermarket	1,000 sf	850	103.38	87.82	1.18	51.69	9	1.52	77.39	0.50	7	2.05
Convenience Market (24 hr)	1,000 sf	851	719.18	N/A	2.50	359.59	9	1.52	544.08	0.20	7	5.47
Wholesale Market	1,000 sf	860	6.73	8.21	0.82	3.37	9	1.73	5.01	1.00	7	0.52
Discount Club	1,000 sf	861	41.80	32.21	1.30	20.9	9	1.73	34.86	1.00	7	1.94
Home Improvement Superstore	1,000 sf	862	29.80	N/A	2.50	14.9	9	1.52	20.15	1.00	7	1.78
Electronics Superstore	1,000 sf	863	45.04	N/A	2.50	22.52	9	1.52	31.73	1.00	7	2.26



**Table II-9 (Continued)**  
**Functional Resident Coefficients for Nonresidential Land Uses**

Land Use	Impact Unit	ITE LUC <sup>(1)</sup>	Trips Per Unit <sup>(2)</sup>	Trips Per Employee <sup>(3)</sup>	Employees Per Unit <sup>(4)</sup>	One-Way Factor @ 50% <sup>(5)</sup>	Worker Hours <sup>(6)</sup>	Occupants Per Trip <sup>(7)</sup>	Visitors <sup>(8)</sup>	Visitor Hours Per Trip <sup>(9)</sup>	Days Per Week <sup>(10)</sup>	Functional Resident Coefficient <sup>(11)</sup>
<b>Retail (Cont'd)</b>												
Apparel Store	1,000 sf	870	66.40	N/A	2.50	33.2	9	1.73	54.94	0.50	7	2.08
Pharmacy/Drug Store	1,000 sf	881	92.88	N/A	2.50	46.44	9	1.52	68.09	0.35	7	1.93
Furniture Store	1,000 sf	890	5.06	12.19	0.42	2.53	9	1.73	3.96	1.00	7	0.32
Bank/Savings Walk-in	1,000 sf	911	156.48	44.47	3.52	78.24	9	1.52	115.40	0.35	6	2.57
Bank/Savings Drive-in	1,000 sf	912	159.34	30.94	5.15	79.67	9	1.52	115.95	0.15	6	2.28
Quality/High-Turnover Restaurant	1,000 sf	931	91.10	N/A	9.92	45.55	9	1.85	74.35	1.00	7	6.82
Fast Food Rest w/ Drive-Thru	1,000 sf	934	522.62	N/A	10.90	261.31	9	1.85	472.52	0.25	7	9.01
Quick Lube	service bay	941	40.00	N/A	1.50	20	9	1.52	28.90	0.50	7	1.16
Automobile Care Center	1,000 sf	942	37.25	N/A	6.00	18.63	9	1.52	22.32	1.00	7	3.18
Gas/Service Station with or without Convenience Market	fuel pos.	945	162.78	N/A	0.50	81.39	9	1.52	123.21	0.20	7	1.21
Gas/Service Station w/ Convenience Market & Car Wash	fuel pos.	946	152.84	N/A	0.50	76.42	9	1.52	115.66	0.25	7	1.39
Self Service Car Wash	service bay	947	27.09	N/A	0.50	13.55	9	1.52	20.10	0.50	7	0.61
<b>Industrial</b>												
General Light Industrial/Industrial Park	1,000 sf	110	6.96	3.02	2.30	3.48	9	1.38	2.50	1.00	5	0.69
General Heavy Industrial/Manufacturing	1,000 sf	120	1.50	0.82	1.83	0.75	9	1.38	0.00	1.00	5	0.49
Warehouse	1,000 sf	150	3.56	3.89	0.92	1.78	9	1.38	1.54	0.75	5	0.28
Mini-Warehouse	1,000 sf	151	2.50	61.90	0.04	1.25	9	1.38	1.69	0.75	7	0.07

Sources:  
 (1) Land use code found in the Institute of Transportation Engineers, 8th Edition  
 (2) Source: Sumter County Adopted Transportation Impact Fee Schedule; ITE 8th edition (if different from adopted transportation impact fee schedule)  
 (3) Trips per worker from ITE's Trip Generation, Eighth Edition, when available  
 (4) Trips per impact unit divided by trips per person (usually employee). When trips per person are not available, the employees per unit is estimated.  
 (5) Trips per unit (Item 2) multiplied by 50 percent  
 (6), (9), (10) Estimated  
 (7) Nationwide Personal Transportation Survey  
 (8) [(One-way Trips/Unit X Occupants/Trip) - Employees]  
 (11) [(Workers X Hours/Day X Days/Week) + (Visitors X Hours/Visit X Days/Week)]/(24 Hours x 7 Days)  
 (12) Trip rate is for 50,000 sf/sfgla  
 (13) Trip rate is for 100,000 sf  
 (14) Trip rate is for 200,000 sf/sfgla  
 (15) Trip rate is for 400,000 sf/sfgla



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### III. Sumter County Fire Impact Fee Calculations

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This section summarizes the analysis used to develop Sumter County's fire impact fee schedule. Sumter County Fire Rescue (SCFR) provides fire rescue and suppression services to all development within the boundaries of Sumter County, excluding The Villages, although SCFR does maintain mutual and automatic aid agreements with The Villages Public Safety Department (VPSD). In addition, Sumter County has a contract with VPSD where VPSD provides fire services to the area of the county known as Oxville. The impact fee analysis will include all fire facilities owned and operated by the County for service provided to this area. This section consists of the following subsections:

- Inventory
- Service Area Population
- Level of Service
- Cost Component
- Credit Component
- Net Fire Impact Cost
- Calculated Fire Impact Fee Schedule
- Fire Impact Fee Schedule Comparison

These eight elements are summarized in the remainder of this section, with the result being the Sumter County calculated fire impact fee schedule.

#### Inventory

Table III-1 presents SCFR's building and land inventory. For purposes of calculating the impact fee, it is important to have a detailed understanding of SCFR's assets so as to determine the appropriate cost component for the impact fee.



**Table III-1  
Land & Buildings Inventory**

Station	Location <sup>(1)</sup>	Year Built/ Refurbished <sup>(2)</sup>	Acreage <sup>(3)</sup>	Square Feet <sup>(4)</sup>	Building Replacement Value <sup>(5)</sup>	Land Replacement Value <sup>(6)</sup>	Total Replacement Value <sup>(7)</sup>
# 11	324 E. Seminole Ave, Bushnell	2003	1.85	4,326	\$53,000	\$69,375	\$122,375
# 12 <sup>(8)</sup>	71 SE 1st St., Webster	2007	N/A	3,694	\$53,000	N/A	\$53,000
# 14	87 W. King's Highway, Center Hill	1987/2009	0.50	4,680	\$889,200	\$18,750	\$907,950
#15/ SCFR Training Facilities <sup>(9)</sup>	1405 CR 526A, Sumterville	2005	N/A	3,250	N/A	N/A	N/A
Logistics Office <sup>(10)</sup>	67 CR 538, Bushnell	1960	N/A	1,556	N/A	N/A	N/A
# 21	1448 CR 459, Lake Panasoffkee	1976	2.00	2,832	\$538,080	\$75,000	\$613,080
#22 (Future Station) <sup>(11)</sup>	5764 CR 313, Bushnell	N/A	2.50	7,877	\$1,496,630	\$93,750	\$1,590,380
# 28	12042 CR 684, Webster	1976	0.40	3,238	\$615,220	\$15,000	\$630,220
# 29				3,036	\$576,840	\$52,125	\$628,965
Vehicle Maintenance <sup>(12)</sup>	7725 CR 476, Bushnell	1997	1.39	1,320	\$5,852	N/A	\$5,852
# 31	227 Hall St., Wildwood	1975	0.40	5,740	\$1,090,600	\$15,000	\$1,105,600
# 32	4147 CR 466, Oxford	1980	1.06	5,062	\$961,780	\$39,750	\$1,001,530
# 33 <sup>(13)</sup>	3290 CR 521, Coleman	2007	1.06	7,877	\$1,496,630	\$39,750	\$1,536,380
# 34	9641 CR 235, Wildwood	1988	3.26	3,452	\$655,880	\$122,250	\$778,130
<b>Total</b>			<b>14.42</b>	<b>57,940</b>	<b>\$8,432,712</b>	<b>\$540,750</b>	<b>\$8,973,462</b>
<b>Weighted Average Building Replacement Value per Square Foot<sup>(14)</sup></b>					<b>\$146</b>		
<b>Land Replacement Value per Acre<sup>(15)</sup></b>						<b>\$37,500</b>	
<b>Weighted Average Building &amp; Land Replacement Value per Square Foot<sup>(16)</sup></b>							<b>\$155</b>

(1), (2), and (4) Source: Sumter County Fire Rescue



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- (3) Source: Sumter County Property Appraiser and SCFR. There are several buildings on the parcel of land where Station #34 is located. To account for only the portion of the acreage allocated to the fire station in the impact fee inventory, the total acreage of this parcel is distributed according to the total square footage of all buildings located on this parcel.
- (5) For the modular stations (Stations #11 and #12) and the Vehicle Maintenance facility, the insurance value is used as the building replacement value. For the remaining stations, the building replacement value is calculated at \$190 per square foot, based on the construction cost estimates for Station #22 and Station #33 replacement.
- (6) The land replacement value is \$37,500 per acre, which is based on the 2009 vacant land sales analysis and the 2009 assessed land value analysis for parcels suitable for placement of a fire station. Please refer to Appendix B for a more detailed explanation of these analyses.
- (7) Sum of the building replacement value (Item 5) and the land replacement value (Item 6) for each station or facility
- (8) Station #12 is located on the City of Webster's Public Works/Public Safety Complex. Since this land is not owned by Sumter County and is a short-term lease with the City of Webster, the value for the land associated with this station is not included in the asset.
- (9) Station #15/SCFR Training Facilities is currently located in space leased from the Lake-Sumter Community College. Since neither the building or land is owned by Sumter County and SCFR has plans to relocate this facility in the future, the value of the facility and land is not included in the asset.
- (10) The centralized Logistics Office where SCFR houses its supplies is located on property that is not owned by Sumter County. Therefore, the value of the facility and land is not included in the asset.
- (11) The value of the new Station #22 is based on cost estimates for this building provided by Sumter County. The value of the new station is included in the asset since the County has secured the necessary fund balance to construct it and the revenue funding this new station is provided as a credit against the impact fee.
- (12) SCFR's Vehicle Maintenance Facility is located on the same parcel as Station #29. The land replacement value for this parcel is included under Station #29.
- (13) The value of the new Station #33 is based on cost estimates for this building provided by Sumter County. Station #33 is currently a modular station, but SCFR is replacing this building with a concrete block building. The value of the new station is included in the asset since the County has secured the necessary fund balance to construct it and the revenue funding this station is provided as a credit against the impact fee.
- (14) Total building replacement value for all stations and facilities (Sum of Item 5) divided by the total square footage (Sum of Item 4). The weighted average building replacement value per square foot takes into account the modular stations valued at their insurance value, which is lower than the replacement value of \$190 per square foot for the metal engineered and concrete block stations.
- (15) Total land replacement value for all stations and facilities (Sum of Item 6) divided by the total acreage (Sum of Item 3)
- (16) Total replacement value for all stations and facilities, including buildings and land (Sum of Item 7) divided by the total square footage (Sum of Item 4)



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Below are key components relating to SCFR's inventory:

- Currently, SCFR operates 11 fire stations and has plans to refurbish/remodel two existing stations (Stations #31 and #32), replace one modular station (Station #33), and construct a new station (Station #22) starting in 2010. The refurbish/remodel of Stations #31 and #32 is essentially a replacement of the existing buildings; as such, these improvements are not included in the impact fee inventory. For the construction of Station #22 and Station #33, the County has already secured the necessary fund balance for these projects. As such, the value of these two new stations is included in the inventory asset, and the revenues funding these two new stations are provided as a credit against the impact fee.
- Station #12 is currently located on the City of Webster's Public Safety Complex through a short-term lease. Since the land for this station is not owned by the County, the value of this land is not included in the impact fee.
- Station #15, which also includes SCFR's Training Facilities, is currently housed in leased classroom space at the Lake-Sumter Community College. The County does have plans to relocate this station to a permanent County-owned location in the future. Since this asset is not currently owned by the County, neither the value of the building or land utilized for this station/training facility is included in the impact fee.
- The centralized Logistics Office where SCFR houses its supplies is located on property that is not owned by Sumter County. Therefore, the value of neither the building nor land utilized for this facility is included in the impact fee.

As part of the impact fee analysis, the replacement value of SCFR's building and land inventory was determined. For the building replacement value, the type of building was considered when determining the appropriate replacement value. For the modular stations (Stations #11 and #12) and the Vehicle Maintenance facility, the insurance value was used as the replacement value. This is because new development should not be charged for a more expensive type of building than is currently being provided. For the remaining stations that are metal engineered or concrete block, a building replacement value of \$190 per square foot is used based on recent construction cost estimates for Station #22 and Station #33.



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To determine the land replacement value, several different sets of analyses were undertaken, including:

- An analysis was conducted of all vacant land parcels sold in 2008 and 2009 for various acreage categories (i.e., all vacant parcels, vacant parcels 0.5-1.0 acres in size, vacant parcels 1-3 acres in size, and vacant parcels 2-4 acres in size) and by land use code (i.e., all vacant parcels, vacant residential, vacant commercial, and vacant industrial). There were several high value sales in 2008 that increased the land replacement value per acre significantly. Therefore, the results of the 2009 vacant land analysis were determined to be more representative of the future land cost.
- Using the 2009 vacant sales, an analysis of the assessed land value of each parcel located on a major thoroughfare was conducted, since a new fire station is most likely to be constructed along a major road to achieve a better response time. The results of this review were compared to the assessed land value for all vacant land sales. The result of this comparison indicates that the location of a parcel on a major road does not substantially increase the land replacement value.
- Using the 2009 vacant sales, an analysis of the assessed land value of parcels that are currently zoned or have a future land use designation consistent with the requirements to locate a fire station. The results of this review were compared to the assessed land value for all vacant land sales. The result of this comparison indicates that parcels either zoned or that have a future land use designation consistent with the requirements to locate a fire station does increase the land replacement value.
- A review of the most recent Sumter County land acquisitions. Sumter County has not purchased much land in recent years, but has acquired land through trade or interlocal agreements, with the most recent transaction occurring in late 2006. The values from these transactions were reviewed and determined to be too outdated for use in the impact fee analysis.

Based on a review of the results of these analyses, it was determined that an appropriate land replacement value is \$37,500 per acre, which is based on the average value per acre for parcels with zoning and land use designations consistent with fire station location



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requirements. Based on discussion with County representatives, these parcels were determined to be most representative of the appropriate land replacement cost for SCFR's stations and other fire-related facilities. Please refer to Appendix B for a more detailed explanation of the land replacement value calculation.

In addition to the fire stations and associated facilities, SCFR's inventory includes the necessary equipped vehicles and other equipment required to perform its fire rescue and suppression duties. As presented in Table III-2, the total replacement value for SCFR's vehicle and equipment inventory is \$9.1 million. This replacement value is based on unit costs for SCFR's vehicles and other equipment that are found to be typical compared to replacement values observed in other jurisdictions.

SCFR is repaying one vehicle-related debt issues with impact fee revenue. Therefore, the value of the remaining principal as of September 1, 2009, is subtracted from the total replacement value of the vehicles and equipment so as to not charge new development for the value of the asset that is not yet paid for and will be repaid by revenue generated by new development through the impact fee. As such, the vehicle and equipment replacement value included in the impact fee is \$7.9 million.

It should be noted that SCFR does have additional vehicles in its fleet that are not included in the impact fee calculations as these vehicles are older models inherited from the volunteer fire departments and have little or no monetary value.



**Table III-2**  
**Vehicle & Equipment Inventory<sup>(1)</sup>**

Description	Units	Unit Cost <sup>(2)</sup>	Replacement Value <sup>(3)</sup>
Equipped Squad	8	\$175,715	\$1,405,720
Equipped Fire Engine Class "A"	11	\$376,430	\$4,140,730
Equipped Tender/Tanker	8	\$329,430	\$2,635,440
Equipped Aerial Tower Platform	2	\$331,430	\$662,860
Equipped Sert Truck F-350	1	\$159,000	\$159,000
Air Cascade Unit	1	\$125,000	\$125,000
<i>Subtotal Replacement Value - All Vehicles &amp; Equipment</i>	<i>37</i>		<i>\$9,128,750</i>
<i>Future Debt to be Repaid with Impact Fees<sup>(4)</sup></i>			<i>\$1,223,597</i>
<b><i>Total Value (Excluding Future Debt Repayments)<sup>(5)</sup></i></b>			<b><i>\$7,905,153</i></b>

(1), (2) Source: SCFR

(3) Number of units multiplied by the unit cost (Item 2)

(4) Payoff balance for outstanding debt service for vehicles and equipment that is being repaid with impact fee revenue. This value of the outstanding debt is subtracted from the total vehicle and equipment replacement value as to not charge new development for the value of the vehicle and equipment asset that is not yet paid for.

(5) Total replacement value for all vehicles and equipment less the value of the asset excluded for future debt repayments

## Level of Service

It is important to establish a relationship between the number of annual fire-related incidents and the increase in the service area population. To accomplish this, Table III-3 presents the number of fire incidents over the last six years, along with the corresponding population. To account for random fluctuations, the three-year average number of incidents and population also is shown. This comparison suggests that, in general, as the population increases, the number of incidents tends to increase also suggesting that, with new growth, the demand for fire facilities will increase.



**Table III-3**  
**Population and Incident Trends**

Year	Service Area Population <sup>(1)</sup>	Three-Year Average	Number of Incidents <sup>(2)</sup>	Three-Year Average
2003	42,381		6,178	
2004	42,833		6,913	
2005	46,622	43,945	7,395	6,829
2006	50,211	46,555	6,697	7,002
2007	51,246	49,360	6,917	7,003
2008	47,835	49,764	6,535	6,716

(1) Source: Table II-1

(2) Source: SCFR

Typically, when population is used as the basis for demand, the level of service (LOS) for fire services is expressed in terms of stations per 10,000 residents. Using this method, the current LOS for fire services within the SCFR District is one station per 3,733 residents or 2.679 stations per 10,000 residents. As mentioned previously, for the County's fire impact fee analysis, the LOS must be measured using functional population to capture workers, visitors, and residents to calculate the fire impact fee. In terms of functional population, the current LOS is 3.093 stations per 10,000 functional residents. Table III-4 summarizes the calculation of the current fire rescue LOS for the SCFR District using both population and functional population.

**Table III-4**  
**Current Level of Service (2009)**

Calculation Step	Year 2009	
	Weighted Population	Functional Population
Sumter County Population <sup>(1)</sup>	44,797	38,793
Number of Stations <sup>(2)</sup>	12	12
Population per Station	3,733	3,233
<b>LOS (Stations per 10,000 Residents)<sup>(3)</sup></b>	<b>2.679</b>	<b>3.093</b>

(1) Source: Table II-1 for weighted population figure and Table II-5 for functional population figure

(2) Source: Table III-1

(3) Number of stations (Item 2) divided by the population (Item 1), multiplied by 10,000



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Table III-5 summarizes a LOS comparison between Sumter County and selected jurisdictions throughout Florida. The LOS is displayed in terms of the permanent population for all entities because a functional population analysis has not been completed for these entities, as it was for Sumter County. The LOS comparison is based on the permanent population for 2008, as this is the most recent population data available for all jurisdictions. As presented in this table, the LOS within the SCFR District is slightly higher than these other communities.

**Table III-5  
2008 Level of Service Comparison**

Jurisdiction	2008 Population <sup>(1)</sup>	Number of Stations <sup>(2)</sup>	Residents per Station	Level of Service (Stations per 10,000 Residents)
SCFR District	45,907	11	4,173	2.396
Highlands County	80,930	18	4,496	2.224
Volusia County	144,003	24	6,000	1.667
Citrus County	138,383	22	6,290	1.590
Lake County	169,420	19	8,917	1.121
Marion County	272,923	29	9,411	1.063
Polk County	396,149	32	12,380	0.808
VPSD District	38,307	3	12,769	0.783
Pasco County	406,357	25	16,254	0.615

- (1) Source: Appendix A, Table A-1 for SCFR District and the VPSD District and BEBR 2008 population estimates for all other jurisdictions
- (2) Source: Table III-1 for SCFR District, Section IV, Table IV-1 for the VPSD District, and each respective fire department for the other jurisdictions

**Cost Component**

Table III-6 summarizes the total replacement value for SCFR's land, buildings, and vehicle/equipment inventory, including:

- 12 stations with a total replacement value of \$9.0 million, including buildings and land and \$7.9 million for vehicles and equipment, for a total replacement value of \$16.9 million; and
- an average replacement cost of \$1.4 million per station.



In addition, Table III-6 presents the total impact cost per functional resident for fire services within the SCFR District, which equals \$435 per functional resident.

**Table III-6**  
**Total Impact Cost per Functional Resident**

Component	Figure
Total Building and Land Replacement Cost <sup>(1)</sup>	\$8,973,462
Total Vehicle and Equipment Replacement Cost <sup>(2)</sup>	\$7,905,153
<b>Total Replacement Cost</b>	<b>\$16,878,615</b>
Number of Stations <sup>(3)</sup>	12
Total Replacement Cost per Station	\$1,406,551
LOS (Stations/10,000 Functional Residents) <sup>(4)</sup>	3.093
<b>Total Impact Cost per Functional Resident<sup>(5)</sup></b>	<b>\$435.05</b>

(1), (3) Source: Table III-1

(2) Source: Table III-2

(4) Source: Table III-4

(5) Total replacement cost per station multiplied by the LOS (Item 4) and divided by 10,000

### Credit Component

To avoid overcharging new development for the fire impact fee, a review of the capital financing program for fire services is completed. The purpose of this review is to identify potential revenue generated by new development that is being used to fund the expansion of fire-related capital facilities, land, and equipment. It should be noted that the credit component does not consider revenue used to fund capital renovation, maintenance, or operations expenses, as these types of expenditures cannot be funded with impact fee revenue.

### Revenue Sources for Capital Expenditures

Sumter County was the recipient of American Recovery and Reinvestment Act (ARRA) revenue, which will fund the majority of the construction costs for Stations #22 and #33 starting in 2010. The ARRA revenue used to construct Stations #22 and Stations #33 is included in the revenue credit, as the value of these new stations is included in the inventory. A credit for the replacement stations (Stations #31 and #32) is not provided as these are complete replacement/renovation of existing stations.



## Capital Improvement Credit

The main source of non-impact fee revenue for SCFR's capital expansion expenditures over the next five years is ARRA revenue. Since this is a one-time revenue source, a review of the historical revenues over the past ten years was also undertaken to average the expenditures over the entire 15-year period. Table III-7 summarizes the fire protection-related capital expansion projects funded during this 15-year period, which averages \$4 per functional resident per year. This amount is calculated by dividing the average annual total capital expenditure amount for the 15-year period by the average annual functional residents during the same time period.



**Table III-7  
Capital Expenditure Credit<sup>(1)</sup>**

Description	Fiscal Year															Total/ Average
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	
<i>Source: General Fund</i>																
- Station #11 Modular Station									\$53,000							\$53,000
<i>Source: FEMA Fire Act Grant</i>																
- Station #34 Fire Engine				\$245,036												\$245,036
<i>Source: Operating Budget</i>																
- Station #31 Aerial Tower Platform					\$91,945											\$91,945
<i>Source: American Recovery &amp; Reinvestment Act (ARRA) Grant</i>																
- Station #33 (Permanent Building)										\$120,000	\$716,309					\$836,309
- New West Bushnell Fire Station #22										\$454,610	\$681,915					\$1,136,525
<b>Total Capital Expansion Expenditures</b>	\$0	\$0	\$0	\$245,036	\$91,945	\$0	\$0	\$0	\$53,000	\$574,610	\$1,398,224	\$0	\$0	\$0	\$0	\$2,362,815
<b>Average Annual Capital Expansion Expenditures<sup>(2)</sup></b>																\$157,521
<b>Functional Population<sup>(3)</sup></b>	35,780	37,175	38,216	36,726	37,130	40,397	43,508	44,422	41,446	38,793	37,435	37,959	38,490	38,682	39,533	
<b>Average Annual Functional Population<sup>(4)</sup></b>																39,046
<b>Capital Expenditure per Functional Resident<sup>(5)</sup></b>																\$4.03

- (1) Source: SCFR
- (2) Average annual capital expenditures for the 15-year period
- (3) Source: Appendix A, Table A-8
- (4) Average annual functional population for the 15-year period
- (5) Average annual capital expansion expenditures (Item 2) divided by average annual functional population (Item 4)



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### Debt Service Credit

Any outstanding debt issued to fund the expansion of the SCFR's facilities, vehicles, or equipment that are being repaid with non-impact fee revenue also will result in a credit to the impact fee.

SCFR has two existing debt service issues, the "Leasing 2 Loan" and the Florida Association of Counties Trust (FACT) Loan, both of which were issued for the acquisition of new vehicles under the volunteer fire departments prior to the consolidated of SCFR in 2002. The Leasing 2 Loan is being repaid with impact fee revenues. Therefore, a credit for this debt is not provided, but the remaining loan principal as of September 1, 2009, is subtracted from the total vehicles and equipment replacement value so as to not charge new development for the value of the asset that is not yet paid for and will be paid for with future impact fee revenues

The FACT Loan is being repaid with operating funds. Therefore, a credit for this remaining debt is provided. The debt service credit is calculated by determining the present value of the total remaining payments of the FACT Loan and then dividing that figure by the average annual functional population estimated over the remaining life of the loan. As presented in Table III-8, the resulting credit is \$30 per functional resident.



**Table III-8  
Debt Service Credit**

Description	Total Years of Debt Issue <sup>(1)</sup>	Number of Years Remaining <sup>(2)</sup>	Interest Rate <sup>(3)</sup>	Total Remaining Debt Service (for expansion) <sup>(4)</sup>	Present Value of Remaining Payments <sup>(5)</sup>	Average Annual Functional Population During Remaining Debt Issue Period <sup>(6)</sup>	Credit per Functional Resident <sup>(7)</sup>
FACT Loan	10.0	5.25	Variable	\$1,268,375	\$1,177,684	38,691	\$30.44

(1), (2), (3) Source: SCFR debt service schedules

(4) The total debt service remaining, including principal and interest payments

(5) The present value in 2009 dollars of the annual debt service

(6) Source: Appendix A, Table A-8

(7) Present value of remaining payments (Item 5) divided by the average annual functional population during the remaining debt issue period (Item 6)



## Net Fire Impact Cost

The net impact fee per functional resident is the difference between the cost component and the credit component. Table III-9 summarizes the calculation of the net fire impact cost per functional resident.

The first section of this table identifies the total impact cost as \$435 per functional resident. The second section of the table identifies the revenue credits for the fire impact fee totaling \$90 per functional resident.

The net impact cost per functional resident is the difference between the total impact cost and the total revenue credit. This results in a net impact cost of \$345 per functional resident.

**Table III-9**  
**Net Impact Cost per Functional Resident**

Description	Impact Cost	Revenue Credits
<b>Impact Cost</b>		
Total Impact Cost per Functional Resident <sup>(1)</sup>	\$435.05	
<b>Impact Credit</b>		
<i>Capital Expansion Expenditure Credit</i>		
Average Annual Capital Expansion Credit per Functional Resident <sup>(2)</sup>		\$4.03
Capitalization Rate		4.5%
Capitalization Period (in years)		25
Capital Improvement Credit per Functional Resident <sup>(3)</sup>		(\$59.76)
<i>Debt Service Credit</i>		
Debt Service Credit per Functional Resident <sup>(4)</sup>		(\$30.44)
<b>Net Impact Cost</b>		
<b>Net Impact Cost per Resident<sup>(5)</sup></b>	<b>\$344.85</b>	

(1) Source: Table III-6

(2) Source: Table III-7

(3) The present value of the capital improvement credit per functional resident (Item 2) at a discount rate of 4.5 percent with a capitalization period of 25 years. The discount rate represents the interest rate that the County is likely to borrow at in the future, based on discussions with Sumter County Budget Office staff.

(4) Source: Table III-8

(5) Total impact cost per functional resident (Item 1) less then capital improvement credit per functional resident (Item 3) and the debt service credit per functional resident (Item 4)



## Calculated Fire Impact Fee Schedule

Table II-10 presents the calculated fire impact fee schedule developed for the SCFR District for both residential and non-residential land uses, based on the net impact cost per functional resident previously presented in Table II-9.

**Table III-10**  
**Calculated Fire Impact Fee Schedule**

Land Use	Impact Unit	Functional Resident Coefficient <sup>(1)</sup>	Net Impact Fee <sup>(2)</sup>
<b>Residential</b>			
Single Family Detached	du	1.40	\$482.79
Multi Family	du	1.33	\$458.65
Mobile Home	du	1.24	\$427.61
Retirement Community/Age-Restricted Single Family	du	0.83	\$286.23
<b>Transient/Assisted, Group</b>			
Hotel	room	0.91	\$313.81
Motel	room	0.87	\$300.02
Nursing Home	bed	0.70	\$241.40
Assisted Living Facility (ALF)	du	0.82	\$282.78
<b>Recreational</b>			
General Recreation/County Park	acre	0.20	\$68.97
RV Park	site	0.54	\$186.22
Golf Course	hole	1.08	\$372.44
Bowling Alley/Health/Fitness Club	1,000 sf	3.03	\$1,044.90
Movie Theater	screen	5.98	\$2,062.20
<b>Institutions</b>			
Elementary School (Private)	Student	0.06	\$20.69
Middle School (Private)	Student	0.07	\$24.14
High School (Private)	Student	0.08	\$27.59
University/Junior College with 7,500 or fewer students (Private)	Student	0.10	\$34.49
University/Junior College with more than 7,500 students (Private)	Student	0.07	\$24.14
Church	1,000 sf	0.51	\$175.87
Day Care Center	1,000 sf	0.89	\$306.92
Hospital	1,000 sf	1.55	\$534.52
Veterinary Clinic	1,000 sf	1.18	\$406.92
<b>Office</b>			
General Office 50,000 Square Feet or less	1,000 sf	1.42	\$489.69
General Office 50,001 - 100,000 Square Feet	1,000 sf	1.21	\$417.27
General Office 100,001 - 200,000 Square Feet	1,000 sf	1.03	\$355.20
General Office 200,001 - 400,000 Square Feet	1,000 sf	0.88	\$303.47
General Office greater than 400,000 Square Feet	1,000 sf	0.80	\$275.88
Medical Office/Clinic	1,000 sf	1.72	\$593.14



**Table III-10 (Continued)**  
**Calculated Fire Impact Fee Schedule**

Land Use	Impact Unit	Functional Resident Coefficient <sup>(1)</sup>	Net Impact Fee <sup>(2)</sup>
<b>Retail</b>			
Building Materials and Lumber Store	1,000 sf	1.55	\$534.52
Discount Superstore	1,000 sf	2.12	\$731.08
Discount Store Free-Standing	1,000 sf	1.70	\$586.25
Hardware/Paint Store	1,000 sf	1.26	\$434.51
Nursery/Garden Center	1,000 sf	0.98	\$337.95
Shopping Center 50,000 or Less Square Feet GLA	1,000 sf gla	2.45	\$844.88
Shopping Center 50,001 to 200,000 Square Feet GLA	1,000 sf gla	2.12	\$731.08
Shopping Center 200,001 to 400,000 Square Feet GLA	1,000 sf gla	2.34	\$806.95
Shopping Center over 400,000 Square Feet GLA	1,000 sf gla	2.14	\$737.98
Factory Outlet Center	1,000 sf	1.79	\$617.28
New and Used Auto Sales	1,000 sf	1.55	\$534.52
Automobile Part Sales	1,000 sf	2.00	\$689.70
Tire Store	1,000 sf	1.17	\$403.47
Tire Superstore	1,000 sf	0.96	\$331.06
Supermarket	1,000 sf	2.05	\$706.94
Convenience Market (24 hr)	1,000 sf	5.47	\$1,886.33
Wholesale Market	1,000 sf	0.52	\$179.32
Discount Club	1,000 sf	1.94	\$669.01
Home Improvement Superstore	1,000 sf	1.78	\$613.83
Electronics Superstore	1,000 sf	2.26	\$779.36
Apparel Store	1,000 sf	2.08	\$717.29
Pharmacy/Drug Store	1,000 sf	1.93	\$665.56
Furniture Store	1,000 sf	0.32	\$110.35
Bank/Savings Walk-in	1,000 sf	2.57	\$886.26
Bank/Savings Drive-in	1,000 sf	2.28	\$786.26
Quality/High-Turnover Restaurant	1,000 sf	6.82	\$2,351.88
Fast Food Rest w/ Drive-Thru	1,000 sf	9.01	\$3,107.10
Quick Lube	service bay	1.16	\$400.03
Automobile Care Center	1,000 sf	3.18	\$1,096.62
Gas/Service Station with or without Convenience Market	fuel pos.	1.21	\$417.27
Gas/Service Station w/ Convenience Market & Car Wash	fuel pos.	1.39	\$479.34
Self Service Car Wash	service bay	0.61	\$210.36
<b>Industrial</b>			
General Light Industrial/Industrial Park	1,000 sf	0.69	\$237.95
General Heavy Industrial/Manufacturing	1,000 sf	0.49	\$168.98
Warehouse	1,000 sf	0.28	\$96.56
Mini-Warehouse	1,000 sf	0.07	\$24.14

GLA = Gross Leasable Area

(1) Source: Table II-7 for residential land uses and Table II-9 for nonresidential land uses

(2) Calculated impact fee determined by multiplying the net impact cost per functional resident (\$344.85) by the functional resident coefficient for each land use (Item 1)



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## **Fire Impact Fee Schedule Comparison**

As part of the work effort in developing SCFR's impact fee program, a comparison of fire impact fee schedules was completed for nearby jurisdictions. Table III-11 presents a comparison of the calculated fire impact fees for SCFR and The Villages (found in Section IV), as well as several other jurisdictions in Florida.



**Table III-11  
Fire Impact Fee Schedule Comparison**

Land Use	Unit	Sumter County (SCFR District) (Calculated) <sup>(1)</sup>	Sumter County (SCFR District) (Adopted)	The Villages (VPSD District) (Calculated) <sup>(2)</sup>	The Villages (VPSD District) (Adopted)	Lake County	Citrus County	Marion County <sup>(4)</sup>	Polk County	Volusia County <sup>(5)</sup>
Date of Last Update		2010	2005	2010	2005	2003	2006	2005	2009	2005
Adoption Percentage		N/A	100%	N/A	100%	100%	100%	100%	50%	100%
Residential:										
Single Family (2,000 sf)	du	\$483	\$397	\$313	\$243	\$390	\$433	\$287	\$111	\$287
Non-residential:										
General Light Industrial	1,000 sf	\$238	\$90	\$161	(3)	\$104	\$205	\$119	\$17	\$150
Office (50,000 sf)	1,000 sf	\$490	\$120	\$331	\$630	\$1,301	\$373	\$209	\$101	\$150
Quality Restaurant	1,000 sf	\$2,352	\$1,500	\$1,591	\$1,470	\$1,301	\$1,970	\$1,614	\$123	\$150
Retail (100,000 sf)	1,000 sf	\$731	\$510	\$495	\$630	\$1,301	\$676	\$553	\$123	\$150
Bank/Savings Drive-In	1,000 sf	\$786	\$510	\$532	\$630	\$1,301	\$685	\$372	\$123	\$150

Note: Source for comparison jurisdictions is adopted impact fee schedules

(1) Source: Table III-10

(2) Source: Table IV-9

(3) There is no industrial land use category in The Villages' adopted fire impact fee schedule



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## IV. The Villages Fire Impact Fee Calculations

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This section summarizes the analysis used to develop The Village's fire impact fee schedule. The Villages Public Safety Department (VPSD) provides fire rescue and suppression services to all development within the boundaries of The Villages Community Center Development Districts (VCCDD), which extends outside of Sumter County into Marion and Lake Counties. As previously noted, for purposes of the impact fee, The Villages service area refers to only the population of the VCCDD that is located within Sumter County, as well as the infrastructure (i.e., stations, vehicles, and equipment) serving The Villages within Sumter County. In addition, VPSD has a contract with Sumter County to provide fire services to the area of the county known as Oxville. This section consists of the following subsections: This section consists of the following subsections:

- Inventory
- Service Area Population
- Level of Service
- Cost Component
- Credit Component
- Net Fire Impact Cost
- Calculated Fire Impact Fee Schedule
- Fire Impact Fee Schedule Comparison

These eight elements are summarized in the remainder of this section, with the result being The Villages calculated fire impact fee schedule.

### Inventory

Table IV-1 presents the building and land inventory for The Villages fire impact fee. The VPSD currently operates three fire stations within the Sumter County portion of The Villages.



**Table IV-1  
Fire Land & Buildings Inventory**

Station #	Location <sup>(1)</sup>	Year Built/ Refurbished <sup>(2)</sup>	Acreage <sup>(3)</sup>	Square Feet <sup>(4)</sup>	Building Replacement Cost <sup>(5)</sup>	Contents Replacement Cost <sup>(6)</sup>	Land Replacement Cost <sup>(7)</sup>	Total Replacement Cost <sup>(8)</sup>
40	2455 Parr Drive	2006	2.45	3,140	\$596,600	\$29,247	\$551,250	\$1,177,097
41	8013 E. CR 466	1996	1.44	5,137	\$976,030	\$29,247	\$324,000	\$1,329,277
51	1231 Bonita Blvd	2005	2.50	9,874	\$1,876,060	\$29,247	\$562,500	\$2,467,807
<b>Total</b>			<b>6.39</b>	<b>18,151</b>	<b>\$3,448,690</b>	<b>\$87,741</b>	<b>\$1,437,750</b>	<b>\$4,974,181</b>
<b>Weighted Average Building &amp; Contents Replacement Value per Square Foot<sup>(9)</sup></b>						<b>\$195</b>		
<b>Land Replacement Value per Acre<sup>(10)</sup></b>							<b>\$225,000</b>	
<b>Weighted Average Replacement Value per Square Foot (Buildings, Contents, and Land)<sup>(11)</sup></b>								<b>\$274</b>

(1), (2), and (4) Source: The Villages Public Safety Department

(3) Source: Sumter County Property Appraiser and the VPSD. There are several buildings on the parcel of land where Station #41 is located. Therefore, the total acreage of this parcel was distributed according to the total building square footage so that only the acreage allocated to the fire station is included in the impact fee inventory.

(5) Each station is valued at \$190 per square foot, based on the construction cost estimates for the two new stations being constructed in Sumter County (SCFR Stations #22 and #33).

(6) Source: The Villages Public Safety Department. Figures provided are based on the insurance values for the furniture and other station contents.

(7) The land replacement value is \$225,000, which is the average value per acre based on a review of the assessed land value for parcels between 0.5 and 4 acres in the two locations that The VPSD has identified for two additional stations to be constructed over the next five years. Please refer to Appendix B for a more detailed explanation.

(8) Sum of the building replacement value (Item 5), building contents replacement value (Item 6), and the land replacement value (Item 7) for each station

(9) Total building and contents replacement value for all stations (sum of Items 5 and 6) divided by the total square footage (sum of Item 4)

(10) Total land replacement value for all stations (sum of Item 7) divided by the total acreage (sum of Item 3)

(11) Total replacement value for all stations, including buildings, contents, and land (sum of Item 8) divided by the total square footage (sum of Item 4)



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Currently, Station #41 is leased from Sumter County while Stations #40 and #51 are still owned by the VCCDD; however, the residents of The Villages fund the operation and maintenance of these stations through the VCCDD assessments and The VPSD is responsible for routine maintenance of the stations and is liable for any accidents or injuries occurring on the premises. As a result, it was determined to be appropriate to include the replacement value of the station land and buildings in the impact fee asset.

As part of the impact fee analysis, the replacement value of The VPSD's building and land inventory was determined. For the building replacement value, a unit cost of \$190 per square foot is used. This replacement value is consistent with the replacement value used to calculate SCFR's impact fee and is based on the construction cost estimates for the two new SCFR stations (Station #22 and Station #33). The building replacement value also includes the value of the building contents (i.e., furniture, fixtures, equipment, etc.). The VPSD provided a replacement value for the building contents of each fire station based on the current insurance value.

Unlike the rest of Sumter County, very few vacant parcels are sold within the VCCDD, due to the type of development where parcels are typically improved by the developer and then sold. Therefore, a vacant land sales analysis for The Villages would not provide the necessary information to determine a land replacement value. The VPSD has identified two locations where additional stations will be constructed over the next five years. To determine the land replacement value per acre, an analysis of the 2009 assessed land value of parcels 0.5 to 4 acres in size in each of these two locations was completed. There were significant differences in the assessed value per acre between the two areas. Therefore, the average assessed value for the two locations of \$225,000 per acre is used to calculate the land replacement value. Please refer to Appendix B for a more detailed explanation of how the land replacement value per acre was determined.

In addition to the two fire stations, VPSD's fire-related inventory includes the necessary vehicles and equipment required to perform its fire rescue and suppression duties. As presented in Table IV-2, the total vehicle and equipment cost is \$4.1 million. The unit costs of the Village's vehicles and other equipment are typical compared to replacement costs observed in other jurisdictions.



**Table IV-2**  
**Fire Vehicle & Equipment Inventory<sup>(1)</sup>**

Description	Units	Unit Cost <sup>(2)</sup>	Total Cost <sup>(3)</sup>
Command Vehicle	2	\$48,291	\$96,582
Equipped Engine	5	\$461,521	\$2,307,605
Equipped Battalion	1	\$120,410	\$120,410
Staff Vehicle	2	\$47,271	\$94,542
Equipped Tower	1	\$938,361	\$938,361
Equipped Rescue/Support	3	\$120,410	\$361,230
Equipped Attack	1	\$175,668	\$175,668
<b>Total</b>	<b>15</b>		<b>\$4,094,398</b>

(1) Source: The Villages Public Safety Department

(2) Source: The Villages Public Safety Department. FY 2010 replacement value based on inflation factor of 3 percent; unit cost based on the average unit costs for that type of vehicle, provided by The Villages Public Safety Department.

(3) Number of units multiplied by the unit cost (Item 2)

### Level of Service

It is important to establish a relationship between the number of annual fire-related incidents and the increase in the service area population. To accomplish this, Table IV-3 presents the number of fire incidents over the last five years, along with the corresponding population. To account for random fluctuations, the three-year average number of incidents and population also is shown. This comparison suggests that, in general, as the population increases, the number of incidents tends to increase also suggesting that, with new growth, the demand for fire facilities will increase.



**Table IV-3**  
**Population and Incident Trends**

Year	Service Area Population <sup>(1)</sup>	Three-Year Average	Number of Incidents <sup>(2)</sup>	Three-Year Average
2004	19,182		3,924	
2005	23,201		1,870	
2006	28,062	23,482	3,602	3,132
2007	33,941	28,401	4,369	3,280
2008	41,042	34,348	4,992	4,321

(1) Source: Table II-1

(2) Source: Villages Public Safety Department

Typically, when population is used as the basis for demand, the level of service (LOS) for fire services is expressed in terms of stations per 10,000 residents. Using this method, the current LOS for The Villages is one station per 15,370 residents or 0.651 stations per 10,000 residents. As mentioned previously, for The Villages' fire impact fee analysis, the LOS must be measured using functional population to capture workers, visitors, and residents to calculate the fire impact fee. In terms of functional population, the current LOS is 0.809 stations per 10,000 functional residents. Table IV-4 summarizes the calculation of the current LOS for The Villages using both population and functional population.

**Table IV-4**  
**Current Level of Service (2009)**

Calculation Step	Year 2009	
	Weighted Population	Functional Population
The Villages Population <sup>(1)</sup>	46,111	37,068
Number of Stations <sup>(2)</sup>	3	3
Population per Station	15,370	12,356
<b>LOS (Stations per 10,000 Residents)<sup>(3)</sup></b>	<b>0.651</b>	<b>0.809</b>

(1) Source: Table II-1 for weighted population figure and Table II-6 for functional population figure

(2) Source: Table IV-1

(3) Number of stations (Item 2) divided by the population (Item 1), multiplied by 10,000

Table IV-5 summarizes a LOS comparison between the VPSD District and selected jurisdictions. The LOS is displayed in terms of permanent population for all entities



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because a functional population analysis has not been completed for these entities, as it was for the VPSD District. The LOS comparison is based on the permanent population for 2008, as this is the most recent population data available for all jurisdictions. As presented in this table, the LOS within the VPSD District is on the lower end of the range of these other communities.

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**Table IV-5**  
**2008 Level of Service Comparison**

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Jurisdiction	2008 Population <sup>(1)</sup>	Number of Stations <sup>(2)</sup>	Residents per Station	Level of Service (Stations per 10,000 Residents)
SCFR District	45,907	11	4,173	2.396
Highlands County	80,930	18	4,496	2.224
Volusia County	144,003	24	6,000	1.667
Citrus County	138,383	22	6,290	1.590
Lake County	169,420	19	8,917	1.121
Marion County	272,923	29	9,411	1.063
Polk County	396,149	32	12,380	0.808
<b>VPSD District</b>	<b>38,307</b>	<b>3</b>	<b>12,769</b>	<b>0.783</b>
Pasco County	406,357	25	16,254	0.615

(1) Source: Appendix A, Table A-1 for the VPSD District and SCFR District; BEBR 2008 population estimates for all other jurisdictions

(2) Source: Table IV-1 for the VPSD District, Section III, Table III-1 for SCFR District, and each the respective fire department for the other jurisdictions.

### Cost Component

Table IV-6 summarizes the total replacement costs for land, buildings, and equipment for fire services, including:

- three stations with a total replacement value of \$5.0 million for buildings and land and \$4.1 million for vehicles and equipment, for a total replacement value of \$9.1 million; and
- an average replacement cost of \$3.0 million per station.

In addition, Table IV-6 presents the total impact cost per functional resident for fire services in the VPSD District, which equals \$245 per functional resident.



**Table IV-6**  
**Total Impact Cost per Functional Resident**

Component	Figure
Total Building and Land Replacement Cost <sup>(1)</sup>	\$4,974,181
Total Vehicle and Equipment Replacement Cost <sup>(2)</sup>	\$4,094,398
<b>Total Replacement Cost</b>	<b>\$9,068,579</b>
Number of Stations <sup>(3)</sup>	3
Total Replacement Cost per Station	\$3,022,860
LOS (Stations/10,000 Functional Residents) <sup>(4)</sup>	0.809
<b>Total Impact Cost per Functional Resident<sup>(5)</sup></b>	<b>\$244.55</b>

(1), (3) Source: Table IV-1

(2) Source: Table IV-2

(4) Source: Table IV-4

(5) Total replacement cost per station multiplied by the LOS (Item 4) and divided by 10,000

### Credit Component

To avoid overcharging new development for the fire impact fee, a review of the capital financing program for fire services was completed. The purpose of this review was to determine any potential revenue credits generated by new development that are being used for expansion of capital facilities, land, and equipment included in the inventory. It should be noted that the credit component does not include any capital renovation, maintenance, or operations expenses, as these types of expenditures cannot be funded with impact fee revenue.

### Capital Improvement Credit per Resident

The VPSD uses impact fee revenue to fund all capital expansion expenditures with the exception of vehicles purchased through debt service. A credit for the debt service issued to fund capital expansion purchases is provided separately.

### Debt Service Credit

Any outstanding debt service issued to fund the expansion of fire-related capital facilities, vehicles, or equipment, and that is repaid with non-impact fee revenue will also result in a



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credit to the impact fee. Currently, there is outstanding debt that was issued to purchase two vehicles in The VPSD's fire inventory, which is being paid back with operating funds. A credit for the outstanding bond issue related to these items is presented in Table IV-7.

The debt service credit is calculated by determining the present value of the total remaining payments of the debt issue and then dividing that figure by the average annual functional population for the remaining life of the debt issue. The resulting credit is \$11 per functional resident.



**Table IV-7  
Debt Service Credit**

Description	Total Years of Debt Issue <sup>(1)</sup>	Number of Years Remaining <sup>(2)</sup>	Interest Rate <sup>(3)</sup>	Total Remaining Debt Service (for expansion) <sup>(4)</sup>	Present Value of Remaining Payments <sup>(5)</sup>	Average Annual Functional Population During Remaining Debt Issue Period <sup>(6)</sup>	Credit per Functional Resident <sup>(7)</sup>
2001 Typhoon	10	2.0	5.29%	\$70,187	\$68,424	42,279	\$1.62
Sutphon Tower Truck	10	5.5	4.30%	\$511,299	\$464,122	48,032	\$9.66
<b>Total Debt Service Credit per Resident</b>							<b>\$11.28</b>

(1), (2), (3) Source: The Villages Public Safety Department debt service schedules

(4) The total debt service remaining, including principal and interest payments

(5) The present value in 2009 dollars of the annual debt service payments

(6) Source: Appendix A, Table A-8

(7) Present value of the remaining payments (Item 5) divided by the average annual functional population during the remaining debt issue period (Item 6)



## Net Fire Impact Cost

The net impact fee per functional resident is the difference between the cost component and the credit component. Table IV-8 summarizes the calculation of the net fire impact cost per functional resident.

The first section of this table identifies the total impact cost as \$245 per functional resident. The second section of the table identifies the revenue credits for the fire impact fee totaling \$11 per functional resident.

The net impact cost per functional resident is the difference between the total impact cost and the total revenue credit. This results in a net impact cost of \$233 per functional resident.

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**Table IV-8**  
**Net Impact Cost per Functional Resident**

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Description	Impact Cost	Revenue Credits
<b>Impact Cost</b>		
Total Impact Cost per Functional Resident <sup>(1)</sup>	\$244.55	
<b>Impact Credit</b>		
Debt Service Credit per Functional Resident <sup>(2)</sup>		(\$11.28)
<b>Net Impact Cost</b>		
Net Impact Cost per Resident <sup>(3)</sup>	\$233.27	

(1) Source: Table IV-6

(2) Source: Table IV-7

(3) Total impact cost per functional resident (Item 1) less the debt service credit per functional resident (Item 3)

## Calculated Fire Impact Fee Schedule

Table IV-9 presents the calculated fire impact fee schedule developed for The Villages for both residential and non-residential land uses, based on the net impact cost per functional resident previously presented in Table IV-8.



**Table IV-9**  
**Calculated Fire Impact Fee Schedule**

Land Use	Impact Unit	Functional Resident Coefficient <sup>(1)</sup>	Net Impact Fee <sup>(2)</sup>
<b>Residential</b>			
Single Family Detached	du	1.34	\$312.58
Multi Family	du	1.10	\$256.60
Mobile Home	du	0.30	\$69.98
<b>Transient/Assisted, Group</b>			
Hotel	room	0.91	\$212.28
Motel	room	0.87	\$202.94
Nursing Home	bed	0.70	\$163.29
Assisted Living Facility (ALF)	du	0.70	\$163.29
<b>Recreational</b>			
General Recreation/County Park	acre	0.20	\$46.65
RV Park	site	0.54	\$125.97
Golf Course	hole	1.08	\$251.93
Bowling Alley/Health/Fitness Club	1,000 sf	3.03	\$706.81
Movie Theater	screen	5.98	\$1,394.95
<b>Institutions</b>			
Elementary School (Private)	Student	0.06	\$14.00
Middle School (Private)	Student	0.07	\$16.33
High School (Private)	Student	0.08	\$18.66
University/Junior College with 7,500 or fewer students (Private)	Student	0.10	\$23.33
University/Junior College with more than 7,500 students (Private)	Student	0.07	\$16.33
Church	1,000 sf	0.51	\$118.97
Day Care Center	1,000 sf	0.89	\$207.61
Hospital	1,000 sf	1.55	\$361.57
Veterinary Clinic	1,000 sf	1.18	\$275.26
<b>Office</b>			
General Office 50,000 Square Feet or less	1,000 sf	1.42	\$331.24
General Office 50,001 - 100,000 Square Feet	1,000 sf	1.21	\$282.26
General Office 100,001 - 200,000 Square Feet	1,000 sf	1.03	\$240.27
General Office 200,001 - 400,000 Square Feet	1,000 sf	0.88	\$205.28
General Office greater than 400,000 Square Feet	1,000 sf	0.80	\$186.62
Medical Office/Clinic	1,000 sf	1.72	\$401.22



**Table IV-9 (Continued)**  
**Calculated Fire Impact Fee Schedule**

Land Use	Impact Unit	Functional Resident Coefficient <sup>(1)</sup>	Net Impact Fee <sup>(2)</sup>
<b>Retail</b>			
Building Materials and Lumber Store	1,000 sf	1.55	\$361.57
Discount Superstore	1,000 sf	2.12	\$494.53
Discount Store Free-Standing	1,000 sf	1.70	\$396.56
Hardware/Paint Store	1,000 sf	1.26	\$293.92
Nursery/Garden Center	1,000 sf	0.98	\$228.60
Shopping Center 50,000 or Less Square Feet GLA	1,000 sf gla	2.45	\$571.51
Shopping Center 50,001 to 200,000 Square Feet GLA	1,000 sf gla	2.12	\$494.53
Shopping Center 200,001 to 400,000 Square Feet GLA	1,000 sf gla	2.34	\$545.85
Shopping Center over 400,000 Square Feet GLA	1,000 sf gla	2.14	\$499.20
Factory Outlet Center	1,000 sf	1.79	\$417.55
New and Used Auto Sales	1,000 sf	1.55	\$361.57
Automobile Part Sales	1,000 sf	2.00	\$466.54
Tire Store	1,000 sf	1.17	\$272.93
Tire Superstore	1,000 sf	0.96	\$223.94
Supermarket	1,000 sf	2.05	\$478.20
Convenience Market (24 hr)	1,000 sf	5.47	\$1,275.99
Wholesale Market	1,000 sf	0.52	\$121.30
Discount Club	1,000 sf	1.94	\$452.54
Home Improvement Superstore	1,000 sf	1.78	\$415.22
Electronics Superstore	1,000 sf	2.26	\$527.19
Apparel Store	1,000 sf	2.08	\$485.20
Pharmacy/Drug Store	1,000 sf	1.93	\$450.21
Furniture Store	1,000 sf	0.32	\$74.65
Bank/Savings Walk-in	1,000 sf	2.57	\$599.50
Bank/Savings Drive-in	1,000 sf	2.28	\$531.86
Quality/High-Turnover Restaurant	1,000 sf	6.82	\$1,590.90
Fast Food Rest w/ Drive-Thru	1,000 sf	9.01	\$2,101.76
Quick Lube	service bay	1.16	\$270.59
Automobile Care Center	1,000 sf	3.18	\$741.80
Gas/Service Station with or without Convenience Market	fuel pos.	1.21	\$282.26
Gas/Service Station w/ Convenience Market & Car Wash	fuel pos.	1.39	\$324.25
Self Service Car Wash	service bay	0.61	\$142.29
<b>Industrial</b>			
General Light Industrial/Industrial Park	1,000 sf	0.69	\$160.96
General Heavy Industrial/Manufacturing	1,000 sf	0.49	\$114.30
Warehouse	1,000 sf	0.28	\$65.32
Mini-Warehouse	1,000 sf	0.07	\$16.33



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GLA = Gross Leasable Area

- (1) Source: Table II-8 for residential land uses and Table II-9 for nonresidential land uses
- (2) Calculated impact fee determined by multiplying the net impact cost per functional resident (\$233.27) by the functional resident coefficient for each land use (Item 1)

## Fire Impact Fee Schedule Comparison

As part of the work effort in developing The Villages' impact fee program, a comparison of fire impact fee schedules was completed for nearby jurisdictions. Table IV-10 presents a comparison of the calculated fire impact fees for The Villages and SCFR (found in Section III), as well as several other jurisdictions in Florida.



**Table IV-10**  
**Fire Impact Fee Schedule Comparison**

Land Use	Unit	The Villages (VPSD District) (Calculated) <sup>(1)</sup>	The Villages (VPSD District) (Adopted)	Sumter County (SCFR District) (Calculated) <sup>(2)</sup>	Sumter County (SCFR District) (Adopted)	Lake County	Citrus County	Marion County	Polk County	Volusia County
Date of Last Update		N/A	2005	N/A	2005	2003	2006	2005	2009	2005
Adoption Percentage		N/A	100%	N/A	100%	100%	100%	100%	50%	100%
Residential:										
Single Family (2,000 sf)	du	\$313	\$243	\$483	\$397	\$390	\$433	\$287	\$111	\$287
Non-residential:										
General Light Industrial	1,000 sf	\$161	(3)	\$238	\$90	\$104	\$205	\$119	\$17	\$150
Office (50,000 sf)	1,000 sf	\$331	\$630	\$490	\$120	\$1,301	\$373	\$209	\$101	\$150
Quality Restaurant	1,000 sf	\$1,591	\$1,470	\$2,352	\$1,500	\$1,301	\$1,970	\$1,614	\$123	\$150
Retail (100,000 sf)	1,000 sf	\$495	\$630	\$731	\$510	\$1,301	\$676	\$553	\$123	\$150
Bank/Savings Drive-In	1,000 sf	\$532	\$630	\$786	\$510	\$1,301	\$685	\$372	\$123	\$150

(1) Source: Table IV-9

(2) Source: Table III-10

(3) The Villages does not currently have an industrial category in its adopted impact fee schedule

Note: Source for comparison jurisdictions is adopted impact fee schedules



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## V. Indexing

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In many cases, impact fees are reviewed periodically (every three to five years, etc.) as opposed to on an annual basis. This was historically done to account for increases in construction costs and land values since, if no adjustment to the impact fee schedule was made during this period, it was more likely that major adjustments to the impact fee schedule would be needed due to cost increases that occurred between adjustments. The need for significant adjustments can create major concerns in the development community.

The capital costs used to calculate the impact fee schedules in this study are based on current replacement values. As such, the impact fee schedules calculated in this study reflect current prices. Moving forward, the County is interested in implementing indexing to reflect adjustments that may occur in the building construction, equipment costs, and land values over the next several years. While historically costs and land values have increased, recently, construction costs and land values have been fluctuating or decreasing. The indexing methodology presented in this section is designed to adjust the fees upward or downward to reflect the current trends during more stable periods. Given this period of instability, it is recommended that the County not index its impact fees over the next two or three years until the costs are more stabilized. Once costs have become more stable, it may be useful to conduct a mini-study to adjust the cost prior to implementing indexing.

### Methodology

The remainder of this section presents the methodology for calculating a fire impact fee index, as well as providing an example of the indexing application for both SCFR and The Villages fire impact fee schedules. Traditionally, indexing took into account a longer-term average of the land, building, and equipment cost increases to account for abnormal fluctuations, such as when the construction cost and land value increased drastically from 2004 thru 2007. This approach provided a conservative index during the periods of large increases. However, during periods when costs are decreasing, this index also moderates the decrease, which may cause concerns about increasing the fees too much and overcharging the new development. The indexing methodology in this study presents a variation to the traditional indexing methodology in that the County should conduct a review of both the 10-year average and one-year change of the cost indices to compare the



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longer-term trends to the recent trends. An index based on the change in cost over the last year, as opposed to the average of a 10-year period, is more responsive to increases and decreases, while use of a 10-year average tends to smooth out the fluctuations. Therefore, both the 10-year average and one-year percent change in land values, building construction costs, and equipment costs are presented.

### Land Cost

Typically, when calculating the land component of the index, the average annual increase in just land values over a given period is calculated. However, the Sumter County Property Appraiser does not extract land values for reporting purposes. In addition, separate values for The Villages did not begin to be accounted for electronically until 2008. Therefore, instead of analyzing separate just land values for the two fire service areas, a review of the countywide assessed values for all property, including land and improvements, was conducted and used in the indexing calculations for both SCFR and The Villages.

As presented in Table V-1, the countywide assessed value of real property increased by an average of 19.4 percent over the past ten years, between 1999 and 2009. Over the last year, the countywide assessed property value decreased by 5.7 percent.



**Table V-1**  
**Sumter County Countywide Assessed Values**

Fiscal Year	Sumter County Assessed Values	Percent Change
1999	\$1,528,838,454	N/A
2000	\$1,778,675,015	16.3%
2001	\$2,359,021,549	32.6%
2002	\$2,650,276,940	12.3%
2003	\$2,944,121,089	11.1%
2004	\$3,487,213,628	18.4%
2005	\$5,142,166,017	47.5%
2006	\$6,755,285,291	31.4%
2007	\$8,387,422,260	24.2%
2008	\$8,848,146,235	5.5%
2009	\$8,347,319,030	-5.7%
<b>10-Year Average (1999-2009)</b>		<b>19.4%</b>

Source: Florida Property Valuations and Tax Databook for countywide assessed values for real property from 1999 thru 2008; Sumter County Property Appraiser for the 2009 countywide assessed value figure.

Given the fluctuations in property values that have recently occurred, it is recommended that a 15 percent cap be placed on land value increases. If at any time property values are increasing by more than 15 percent, it is recommended that the County review its recent land purchases to determine if a land cost of higher than 15 percent is appropriate.

### Building Construction Cost

For building construction costs, it is recommended that the building cost index provided by Engineering-News Record (ENR) be used for indexing purposes. The cost indices provided by ENR are national averages and do not necessarily capture the cost trends that occur in Florida. Given the variation of Florida trends from the national trends, the County may choose to conduct a local cost increase study or use local construction bid data to calculate the building cost index. In the absence of such a study or local bid data, however, Table V-2 presents an estimate of the annual construction cost increase over the past 10 years, which averages an annual increase of 3.3 percent. For the ENR, the 10-year annual



average percent change of 3.3 percent is higher than the one-year percent change from 2008 to 2009 (1.7%).

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**Table V-2**  
**Building Cost Index**

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Year	Annual Avg	Percent Change
1999	3,456	N/A
2000	3,539	2.4%
2001	3,574	1.0%
2002	3,623	1.4%
2003	3,693	1.9%
2004	3,984	7.9%
2005	4,205	5.5%
2006	4,369	3.9%
2007	4,485	2.7%
2008	4,691	4.6%
2009	4,769	1.7%
<b>Average (1999-2009)</b>		<b>3.3%</b>

Source: Engineering News-Record, Building Cost Index History. ENR building cost index data are only available thru April 2009. As such, the annual average is only shown thru 2008.

### Equipment Cost

For vehicle and equipment costs, it is recommended that the Consumer Price Index (CPI) provided by the U.S. Department of Labor, Bureau of Labor Statistics, be used for indexing purposes. Table V-3 presents the annual CPI cost increase over the last ten years, which averages an annual increase of 2.4 percent. Similar to the countywide assessed property values and ENR, the one-year percent change for the CPI, from 2008 to 2009 (-0.4%) is lower than the 10-year annual average percent change (2.4%).



**Table V-3**  
**Equipment Cost Index**

Year	Annual Index	Percent Change
1999	104.2	N/A
2000	107.4	3.1%
2001	109.6	2.0%
2002	110.8	1.1%
2003	113.1	2.1%
2004	116.2	2.7%
2005	120.0	3.3%
2006	123.9	3.3%
2007	127.4	2.8%
2008	132.6	4.1%
2009	132.1	-0.4%
<b>Average</b>		<b>2.4%</b>

Source: US Department of Labor, Bureau of Labor Statistics  
([www.bls.gov](http://www.bls.gov))

## Application

To index the fire impact fee schedules previously presented in this report, the combined index must first be calculated. As previously mentioned, a comparison of the applications using both the 10-year and one-year averages was completed.

Tables V-4 and V-5 present the indexing applications for SCFR's impact fee program, using the 10-year and one-year averages, respectively. Tables V-6 and V-7 present the indexing applications for The Villages fire impact fee program, using the 10-year and one-year averages, respectively. In each of these tables, the second column includes the distribution of the land, buildings, and vehicle/equipment costs. The third column calculates the percent of each of these components to the total cost. The fourth column summarizes the average cost increases presented previously in Tables V-1 through V-3, which are then multiplied with the percent of total cost to create the index.



**Table V-4**  
**Sumter County Fire Indexing Application**  
**(10-Year Average)**

Calculation Step	Distribution of Inventory <sup>(1)</sup>	Percent of Total Cost <sup>(2)</sup>	Annual Increase <sup>(3)</sup>	Index <sup>(4)</sup>
Land Replacement Value	\$540,750	3.2%	15.0%	0.5%
Building Replacement Value	\$8,432,712	50.0%	3.3%	1.7%
Vehicles & Equipment Replacement Value	\$7,905,153	46.8%	2.4%	1.1%
Total Replacement Value	\$16,878,615			
<b>Total Applicable Index<sup>(5)</sup></b>				<b>3.3%</b>

- (1) Source: Table III-1 for land/building value and Table III-2 for vehicle and equipment costs
- (2) Land, building, and vehicle/equipment cost divided by total cost.
- (3) Source: Table V-1 thru V-3.
- (4) Percent of total cost (Item 2) for each cost component multiplied by annual increase of each cost component (Item 3)
- (5) Sum of index components for land, building, and vehicles/equipment.

**Table V-5**  
**Sumter County Fire Indexing Application**  
**(One-Year Average)**

Calculation Step	Distribution of Inventory <sup>(1)</sup>	Percent of Total Cost <sup>(2)</sup>	Annual Increase <sup>(3)</sup>	Index <sup>(4)</sup>
Land Replacement Value	\$540,750	3.2%	-5.7%	-0.2%
Building Replacement Value	\$8,432,712	50.0%	1.7%	0.9%
Vehicles & Equipment Replacement Value	\$7,905,153	46.8%	-0.4%	-0.2%
Total Replacement Value	\$16,878,615			
<b>Total Applicable Index<sup>(5)</sup></b>				<b>0.5%</b>

- (1) Source: Table III-1 for land/building value and Table III-2 for vehicle and equipment costs
- (2) Land, building, and vehicle/equipment cost divided by total cost.
- (3) Source: Table V-1 thru V-3.
- (4) Percent of total cost (Item 2) for each cost component multiplied by annual increase of each cost component (Item 3)
- (5) Sum of index components for land, building, and vehicles/equipment.



**Table V-6**  
**The Villages Fire Indexing Application**  
**(10-Year Average)**

Calculation Step	Distribution of Inventory <sup>(1)</sup>	Percent of Total Cost <sup>(2)</sup>	Annual Increase <sup>(3)</sup>	Index <sup>(4)</sup>
Land Replacement Value	\$1,437,750	15.9%	15.0%	2.4%
Building Replacement Value	\$3,448,690	38.0%	3.3%	1.3%
Contents/Vehicles/Equipment Replacement Value	\$4,182,139	46.1%	2.4%	1.1%
Total Replacement Value	\$9,068,579			
<b>Total Applicable Index<sup>(5)</sup></b>				<b>4.8%</b>

- (1) Source: Table IV-1 for land/building/contents value and Table IV-2 for vehicle/equipment costs
- (2) Land, building, and vehicle/equipment cost divided by total cost
- (3) Source: Table V-1 thru V-3.
- (4) Percent of total cost (Item 2) for each cost component multiplied by annual increase of each cost component (Item 3)
- (5) Sum of index components for land, building, and vehicles/equipment.

**Table V-7**  
**The Villages Fire Indexing Application**  
**(One-Year Average)**

Calculation Step	Distribution of Inventory <sup>(1)</sup>	Percent of Total Cost <sup>(2)</sup>	Annual Increase <sup>(3)</sup>	Index <sup>(4)</sup>
Land Replacement Value	\$1,437,750	15.9%	-5.7%	-0.9%
Building Replacement Value	\$3,448,690	38.0%	1.7%	0.6%
Contents/Vehicles/Equipment Replacement Value	\$4,182,139	46.1%	-0.4%	-0.2%
Total Replacement Value	\$9,068,579			
<b>Total Applicable Index<sup>(5)</sup></b>				<b>-0.5%</b>

- (6) Source: Table IV-1 for land/building/contents value and Table IV-2 for vehicle/equipment costs
- (7) Land, building, and vehicle/equipment cost divided by total cost
- (8) Source: Table V-1 thru V-3.
- (9) Percent of total cost (Item 2) for each cost component multiplied by annual increase of each cost component (Item 3)
- (10) Sum of index components for land, building, and vehicles/equipment.



## **Indexed Impact Fee Schedule**

The indices calculated in Tables V-4 through V-7 are example calculations using the methodology previously described. As mentioned previously, given the recent fluctuations in land and construction values, it is recommended Sumter County not index the impact fee schedules until the land, building construction, and CPI trends stabilize and begin to change at a consistent pace again. After two or three years, it may be useful for the County to conduct a mini-study to update the cost component, and then consider indexing.

Should the County decide to index, the indices should be recalculated and applied to each respective impact fee schedule at the end of the first year after adoption. At the end of each subsequent year between updates, each index would also be recalculated and approved on an annual basis along with a new fee schedule. This approach creates an opportunity to base the index on more current data. In addition, to allow for more flexibility, the County could adopt the indexing methodology as the method to calculate the maximum index level, with the Board of County Commissioners deciding annually at what level to index (if any).

Table V-8 provides an example indexed fee schedules for the single family land use based on the 10-year average, while Table V-9 provides an example of the indexed fee schedules based on the one-year average. These examples are for illustration purposes only and, as previously mentioned, if the County does decide to index, then the index should be recalculated each year based on the most current data available.



**Table V-8**  
**Indexed Fee Schedule – Single Family Land Use**  
**(10-Year Average)**

Index / Year	Impact Fee Program Area	
	Sumter County	The Villages
Index <sup>(1)</sup>	3.3%	4.8%
Year 1 Single Family Detached Fee <sup>(2)</sup>	\$482.79	\$312.58
Year 2 Single Family Detached Fee <sup>(3)</sup>	\$498.72	\$327.58
Year 3 Single Family Detached Fee <sup>(4)</sup>	\$515.18	\$343.30
Year 4 Single Family Detached Fee <sup>(5)</sup>	\$532.18	\$359.78

- (1) Source: Table V-4 for Sumter County index and Table V-6 for The Villages index based on the 10-year average
- (2) Source: Section III, Table III-10 for Sumter County single family fee and Section IV, Table IV-9 for The Villages single family fee
- (3) Year 1 fee multiplies by (1+ the index)
- (4) Year 2 fee multiplies by (1+ the index)
- (5) Year 3 fee multiplies by (1+ the index)

**Table V-9**  
**Indexed Fee Schedule – Single Family Land Use**  
**(One-Year Average)**

Index / Year	Impact Fee Program Area	
	Sumter County	The Villages
Index <sup>(1)</sup>	0.5%	-0.5%
Year 1 Single Family Detached Fee <sup>(2)</sup>	\$482.79	\$312.58
Year 2 Single Family Detached Fee <sup>(3)</sup>	\$485.20	\$311.02
Year 3 Single Family Detached Fee <sup>(4)</sup>	\$487.63	\$309.46
Year 4 Single Family Detached Fee <sup>(5)</sup>	\$490.07	\$307.91

- (1) Source: Table V-5 for Sumter County index and Table V-7 for The Villages index based on the one-year average
- (2) Source: Section III, Table III-10 for Sumter County single family fee and Section IV, Table IV-9 for The Villages single family fee
- (3) Year 1 fee multiplies by (1+ the index)
- (4) Year 2 fee multiplies by (1+ the index)
- (5) Year 3 fee multiplies by (1+ the index)



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## VI. Standard Operating Procedures

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This section of the report presents the proposed methodology for conducting an Alternative Fee Calculation Study for the Sumter County and The Villages fire impact fee programs, as well as a process for requesting County consideration for Fire Impact Fee developer contribution credits.

It should be noted that Tindale-Oliver & Associates, Inc. is not a legal firm and therefore any language included in Sumter County or The Villages' Fire Impact Fee Ordinances, either directly or by reference, should be reviewed by Sumter County's legal counsel.

### Alternative Fee Calculation Study

The Alternative Fee Calculation Study is designed to address the demand component variables of the impact fee formula because the cost and credit components of the impact fee formula do not vary by land use and should not be challenged through an Alternative Fee Calculation Study.

Both Sumter County and The Villages fire impact fees apply to residential and nonresidential land uses and, as discussed in Section II, each of these fees were developed using the functional population approach. As such the Alternative Fee Calculation Study guidelines below apply to both fire impact fee programs.

1. Proposed Previous Studies. If the applicant proposes relying on the results of any previous studies originally submitted as part of the zoning approval process, (s)he should provide a copy of the other report(s). The County will review previous studies for sufficiency and applicability to the proposed new development.
2. Pre-application Meeting. Before beginning the Alternative Fee Calculation Study, the applicant shall attend a pre-application meeting jointly with the Impact Fee Coordinator and Department Director to discuss procedures and methodology. The pre-application meeting will normally cover the following topics:



a. *Study Data Elements*

Study data elements will include the impact fee formula demand component variables. These are the trip generation rate, persons per household, visitor hours per trip, and other factors necessary to determine the functional population. Each of these components is discussed below:

(1) Trip Generation Rate

Trip generation data is used as an input to determine the number of persons visiting a particular land use in a given 24-hour period, which is used to develop functional population estimates. The trip generation rate is normally determined by machine counts. The applicant shall provide documentation depicting the proposed machine counter sites and locations within the site. County staff shall review the proposed sites for suitability of equipment, hose/loop detector configurations, and the dates of counting to reflect typical travel characteristics (i.e., excluding holidays). The County staff shall specify the level of detail to be included in the study report.

(2) Persons per Household

Persons per household information was taken from the U.S. Bureau of the Census, Census 2000. More refined census data may be developed or field studies conducted to determine site-specific persons per household data. The County staff will specify the level of detail to be included in the study report.

(3) Visitor Hours per Trip

Visitor hours per trip have been assigned based on the development of prior impact fees around the country and on professional judgment. Development parameters and land



use mix could influence visitor hours per trip. Existing developments with land use characteristics similar to the applicant's proposed development could provide more refined visitor hours per trip data. This data could be obtained through field surveys. County staff will specify the level of detail to be included in the report.

(4) Other Data Items to Determine Functional Population

The County staff will specify any other data items the applicant will be required to collect for the proposed study. This could include items such as vacancy factors, trips per worker, workers per unit, and occupants per trip, etc. as necessary to properly conduct the study.

b. *Proposed Study Sites*

Based on the study data element(s) to be reviewed as part of the Alternative Fee Calculation Study, a determination of whether on-site study of similar land uses is required. If on-site study of similar land uses is required, the applicant will identify a minimum of three comparable sites to be studied. The site description should include the specific location, the character of the location (CBD, urban, suburban, or rural urbanized or rural areas), and the land use(s) at the location.

The applicant should include an explanation of why the proposed sites are similar to the proposed new development. The explanation should address pertinent characteristics, such as land use, adjacent area, and demographics.

The applicant should include a map showing the location of the proposed new development and the proposed study sites.

The County staff will review the proposed study sites for applicability to the proposed new development.



c. *Proposed Data Collection Methodology*

The County staff will review the applicant's proposed methodology for analyzing the data collected in the study. This methodology shall be consistent with Section Three (3), Guidelines.

d. *Report Format*

The County staff will discuss the required format for submitting the study report. The applicant should compile the study findings into a report structured as follows:

- Table of Contents
  - Letter of Transmittal
  - Findings of the Report
    - Trip generation rate
    - Persons per household
    - Employee hours per trip
    - Visitor hours per trip
    - Other findings required of study, as determined by County staff
  - Impact Fee Calculations
3. Guidelines. The Alternative Fee Calculation shall follow the prescribed methodologies and formats adopted by the Fire Impact Fee Ordinance. The results of the Alternative Fee Calculation shall be submitted to both the Impact Fee Coordinator and the responsible Department Director. The following guidelines shall be followed when conducting an Alternative Fee Calculation:

a. *Determining Persons per Household*

When an applicant believes that unique household size data (persons per household) will apply to the subject development, and would impact the functional population calculations that are used to determine impact fees, appropriate documentation must be provided. This documentation could include projections of the anticipated socioeconomic makeup (average age,



average income) of the subject development that would indicate unique household size conditions, such as in the case of a retirement community. If it can be documented that an existing development has similar residential development parameters and demographic makeup than the subject development, persons per household data from the existing development can be submitted for consideration as a basis of comparison with the proposed development.

b. *Determining Visitor Hours per Trip (Duration of Visit)*

The duration of visit survey will collect the following information:

- Date of the interview;
- Location of the interview;
- Name of the interviewer;
- Time of day of the interview
- Identification of interviewee (i.e., employer, visitor/patron) or trip purpose (e.g., work, visit, shop, personal business)
- Duration of time spent at the site.

The applicant will use an interview form to record the interview responses. This form will be used to record the information identified above. The applicant should include copies of the completed interview forms in the study report.

The applicant should also include in the study report:

- The number of observations (useable interview responses); and
- The average time spent in the subject land use.

c. *Number of Interviews to Conduct*

In determining a reasonable estimate of the Employee Hours per Trip and Visitor Hours per Trip, the applicant will perform surveys at each of the three sites for a minimum of 10 hours per site. The specific time period to be covered will be governed by the type of land use being surveyed and its



typical daily operations. A minimum of 100 valid observations must be obtained at each site. An observation shall be considered valid if the length of stay at the site is documented on the survey form. The specific required number of valid surveys is the number of surveys required to meet a 90 percent level of confidence at a  $\pm 15$  percent level of accuracy, or at least a total of 150 usable surveys for the study land use.

Upon completion of the surveys, whether there were sufficient number of surveys will be determined through the following formula<sup>2</sup>, which calculates the necessary sample size:

$$N = \frac{C^2 \times Z^2}{E^2}$$

Where: N = Is the required sample size for the specific level of confidence at the desired accuracy level;

C = Is the coefficient of variation as calculated by dividing the sample mean hours per trip into the standard deviation of the sample hours per trip;

Z = Is the normal distribution value statistic at the specific level of confidence; and

E = Is the specific margin of error or level of accuracy.

4. Sufficiency Determination. The appropriate Fire Chief(s) will review the Alternative Fee Calculation for sufficiency of methodology, technical accuracy, and findings and will make recommendations concerning the amount of the impact fee to the Impact Fee Coordinator. A final determination of sufficiency shall be made by the Impact Fee Coordinator.

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<sup>2</sup> Formula based on a methodology developed by Michael E. Smith in "Design of Small-Sample Home Interview Travel Surveys", Transportation Research Board 701, 1979.



5. Determination of Fee. The final determination of the amount of the impact fee shall be made by the Impact Fee Coordinator and approved by the responsible Department Director.

## **Developer Contribution Credits**

The adopted Sumter County and The Villages Fire Impact Fee Ordinances each contain language concerning developer contribution credits. As part of this Study, the ordinance language concerning developer credits was reviewed. Recommended additions to the adopted ordinance language are summarized below.

### **Definition of Impact Fee Credit**

- The definition section of the ordinance should clearly define the criteria for a project or improvements to be eligible for impact fee credits. The adopted language ordinance identifies the types of improvement that are eligible for credits (i.e., land donation, capital equipment or facilities). However, it is recommended that the ordinance clearly state that site-related improvements that do not increase the overall capacity of fire services are not eligible for an impact fee credit.

### **Inclusion of Creditable Projects in Capital Improvement Plan**

- The ordinance should more clearly state that the impact fee credit will be provided only for an improvement that is included in the first five (5) years of the Capital Improvement Plan (CIP) of the applicable fire district. In the event that the proposed project is not listed in the CIP to be funded by the same fiscal year that the construction or conveyance will be completed, or the donation made, the applicant may request the governing body to amend the CIP and to move the applicable project forward to the fiscal year in which the construction or conveyance will be completed, or the donation made.

### **Management of Fire Impact Fee Program**

- The ordinance should include language stating that Sumter County staff shall be responsible for establishing the management and control of all Fire Impact Fee credit accounts. Each account shall be maintained in electronic format and shall indicate authorization for credit, the beginning credit balance, and each building permit that is issued which draws down the credit balance.



### **Payment Under Protest**

- The ordinance should include language concerning “payment under protest” where prior to the resolution of a pending credit application, any applicant desiring the issuance of a building permit must pay the applicable Fire Impact Fee prior to or at the time the request for hearing is filed. Such payment shall be deemed paid “under protest” and shall not be construed as a waiver of any rights. Any difference shall be refunded to the Applicant.

### **Process for Applicant Challenge of Credit Determination**

- The ordinance should include a process for the applicant to challenge the determination of impact fee credits made by Sumter County staff and approved by the County Administrator in the form of a hearing before the Board of County Commissioners (BOCC).

In addition, example language concerning developer contribution credits is provided below. This language does not include all details found in the Sumter County and The Villages adopted ordinances, but this example does provide language concerning the points specified above, as well as identifies which actions are to be undertaken by County staff or the Applicant.

#### *Developer Contribution Credits*

In certain situations, an Applicant or Owner seeking to develop land may wish to dedicate land, construct a fire station or other fire-related facility, donate fire vehicles or equipment, or a combination of the above. In these situations, the Applicant or Owner may wish to enter into a development contribution credit agreement with the County in lieu of paying all or part of the total fire impact fee due for the applicable development project.

This agreement does not include any site-related improvements that may be required as determined by the Impact Fee Coordinator and improvements must increase the overall capacity of fire services to be eligible for an impact fee credit. Credits against the fire impact fee can only be provided for projects identified in the first five (5) years of the current adopted Capital Improvement Program (CIP) of the applicable fire district.



Declaration for consideration for credits shall occur at the time of subdivision development plan submittal for credits pertaining to subdivisions and at the time of site development plan submittal for credits pertaining to projects requiring site plan approval. Failure to do so shall be deemed a waiver of such application and a bar to any credits.

Development orders or permits issued prior to (insert effective date), shall remain binding to any building permit issued on land subject to the development conditions.

Prior to the issuance of a building permit, the Applicant shall submit to the Impact Fee Coordinator a proposed plan, including the development contribution credit agreement for the construction or conveyance of any improvements as identified in the Fire Impact Fee Ordinance. Upon receipt of this plan, the Impact Fee Coordinator and other County staff, as deemed appropriate, shall review the proposed plan and determine whether it complies with the Fire Impact Fee Ordinance.

#### *Determination of Credit Amount*

Improvements proposed for the purpose of impact fee credits shall be subject to approval by Sumter County staff, based on input received from the Fire Chief of the applicable fire district.

For land conveyances, the following shall be provided:

- A designation of the development project for which the plan is being submitted;
- A specimen of the deed which will be used to convey title to the County;
- A legal description of the land;
- A title opinion written by a licensed state attorney and rendered within sixty (60) days of submission thereof, the content of which is satisfactory to the County Attorney and verifying that the proffered deed will convey unencumbered fee simple title to the appropriate governmental body.
- Property appraisals prepared by a qualified professional, including a written appraisal of contemplated sales of similar property between



unrelated parties in a bargaining transaction, if available. In preparing their report, the appraiser shall value the land at its then current zoning and without the improvements for which the dedication is offered or the permit in question is sought, unless the land in question is subject to a valid agreement, zoning approval, or development order which prescribes a different valuation, in which case the agreement, zoning approval, or development order shall control.

- A certified copy of the most recent assessment of the property for tax purposes to be used by the County in its decision or recommendation for the amount of the credit.

For the construction of fire stations or other fire-related facilities or similar improvements, the proposed plan is to include:

- A designation of the development project for which the plan is being submitted;
- A list of the contemplated improvements;
- An estimate of proposed construction costs based on detailed unit costs that are less than one year old and sealed by a professional engineer; and
- A proposed time schedule for completion of the proposed plan.

For the donation of fire vehicles or equipment, the proposed plan is to include:

- A designation of the development project for which the plan is being submitted;
- A list of the contemplated fire vehicles or equipment for donation, including a detailed list of the specifications for each vehicle or item;
- An estimate of value of each vehicle or item of equipment based on comparable purchase or acquisition costs that are less than one year old; and
- A proposed time schedule for donation of the vehicle or equipment.

Any land, capital equipment or facilities dedicated to the County in lieu of paying the impact fee must be acceptable to the County in terms of suitable



size, dimension, soil type, topography, location, accessibility, and general character, type and specifications.

All cost estimates and construction plans shall be in conformity with construction standards of the County and shall be approved by the County Engineer prior to commencement of construction.

### *Process for Approval of Credits*

A credit for the donation of land shall be granted at such time as the property which is the subject of the donation has been conveyed to and accepted by the County. A credit for the construction of an improvement or donation of capital equipment shall be granted at such time as the construction is completed, approved and accepted by the County or the time the capital equipment is approved and accepted by the County.

Sumter County staff should be familiar with the definitions section of the applicable ordinance to determine and clearly understand which improvements are eligible for fire impact fee credits.

Within sixty (60) days after receipt, Sumter County staff shall approve or deny the proposed plan and, if approved, establish the amount of credit. This decision shall be based on the following:

1. Whether such proposed plan of construction or conveyance is in conformity with the fire facilities inventory as identified in the first five (5) years of the current adopted CIP of the applicable fire district. The issuance of the developer contribution credit will only occur after the off-site improvements are included in the first five (5) years of the CIP of the applicable fire district. In the event that the proposed project is not listed in the CIP to be funded by the same fiscal year that the construction or conveyance will be completed, or the donation made, the applicant may request the governing body to amend the CIP and to move the applicable project forward to the fiscal year in which the construction or conveyance will be completed, or the donation made;



2. Whether the proposed plan of construction or conveyance is consistent with the public interest; and
3. Whether the off-site improvements shall be constructed to the specifications of the applicable fire district.

Upon acceptance, Sumter County staff will forward the proposed plan, including the developer contribution credit agreement to the County Administrator and County Attorney for their review and approval. The County Administrator will then forward the recommended plan and developer contribution credit agreement to the BOCC for consideration.

If a developer contribution credit is granted for a development project, it shall be recorded in a letter to the Applicant, who shall be given a copy. A copy of this letter must be attached to all subsequent Fire Impact Fee applications seeking to use a portion of the credit balance.

The credit provided for each component shall not exceed the total amount of the impact fees due and payable for the component for which the credit is proposed.

### *Challenge of Credit Determination*

The developer may challenge any determination made by the County Administrator by notifying the County Administrator of his or her intent to challenge the decision. The County Administrator shall schedule a hearing before the BOCC and provide the Applicant written notice of the time and place of the hearing. Such a hearing shall be scheduled within sixty (60) days of rendition of said decision and at which time the following shall be determined:

1. If the proposed plan of construction or conveyance is in conformity with contemplated improvements to the fire facilities inventory as identified in the first five (5) years of the current adopted CIP of the applicable fire district;
2. If the proposed conveyance is consistent with the public interest; and



3. If the proposed construction and conveyance time schedule is consistent with the CIP of the applicable fire district.

The decision of the BOCC to either accept or deny the credit in petition shall be in writing and issued by the County Administrator within thirty (30) days of the hearing, at which time a copy shall be provided to the Applicant.

If the proposed plan of conveyance or construction is accepted by the BOCC granting impact fee credits, then the Applicant and the County shall sign the developer contribution credit agreement which shall provide for the timing of the action to be taken by the Applicant and the obligations and responsibilities of both parties according to the standards identified in Fire Impact Fee Ordinance.

#### *Management of Fire Impact Fee Credit Program*

The Financial Services Department shall be responsible for establishing the management and control of all Fire Impact Fee credit accounts. Each account shall be maintained in electronic spreadsheet format and shall indicate authorization for credit, the beginning credit balance, and each building permit that is issued which draws down the credit balance.

#### *Payment Under Protest*

Prior to the resolution of a pending credit application, any Applicant desiring the issuance of a building permit must pay the applicable Fire Impact Fee prior to or at the time the request for hearing is filed. Such payment shall be deemed paid "under protest" and shall not be construed as a waiver of any rights. Any difference shall be refunded to the Applicant.



*Transferability*

Credit for contributions, payments, construction or dedications of a fire impact fee component shall not be transferable from one impact construction to another.



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**Appendix A**  
**Population Estimates and Projections –**  
**Supplemental Information**

**Table A-1**  
**Permanent Population Projections**

Geographic Area	Year																				
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
The Villages	8,366	10,119	12,239	14,803	17,904	21,655	26,192	31,679	38,307	43,038	47,439	50,751	54,063	57,734	60,686	63,998	67,310	67,813	68,316	68,819	69,320
Sumter County	39,612	41,151	42,318	40,673	41,106	44,743	48,187	49,180	45,907	42,991	41,486	42,054	42,622	42,831	43,759	44,327	45,375	49,232	53,089	56,946	60,805

Notes:

- (1) The incarcerated population residing in Sumter County is excluded from the population estimates and projections.
- (2) Sumter County population estimates for 2000 thru 2008 are from the University of Florida's Bureau of Economic and Business Research (BEBR).
- (3) The Villages population estimates for 2001 thru 2008 interpolated based on population estimates for 2000 (from the 2000 Census) and the 2009 population estimate provided by Sumter County.
- (4) Sumter County and The Villages population estimates for 2009 thru 2020 provided by the Sumter County Planning Department.

**Table A-2**  
**Seasonal Population Projections**

Seasonal Population	Year																				
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
The Villages	1,422	1,720	2,081	2,517	3,044	3,681	4,453	5,385	6,512	7,316	8,065	8,628	9,191	9,815	10,317	10,880	11,443	11,528	11,614	11,699	11,784
Sumter County	3,961	4,115	4,232	4,067	4,111	4,474	4,819	4,918	4,591	4,299	4,149	4,205	4,262	4,283	4,376	4,433	4,538	4,923	5,309	5,695	6,081

Notes:

- (1) For The Villages, the annual seasonal population is calculated as 17 percent of the permanent population, based on the seasonal adjustment factor consistent with the Sumter County 2035 Comprehensive Plan.
- (2) For Sumter County, for the Year 2000, the weighted average persons per household for Sumter County from Census 2000 is divided by the permanent population figure for the Year 2000 to determine the ratio of seasonal to permanent residents (10%). This ratio is then applied to the permanent population each year to determine the corresponding seasonal population.



**Table A-3**  
**Weighted Average Population Projections**

Population Category	Year																				
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>The Villages</b>																					
Permanent Residents	8,366	10,119	12,239	14,803	17,904	21,655	26,192	31,679	38,307	43,038	47,439	50,751	54,063	57,734	60,686	63,998	67,310	67,813	68,316	68,819	69,320
Seasonal, Occasional, Recreational	597	722	874	1,057	1,278	1,546	1,870	2,262	2,735	3,073	3,387	3,624	3,860	4,122	4,333	4,570	4,806	4,842	4,878	4,914	4,949
<b>Weighted Average Population</b>	<b>8,963</b>	<b>10,841</b>	<b>13,113</b>	<b>15,860</b>	<b>19,182</b>	<b>23,201</b>	<b>28,062</b>	<b>33,941</b>	<b>41,042</b>	<b>46,111</b>	<b>50,826</b>	<b>54,375</b>	<b>57,923</b>	<b>61,856</b>	<b>65,019</b>	<b>68,568</b>	<b>72,116</b>	<b>72,655</b>	<b>73,194</b>	<b>73,733</b>	<b>74,269</b>
<b>Sumter County</b>																					
Permanent Residents	39,612	41,151	42,318	40,673	41,106	44,743	48,187	49,180	45,907	42,991	41,486	42,054	42,622	42,831	43,759	44,327	45,375	49,232	53,089	56,946	60,805
Seasonal, Occasional, Recreational	1,664	1,728	1,777	1,708	1,727	1,879	2,024	2,066	1,928	1,806	1,743	1,766	1,790	1,799	1,838	1,862	1,906	2,068	2,230	2,392	2,554
<b>Weighted Average Population</b>	<b>41,276</b>	<b>42,879</b>	<b>44,095</b>	<b>42,381</b>	<b>42,833</b>	<b>46,622</b>	<b>50,211</b>	<b>51,246</b>	<b>47,835</b>	<b>44,797</b>	<b>43,229</b>	<b>43,820</b>	<b>44,412</b>	<b>44,630</b>	<b>45,597</b>	<b>46,189</b>	<b>47,281</b>	<b>51,300</b>	<b>55,319</b>	<b>59,338</b>	<b>63,359</b>

Notes:

- (1) For both The Villages and Sumter County, the annual permanent resident figure from Table A-1 is multiplied by a weighting factor of 1.0, or 12 months, per year.
- (2) For both The Villages and Sumter County, the seasonal, occasional, and recreational residents from Table A-2 is multiplied by a weighting factor of 0.42, or 5 months per year, per the Census definition of a part-time resident.
- (3) The weighted average population for both The Villages and Sumter County is the sum of the weighted permanent residents and the weighted seasonal, occasional, and recreational residents.



**Table A-4**  
**Sumter County**  
**Population and Employment Characteristics (Year 2009)**

Item/Calculation Step	Figure
Total employees who live in Sumter County <sup>(1)</sup>	21,881
Sumter County permanent population <sup>(2)</sup>	42,991
Total employees as a percent of population <sup>(3)</sup>	50.9%
School age population (5-17 years) <sup>(4)</sup>	7,632
School age population as a percent of total population <sup>(5)</sup>	17.8%
Population net of employees and school age population <sup>(6)</sup>	13,478
Other population as a percent of total population <sup>(7)</sup>	31.4%

- (1) Source: Environmental Systems Research Institute (ESRI) for the 2009 number of employees who live in Sumter County based on the Census Block Groups comprising Sumter County excluding The Villages
- (2) Source: Table A-1 for the 2009 permanent population figure
- (3) Total employees (Item 1) divided by total population (Item 2)
- (4) Source: Sumter County School District for the 2009 total public school enrollment
- (5) School age population (Item 4) divided by total population (Item 2)
- (6) Total population (Item 2) less total employees (Item 1) and school age population (Item 4)
- (7) Population net of employees and school age population (Item 6) divided by total population (Item 2)

**Table A-5**  
**Sumter County**  
**Residential Coefficient for Functional Population**

Population Group	Hours at Residence <sup>(1)</sup>	Percent of Population <sup>(2)</sup>	Effective Hours <sup>(3)</sup>
Employees	13	50.9%	6.6
Students	15	17.8%	2.7
Other	20	31.4%	6.3
Total Hours at Residence <sup>(4)</sup>			15.6
Residential Functional Population Coefficient <sup>(5)</sup>			65.0%

- (1) Estimated.
- (2) Source: Table A-4
- (3) Hours at residence (Item 1) multiplied by percent of population (Item 2)
- (4) Sum of the effective hours
- (5) Sum of effective hours (Item 4) divided by 24



**Table A-6**  
**The Villages**  
**Population and Employment Characteristics (Year 2009)**

Item/Calculation Step	Figure
Total employees who live in The Villages <sup>(1)</sup>	11,595
The Villages permanent population <sup>(2)</sup>	43,038
Total employees as a percent of population <sup>(3)</sup>	26.9%
School age population (5-17 years) <sup>(4)</sup>	0
School age population as a percent of total population <sup>(5)</sup>	0.0%
Population net of employees and school age population <sup>(6)</sup>	31,443
Other population as a percent of total population <sup>(7)</sup>	73.1%

- (1) Source: ESRI for the 2009 number of employees who live in The Villages based on the Census Block Groups comprising The Villages
- (2) Source: Table A-1 for the 2009 permanent population figure
- (3) Total employees (Item 1) divided by total population (Item 2)
- (4) The Villages is an age-restricted community and there are no school-age children within The Villages
- (5) School age population (Item 4) divided by total population (Item 2)
- (6) Total population (Item 2) less total employees (Item 1) and school age population (Item 4)
- (7) Population net of employees and school age population (Item 6) divided by total population (Item 2)

**Table A-7**  
**The Villages**  
**Residential Coefficient for Functional Population**

Population Group	Hours at Residence <sup>(1)</sup>	Percent of Population <sup>(2)</sup>	Effective Hours <sup>(3)</sup>
Employees	13	26.9%	3.5
Students	15	0.0%	-
Other	20	73.1%	14.6
Total Hours at Residence <sup>(4)</sup>			18.1
Residential Functional Population Coefficient <sup>(5)</sup>			75.4%

- (1) Assumed
- (2) Source: Table A-6
- (3) Hours at residence (Item 1) multiplied by percent of population (Item 2)
- (4) Sum of the effective hours
- (5) Sum of effective hours (Item 4) divided by 24



**Table A-8**  
**Functional Population Projections**

Year	Annual Functional Population	
	Sumter County	The Villages
2000	35,780	7,195
2001	37,175	8,706
2002	38,216	10,534
2003	36,726	12,736
2004	37,130	15,398
2005	40,397	18,631
2006	43,508	22,544
2007	44,422	27,278
2008	41,446	32,979
2009	38,793	37,068
2010	37,435	40,849
2011	37,959	43,708
2012	38,490	46,549
2013	38,682	49,714
2014	39,533	52,249
2015	40,047	55,123
2016	41,008	57,989
2017	44,494	58,395
2018	47,965	58,804
2019	51,466	59,216
2020	54,966	59,631

Source: Based on growth rates for the jurisdiction's population found in Table A-1.



**DRAFT**

**Appendix B  
Land Replacement Values –  
Supplemental Information**

## Appendix B Land Replacement Value – Supplemental Information

To assist in determining an accurate land replacement value for both Sumter County and The Villages' fire impact fee programs, several different analysis were completed.

### Sumter County

To determine the land replacement values for the Sumter County fire impact fee, the following steps were undertaken:

- An analysis was conducted of all vacant land parcels sold in 2008 and 2009 for various acreage categories (i.e., all vacant parcels, vacant parcels 0.5-1.0 acres in size, vacant parcels 1-3 acres in size, and vacant parcels 2-4 acres in size) and by land use code (i.e., all vacant parcels, vacant residential, vacant commercial, and vacant industrial). There were several high value sales in 2008 that increased the land replacement value per acre significantly. Therefore, the results of the 2009 vacant land analysis were determined to be more representative of the future land cost.
- Using the 2009 vacant sales, an analysis of the assessed land value of each parcel located on a major thoroughfare was conducted, since a new fire station is most likely to be constructed along a major road to achieve a better response time. The results of this review were compared to the assessed land value for all vacant land sales. The result of this comparison indicates that the location of a parcel on a major road does not substantially increase the land replacement value.
- Using the 2009 vacant sales, an analysis of the assessed land value of parcels that are currently zoned or have a future land use designation consistent with the requirements to locate a fire station. The results of this review were compared to the assessed land value for all vacant land sales. The result of this comparison indicates that parcels either zoned or that have a future land use designation consistent with the requirements to locate a fire station does increase the land replacement value. As presented in Table B-1, the weighted average value per acre is \$37,500 (rounded down), which is used as the land replacement value in the Sumter County fire impact fee calculations.



- A review of the most recent Sumter County land acquisitions. Sumter County has not purchased much land in recent years, but has acquired land through trade or interlocal agreements, with the most recent transaction occurring in late 2006. The values from these transactions were reviewed and determined to be too outdated for use in the impact fee analysis.

**Table B-1**  
**Sumter County Land Replacement Value**

Land Value Summary			
Statistic	Land Value	Acreage	Value/ Acre
Min	\$1,486	0.20	\$2,199
Max	\$615,828	11.50	\$216,841
Median	\$46,227	2.39	\$24,589
Average	\$119,973	3.23	\$41,821
Weighted Average			\$38,131
Parcel Count			10

Source: Analysis based on data provided by the Sumter County Property Appraiser

## The Villages

Unlike the rest of Sumter County, very few vacant parcels are sold within The VCCDD, due to the type of development where parcels are typically improved by the developer and then sold. Therefore, a vacant land sales analysis for The Villages would not provide a significant amount of information upon which to determine a land replacement value. The VPSD has identified two locations where additional stations will be constructed over the next five years. To determine the land replacement value per acre, an analysis of the 2009 assessed land value of parcels 0.5 to 4 acres in size in each of these two locations was completed. There was a significant difference in the assessed value per acre between the two areas, so the average assessed value per acre for each location for the two areas was determined to be most appropriate. As presented in Table B-2, the weighted average cost per acre is \$225,000 (rounded down), which is used as the land replacement value in The Villages impact fee calculations.



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**Table B-2**  
**2009 Assessed Land Value of Future Station Locations**  
**(Parcels 0.5-2 Acres)**

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Land Value Summary		
Area/Description	Number of Parcels	Value/ Acre
CR 466 A East by the Lake/Sumter County Line	10	\$443,469
Buena Vista and CR 44A	15	\$10,924
<b>Average</b>		\$227,197

Source: Analysis based on data provided by the Sumter County Property Appraiser

