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Development Impact Fees

Jefferson County, West Virginia

March, 1991

Fiscal Impact Analysis

•

Capital Facility Analysis

•

Impact Fee Systems

•

Growth Policy Planning

•

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•

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JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

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I. Executive Summary

Introduction

In 1990, the State of West Virginia passed legislation which enables counties to adopted impact fees if they meet specified criteria and requirements. Jefferson County contracted with Tischler & Associates, Inc. (TA) to conduct an impact fee study and document supportable fees. Beginning in October, TA met with County staff members to gather information on seven types of public facilities. After conducting interviews and reviewing documentation, TA and staff evaluated potential development impact fees. Based on the initial evaluation, six types of public facilities remained in consideration. TA conducted additional staff interviews and developed methodologies for the following public facilities:

- Public Schools
- Parks
- County Libraries
- Law Enforcement
- Fire Protection
- Emergency Medical Service

After gathering data necessary to determine local level of service standards, cost factors and fiscal variables, TA calculated potential development impact fees for these six types of public facilities.

Overview of the Report

Each of the development impact fee methodologies presented in

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this report follow the same basic steps. The first component is the calculation of demand generators (such as people or employees) associated with the proposed development. The second component in the calculation of development impact fees is the local level of service standards for each type of public facility. A major work effort in preparing this report was the documentation of actual or "as built" level of service standards for Jefferson County. The third component is the calculation of the maximum gross cost, which is the "cost" of public facilities if there were no credits for the anticipated payment of future revenues to be used for capital improvements. However, for public schools, capital projects will be financed with bonds retired by property taxes. Because new real estate development will help pay for the retirement of this debt, a general credit has been used to avoid potential double payment by new development. The calculation of general credits is the fourth component in the development impact fee methodology. The fifth and final component is the calculation of the maximum development impact fee, which is the maximum gross cost minus the general credits.

For each type of public facility, there is a methodology chart showing the steps followed to calculate development impact fees. The methodology chart illustrates the formula and variables which determine the development impact fee. After each methodology chart is a table showing the assumptions and calculated results of each development impact fee formula. All assumptions used in the calculations are clearly shown in the boxed areas of the development impact fee tables.

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Supportable and Recommended Development Impact Fees

TA has developed supportable methodologies and data for public schools, parks, county libraries, law enforcement, fire protection, and emergency medical services. The maximum development impact fees are summarized at the top of Table 1.

TA recommends the adoption of a fee schedule which is 10% less than the maximum supportable fee amounts. Using a percentage reduction is a common practice in the adoption of this type of fee. This practice discourages legal challenges and thus avoids the expenditure of both time and money by the County in successfully defending any challenges. Finally, community leaders concerned with economic development frequently point out the indirect economic benefit of new development. A percentage reduction in the development impact fees acknowledges the potential indirect economic benefit from new development. The recommended fee schedule, based on the 10% reduction, is shown at the bottom of Table 1.

Before Jefferson County adopts an impact fee ordinance, consideration should be given to a possible reduction in the fee amount for mobile homes. In Jefferson County this type of unit represents "affordable housing" for many residents. However, mobile homes have higher student generation rates and smaller property tax payments than other types of housing units. These factors result in a public school impact fee for a mobile home which is approximately twice the fee for a single family house, and seven times the impact fee for a townhouse. Jefferson County

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could recognize mobile homes as a type of affordable housing and thereby adopt a lower impact fees for this public purposes [see Section 7-20-7 (c), West Virginia Code as amended].

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Table 1: Maximum Supportable Development Impact Fees and Recommended Schedule

Summary of Maximum Supportable Impact Fees
Jefferson County, West Virginia

	Public Schools	Parks	County Libraries	Law Enforcement	Fire Protection	Emergency Medical	TOTAL
<i>Residential (per housing unit)</i>							
Single Family	\$2,343	\$135	\$55	\$22	\$433	\$46	\$3,034
Townhouse	\$630	\$119	\$48	\$20	\$273	\$40	\$1,130
Apartment	\$1,467	\$108	\$44	\$18	\$182	\$37	\$1,856
Mobile Home	\$4,400	\$141	\$57	\$23	\$159	\$48	\$4,828
<i>Non-Residential (per 1,000 square feet)</i>							
Shopping Center (1-30,000 sq. ft.)	\$0	\$0	\$0	\$133	\$225	\$42	\$400
Shopping Center (30,001-75,000 sq. ft.)	\$0	\$0	\$0	\$76	\$225	\$42	\$343
Shopping Center (75,001-150,000 sq. ft.)	\$0	\$0	\$0	\$60	\$225	\$42	\$327
General Office (1-30,000 sq. ft.)	\$0	\$0	\$0	\$20	\$225	\$86	\$331
General Office (30,001-75,000 sq. ft.)	\$0	\$0	\$0	\$13	\$225	\$69	\$307
Business Park	\$0	\$0	\$0	\$10	\$225	\$45	\$280
General Light Industrial	\$0	\$0	\$0	\$6	\$225	\$39	\$270

Recommended Impact Fee Schedule
Jefferson County, West Virginia

	Public Schools	Parks	County Libraries	Law Enforcement	Fire Protection	Emergency Medical	TOTAL
<i>Residential (per housing unit)</i>							
Single Family	\$2,109	\$122	\$50	\$20	\$390	\$41	\$2,731
Townhouse	\$567	\$107	\$43	\$18	\$246	\$36	\$1,017
Apartment	\$1,320	\$97	\$40	\$16	\$164	\$33	\$1,670
Mobile Home	\$3,960	\$127	\$51	\$21	\$143	\$43	\$4,345
<i>Non-Residential (per 1,000 square feet)</i>							
Shopping Center (1-30,000 sq. ft.)	\$0	\$0	\$0	\$120	\$203	\$38	\$360
Shopping Center (30,001-75,000 sq. ft.)	\$0	\$0	\$0	\$68	\$203	\$38	\$309
Shopping Center (75,001-150,000 sq. ft.)	\$0	\$0	\$0	\$54	\$203	\$38	\$294
General Office (1-30,000 sq. ft.)	\$0	\$0	\$0	\$18	\$203	\$77	\$298
General Office (30,001-75,000 sq. ft.)	\$0	\$0	\$0	\$12	\$203	\$62	\$276
Business Park	\$0	\$0	\$0	\$9	\$203	\$41	\$252
General Light Industrial	\$0	\$0	\$0	\$5	\$203	\$35	\$243

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II. Legal Foundation

The Local Powers Act is the enabling legislation for the implementation of development impact fees in West Virginia. The Local Powers Act consists of a series of statutes found in Chapter 7, Article 20, Sections 1-10 (Section 7-20-1 through 7-20-10) West Virginia Code as amended.

The Act authorizes counties to collect development impact fees which are to be levied upon new development and which are calculated to provide a proportionate share of the costs of capital improvements required as a result of such new development in the Jefferson County. There are several prerequisites required prior to the authorization for the collection of impact fees and these are found in Section 7-2-6, West Virginia Code as amended. The Local Powers Act goes on to describe the method for calculation of a proportionate share of the costs of development which must be borne by new residential and commercial development. The Act also describes the use and administration of impact fees. There is also a provision for the refund of unexpended impact fees (see Section 7-20-9, West Virginia Code as amended).

The methodology and the calculation used by TA in this analysis of development impact fees is consistent with the provisions and restrictions contained in the Local Powers Act. Each component of the impact fee analysis contained in this report has been carefully analyzed in light of the West Virginia enabling legislation, otherwise known as the Local Powers Act.

III. General Data Assumptions

Housing Unit, Population, and Employment Projections

Table 2 lists housing unit, persons per household, population, and employment projections for Jefferson County from 1990 to the year 2000. Housing units permitted over the past ten years in the unincorporated area are shown at the top of Table 2. Residential building permit activity has increased annually in the unincorporated area to a 1989 addition (based on the latest available data) of 467 housing units, of which approximately 79% were single family units.

According to the preliminary 1990 census data for Jefferson County, total housing units in the county have increased from 11,542 units in 1980 to 14,558 units in 1990, which represents an average annual growth rate of 2.6%. Assuming that half of all mobile home permits are replacement units, as reported by the Planning Department, then subtracting the residential building permit data for the unincorporated area from the increase in total housing units (1980 to 1990) indicates that the municipalities in Jefferson County added 896 housing units over the same ten year period. Using these assumptions, TA produced the annual housing unit estimates shown in Table 2. The projected housing units (1991-2000) are based on a linear trend extrapolation of the annual housing unit data from 1980 to 1990.

The 1980 and 1990 Persons Per Household (PPH) figures for Jefferson County, which are discussed in more detail in the next section, were used in a logarithmic projection formula to produce the annual PPH

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figures for 1991 through the year 2000. A logarithmic curve is one which increases or decreases at an ever decreasing rate. Projections using this method will level off over time. This method was chosen because household size, which dropped significantly from 2.88 in 1980 to 2.70 in 1990, is expected to show a more moderate decline in the next ten years to 2.65 by the year 2000.

The population projections, shown near the bottom of Table 2, were calculated using the projected number of housing units and the PPH data discussed above. The 1991-2000 annual population projections include an assumed 91.4% occupancy rate, which was derived from preliminary 1990 census data. These figures forecast an average annual population growth rate of 2.08% for the next ten years. In comparison, the preliminary 1990 census data indicate that Jefferson County's population grew at an average annual rate of 1.80 % during the last ten years.

The employment estimates shown at the bottom of Table 2 are published by the West Virginia Division of Employment Security. The employment data has been grouped into three categories. The first category includes agriculture / forestry / fisheries, mining, construction, manufacturing, and wholesale trade employment. Retail trade is listed as a separate category. The third category includes all other types of employment (transportation / public utilities / communications, finance / insurance / real estate, services, and government). The historical data for the past five years was used to project future employment through the year 2000. Using a linear regression formula, Jefferson County is projected to add an average of 580 jobs per year during the next decade.

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Persons Per Household

In several of the development impact fee formulas, level of service standards and cost factors are calibrated on a per capita basis. Person Per Household (PPH) multipliers by housing type are used to determine the proportionate share of impact upon public facilities from each type of residential unit.

For housing data, TA used the 1980 census data shown in Table 3. The types of residential units were grouped into four categories, Single Family, Townhouse, Apartment, and Mobile Home (see Table 3). Because the detailed data shown from the 1980 census is not yet available from the 1990 census, TA used the preliminary 1990 total population and total housing unit figures to produce the preliminary 1990 PPH figures shown in Table 3. TA calculated the 1990 PPH by type of unit using the 1980 ratios of PPH by type of unit to the overall PPH (e.g. for Single Family [SF] $2.93 / 2.88 = [1990 \text{ SF PPH}] / 2.70$).

Employees Per 1,000 Square Feet

To allow for variations in building size, non-residential developments will determine their proportional development impact fee by using rates of employment per 1,000 square feet of building. These rates were calculated from data published by the Institute of Transportation Engineers (ITE) in Trip Generation (4th edition, 1987), except for the retail figures, which are based on the assumption of 400 square feet per retail employee.

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Table 2: Demand Base Data

Demand Base Data
Jefferson County, West Virginia

Housing Units

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	
Units Permitted in the Unincorporated Area											
Single Family	143	155	112	103	124	136	189	256	270	370	
Townhouse	0	0	0	0	31	24	16	12	22	25	
Apartment	2	5	17	82	88	64	16	80	20	4	
Mobile Home	39	48	30	29	26	40	37	38	42	68	
TOTAL	184	208	159	214	269	264	258	386	354	467	
Census Count Estimates ->											
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Single Family	8,493	8,696	8,911	9,083	9,246	9,430	9,626	9,875	10,191	10,521	10,951
Townhouse	501	516	530	545	559	605	643	674	700	737	776
Apartment	843	860	880	912	1,009	1,112	1,191	1,222	1,317	1,352	1,371
Mobile Home	1,261	1,281	1,305	1,320	1,334	1,347	1,367	1,386	1,405	1,426	1,460
TOTAL	11,098	11,352	11,626	11,859	12,148	12,494	12,827	13,156	13,613	14,035	14,558
Projected ->											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	
Single Family	11,182	11,412	11,643	11,874	12,105	12,336	12,567	12,798	13,028	13,259	
Townhouse	786	815	843	871	900	928	956	984	1,013	1,041	
Apartment	1,464	1,525	1,586	1,647	1,708	1,769	1,830	1,891	1,953	2,014	
Mobile Home	1,465	1,483	1,502	1,520	1,539	1,557	1,576	1,594	1,613	1,631	
TOTAL	14,896	15,235	15,574	15,913	16,251	16,590	16,929	17,268	17,606	17,945	

Persons Per Household (PPH)

	Logarithmic Projection ->											
	1980	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All Units	2.88	2.70	2.69	2.69	2.68	2.67	2.67	2.66	2.66	2.65	2.65	2.65

Population

	Census Estimates* ->										Prelim. Census
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Population Data	30,302	30,864	31,427	31,989	32,552	33,114	33,676	34,239	34,801	35,364	35,926
* Annual estimates calculated from average annual increase based on 1980 and 1990 census data.											
Projected** ->											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	
Population Projections	36,660	37,399	38,141	38,887	39,634	40,384	41,135	41,888	42,642	43,396	
** Calculated from projected housing units and PPH, assuming a 91.4% occupancy rate.											
Simple Population Growth Rate (Average Annual Change, 1990-2000)										2.08%	
Compound Population Growth Rate (Average Annual Change, 1990-2000)										1.91%	

Employment

	Estimates*** ->										
	1985	1986	1987	1988	1989						
Ind/Whse/Ag/Constr	2,775	2,896	3,060	3,401	3,565						
Retail	1,372	1,502	1,683	1,893	1,837						
All Other	4,018	4,161	4,433	4,629	4,992						
Total County (rounded)	8,200	8,600	9,200	9,900	10,400						
*** Data provided by West Virginia Division of Employment Security.											
Linear Trend Projections ->											
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Ind/Whse/Ag/Constr	3,765	3,973	4,182	4,390	4,599	4,807	5,016	5,224	5,433	5,641	5,850
Retail	2,054	2,186	2,318	2,450	2,582	2,714	2,846	2,978	3,111	3,243	3,375
All Other	5,171	5,413	5,655	5,896	6,138	6,379	6,621	6,863	7,104	7,346	7,587
Total County (rounded)	11,000	11,600	12,200	12,700	13,300	13,900	14,500	15,100	15,600	16,200	16,800

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Table 3: Persons Per Household

Persons Per Household
Jefferson County, West Virginia

Type of Unit	Census Data (1980)			Preliminary* 1990 PPH
	Persons in Occupied Housing Units	Occupied Housing Units	Persons Per Household (PPH)	
<i>Single Family</i>	22,420	7,660	2.93	2.75
<i>Townhouse</i>				
Attached Units	246	119	2.07	
Duplexes	894	325	2.75	
Subtotal	1,140	444	2.57	2.41
<i>Apartment</i>				
Three or Four Units	697	313	2.23	
Five or more Units	1,167	487	2.40	
Subtotal	1,864	800	2.33	2.19
<i>Mobile Home</i>	3,273	1,076	3.04	2.86
TOTAL	28,697	9,980	2.88	2.70

* Total 1990 PPH (for all types of units) calculated from 1990 census data, the latest figures being 35,926 persons and 14,558 housing units. The ratio of Persons in Occupied Housing Units to Total Population, and the ratio of Occupied Housing Units to Total Housing Units, were based on 1980 census data, as these 1990 census figures are not yet available.

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Table 4: Employees Per 1,000 Square Feet

Employees Per 1,000 Square Feet
Jefferson County, West Virginia

Land Use	Average Weekday Vehicle Trip Ends Per 1,000 Sq. Ft.*	Average Weekday Vehicle Trip Ends Per Employee*	Calculated # of Employees Per 1,000 Sq. Ft.
Shopping Center (1-30,000 sq. ft.)	166.35	**	2.50
Shopping Center (30,001-75,000 sq. ft.)	94.71	**	2.50
Shopping Center (75,001-150,000 sq. ft.)	74.31	**	2.50
General Office (1-30,000 sq. ft.)	24.39	4.72	5.17
General Office (30,001-75,000 sq. ft.)	16.31	3.94	4.14
Business Park	12.42	4.58	2.71
General Light Industrial	6.97	3.02	2.31

* From the reference book Trip Generation (4th Edition)
published by the Institute of Transportation Engineers, 1987.
** Retail calculation based on 400 square feet per employee.

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IV. Public School Impact Fee

Jefferson County Public Schools currently operates 12 schools (8 Elementary, 3 Junior High, and 1 Senior High).

The methodology used to calculate the public school impact fee is diagrammed in Chart 1. Table 5 shows the Public School Impact Fee, including assumptions and calculated results. The assumptions used in the impact fee formula are discussed below. The financial assumptions used in the calculation of general credits are discussed near the end of this report under the heading "General Credits".

Average Public School Students Per Household

Jefferson County Public Schools conducted a survey of students to determine the number of students living in each type of dwelling unit. The housing survey results are shown in the shaded portion of Table 6. TA adjusted the survey totals according to the actual 1990 enrollment in Jefferson County Public-Schools, by type of school. The current estimates of households were used to calculate the number of students per household by type of unit and type of school. The public school students per household multipliers, shown at the bottom of Table 6, will yield the actual 1990 Jefferson County enrollment when multiplied by the 1990 household estimates. The survey should be conducted at least every other year in order to monitor any changes in student generation rates. For example, as families in predominately new townhouses age, the student generation rate may increase significantly from the relatively low figure of

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0.18 public school students per housing unit. In comparison, the rate for single family units is 0.5 public school students per housing unit.

Land Cost Per Acre

The Jefferson High School site was purchased approximately 18 years ago. Another school site has not been acquired since. Therefore, TA recommends that a reasonable proxy be used to indicate the likely cost of a school site in Jefferson County. According to the County Administrator, the 40 acre addition to the industrial park located near Bardane, which Jefferson County purchased in March of 1990, is probably the best proxy for land purchased recently by the public sector. The cost of this farm land (\$202,762) indicates a land cost of approximately \$5,000 per acre.

Acreage and Square Footage Per Student

Table 7 lists the actual acreage and square footage of all public schools in Jefferson County. The public school impact fee is calibrated using existing level of service standards. The data provided by Jefferson County Schools indicates an average of 0.02 acres of public school land per elementary student, 0.02 acres per junior high student, and 0.05 acres per senior high student. The average square footage per student is 87, 107, and 102 for elementary, junior high, and senior high, respectively.

Capital Cost Per Square Foot

Jefferson County Public Schools provided construction cost and square footage data on recent capital projects as shown at the bottom of

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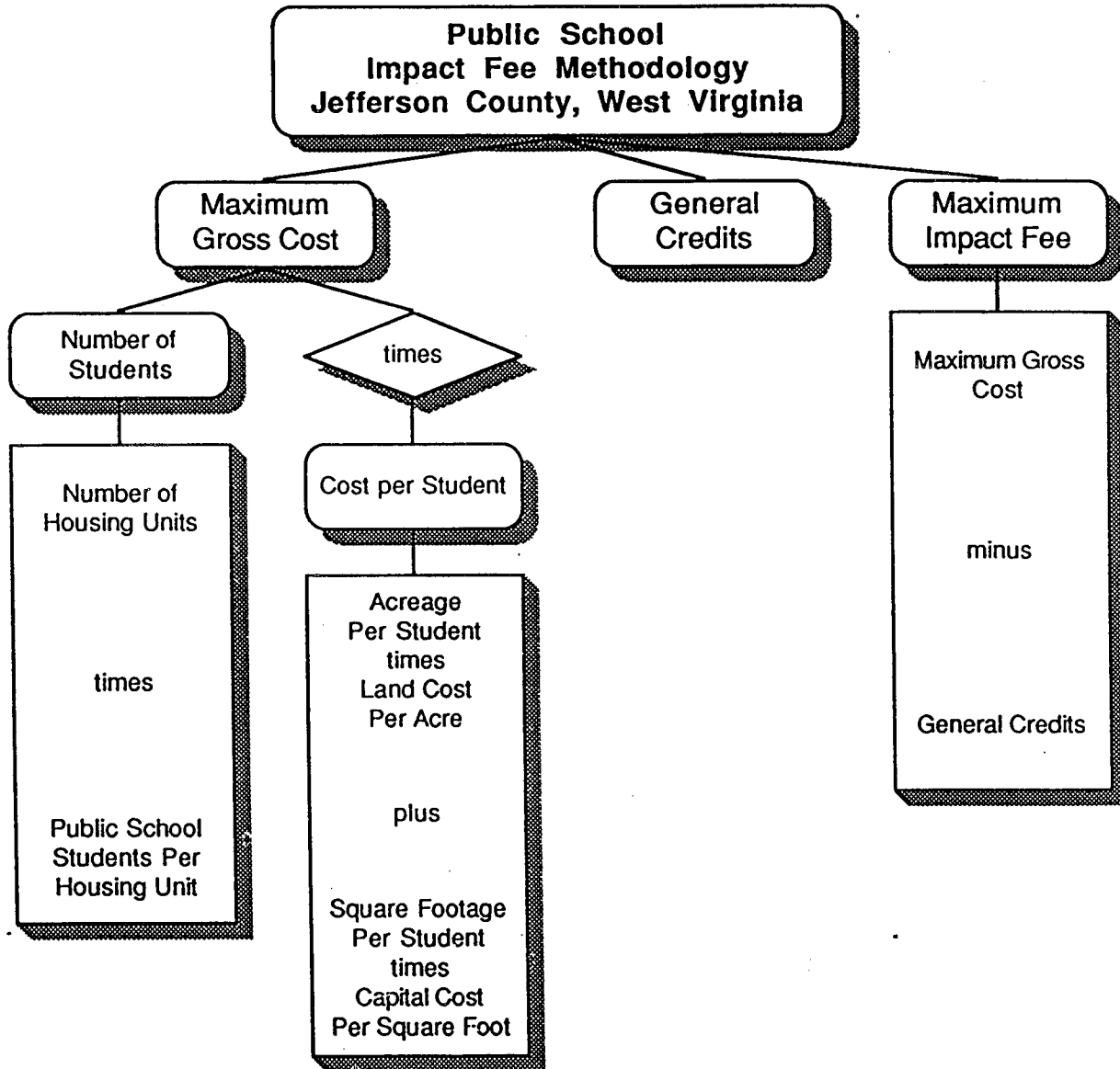
Table 7. Based on information from Helbing Lipp Ltd, the architecture and engineering firm working on these projects, the average construction cost was \$61.66 per square foot for elementary schools. A national survey by American School and University Magazine (5/90) indicated a minor variation of approximately one percent by type of school. Therefore, the elementary school capital cost will be used for all types of schools. TA increased the capital cost figure by 16% to include the cost of design fees, furniture, and equipment necessary to make a school ready for use. With this 16% increase, the capital cost for Jefferson County public schools is \$71.53 per square foot.

General Credits

The public school impact fee methodology includes general credits for future property tax payments which will be used to retire debt incurred for school construction. The assumptions used to calculate the general credits are shown in Table 5 and explained in the "General Credits" section near the end of this report. Because of the high number of public school students per mobile home and the relatively low market value, which results in a low general credit for future property tax payments, the public school impact fee for mobile homes is over twice as high as the fee for single family units.

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Chart 1: Public School Impact Fee Methodology



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Table 5. Public School Impact Fee

Public School Impact Fee
Jefferson County, West Virginia

	Elementary grades K-6	Junior High grades 7-9	Senior High grades 10-12	All Grades
<i>Assumptions:</i>				
Public School Students Per Housing Unit				
Single Family	0.27	0.12	0.11	0.50
Townhouse	0.11	0.04	0.03	0.18
Apartment	0.18	0.05	0.05	0.28
Mobile Home	0.48	0.13	0.06	0.67
Level Of Service (LOS) Standards				
Acreage Per Student	0.02	0.02	0.05	
Land Cost Per Acre	\$5,000	\$5,000	\$5,000	
Square Footage Per Student	87	107	102	
Capital Cost Per Square Foot	\$71.53	\$71.53	\$71.53	

Maximum Gross Cost Per Housing Unit*				
Single Family (SF)	\$1,707	\$930	\$830	\$3,468
Townhouse (TH)	\$696	\$310	\$226	\$1,232
Apartment (AP)	\$1,138	\$388	\$377	\$1,903
Mobile Home (MH)	\$3,035	\$1,008	\$453	\$4,496

* Incomplete methodology which does not include credits.

General Credits

<i>Assumptions for calculation of credits:</i>		Year	SF	TH	APT	MH
SF Market Value	\$129,000	1	\$105	\$56	\$41	\$9
TH Market Value	\$69,000	2	\$105	\$56	\$41	\$9
APT Assessed Value	\$10,000	3	\$105	\$56	\$41	\$9
MH Market Value	\$11,000	4	\$105	\$56	\$41	\$9
Assessment Rate	40%	5	\$105	\$56	\$41	\$9
Class II Property Levy (per \$100)	0.2034	6	\$105	\$56	\$41	\$9
Class III Property Levy (per \$100)	0.4068	7	\$105	\$56	\$41	\$9
Appreciation Rate	0.00%	8	\$105	\$56	\$41	\$9
Discount Rate	6.85%	9	\$105	\$56	\$41	\$9
		10	\$105	\$56	\$41	\$9
		11	\$105	\$56	\$41	\$9
		12	\$105	\$56	\$41	\$9
		13	\$105	\$56	\$41	\$9
		14	\$105	\$56	\$41	\$9
		15	\$105	\$56	\$41	\$9
		16	\$105	\$56	\$41	\$9
		17	\$105	\$56	\$41	\$9
		18	\$105	\$56	\$41	\$9
		19	\$105	\$56	\$41	\$9
		20	\$105	\$56	\$41	\$9
		Total	\$2,099	\$1,123	\$814	\$179
		Net Present Value	\$1,125	\$602	\$436	\$96

Maximum Impact Fee Per Housing Unit

Single Family	\$2,343
Townhouse	\$630
Apartment	\$1,467
Mobile Home	\$4,400

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Table 6. Public School Students Per Household

Student Generation Rates

Jefferson County, West Virginia

		Housing Survey Results*							Survey	Adjusted	House-	Students
<i>Elementary</i>	Grade ->	K	1	2	3	4	5	6	Total	Total**	holds***	Per Hsehd
Single Family		287	317	399	399	388	376	331	2,497	2,692	10,009	0.27
Townhouse		6	17	9	15	9	6	9	71	77	709	0.11
Apartment		31	32	33	23	24	39	22	204	220	1,253	0.18
Mobile Home		72	98	79	87	87	80	88	591	637	1,334	0.48
TOTAL		396	464	520	524	508	501	450	3,363	3,626	13,306	0.25
<i>Junior High</i>	Grade ->	7	8	9					Survey	Adjusted	House-	Students
Single Family		375	353	296					Total	Total**	holds***	Per Hsehd
Townhouse		9	6	9					24	28	709	0.04
Apartment		25	21	9					55	64	1,253	0.05
Mobile Home		50	67	30					147	171	1,334	0.13
TOTAL		459	447	344					1,250	1,457	13,306	0.09
<i>Senior High</i>	Grade ->	10	11	12					Survey	Adjusted	House-	Students
Single Family		313	316	297					Total	Total**	holds***	Per Hsehd
Townhouse		6	1	12					19	22	709	0.03
Apartment		22	11	22					55	63	1,253	0.05
Mobile Home		29	19	23					71	82	1,334	0.06
TOTAL		370	347	354					1,071	1,233	13,306	0.08

* 1990 data provided by Jefferson County Public Schools.

** Due to absentees, the total was adjusted on a pro rata basis to equal the 1990 enrollment.

*** Housing units times an occupancy rate of 91.4%.

Public School Students Per Household Multipliers

	Elementary	Junior High	Senior High	All Grades
Single Family	0.27	0.12	0.11	0.50
Townhouse	0.11	0.04	0.03	0.18
Apartment	0.18	0.05	0.05	0.28
Mobile Home	0.48	0.13	0.06	0.67
Total	0.25	0.09	0.08	0.43

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Table 7. Public School Level Of Service Standards

Public School Level Of Service Standards

Jefferson County, West Virginia

Acreage and Square Footage per Student

School	Acreage	Square Footage	1990 Enrollment	Average Acreage Per Student	Average Square Footage Per Student
ELEMENTARY					
Blue Ridge	12.0	33,079	539	0.02	61
North Jefferson	12.0	32,278	452	0.03	71
Page Jackson	12.4	55,892	571	0.02	98
Ranson	4.0	32,000	415	0.01	77
Shepherdstown	7.5	36,284	489	0.02	74
C. W. Shipley	15.0	35,472	349	0.04	102
South Jefferson	15.0	38,041	367	0.04	104
Wright Denny	4.0	52,191	444	0.01	118
Total	81.9	315,237	3,626	0.02	87
JUNIOR HIGH					
Charles Town	13.9	59,869	710	0.02	84
Harpers Ferry	10.0	37,042	357	0.03	104
Shepherdstown	8.8	58,498	390	0.02	150
Total	32.7	155,409	1,457	0.02	107
SENIOR HIGH					
Jefferson	64.6	126,181	1,233	0.05	102

Data Source: Jefferson County Public Schools.

Capital Cost of School Construction

Elementary School	New Constr. (Sq. Ft.)	Renovation (Sq. Ft.)	Construction Cost	Capital Cost per Sq. Ft.
North Jefferson	6,581	2,400	\$818,781	
South Jefferson	6,581	2,400	\$626,486	
C. W. Shipley	6,581	2,800	\$620,014	
Page Jackson	2,600	4,300	\$265,031	
Blue Ridge	16,593	13,800	\$1,627,300	
Ranson	2,565	4,276	\$450,000	
Total	41,501	29,976	\$4,407,612	\$61.66

Increase for design fees, furniture, and equipment => 16.00%

Total Capital Cost per Square Foot \$71.53

Data Source: Helbing Lipp Ltd., architects / engineers for Jefferson County Public Schools.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

V. Park Impact Fee

The Park Impact Fee methodology is illustrated in Chart 2. The demand for additional parks is created by the residents of additional housing units being constructed in Jefferson County. All assumptions and the calculated fee amounts by type of housing unit are listed in Table 8.

Jefferson County's largest parks, Summit Point Park and Sam Michaels Park, have a countywide service area. Leetown Park offers unique features, such as lighted ballfields, that also draw patrons from all parts of the county. John Moulton Park, located on the Shenandoah River, has a countywide service area as a point of access to the river. Given the characteristics of existing parks and the pattern of patronage, TA recommends the continued provision of parks on a countywide basis.

Acres of Park Land per 1,000 People

As shown in Table 9, Jefferson County has 232.3 acres of park land. Dividing this acreage by the 1990 population of Jefferson (35.926 when expressed in thousands) yields a level of service standard of 6.47 acres of park land per 1,000 people.

Land Cost per Acre

Records maintained by the County Administrator's office document that in March of 1990, Jefferson County purchased a 40 acre addition to the industrial park located near Bardane. The cost of this farm land (\$202,762) indicates a land cost of approximately \$5,000 per acre. This figure will be used as a proxy for the cost of land which Jefferson County

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

can expect to pay for future park sites.

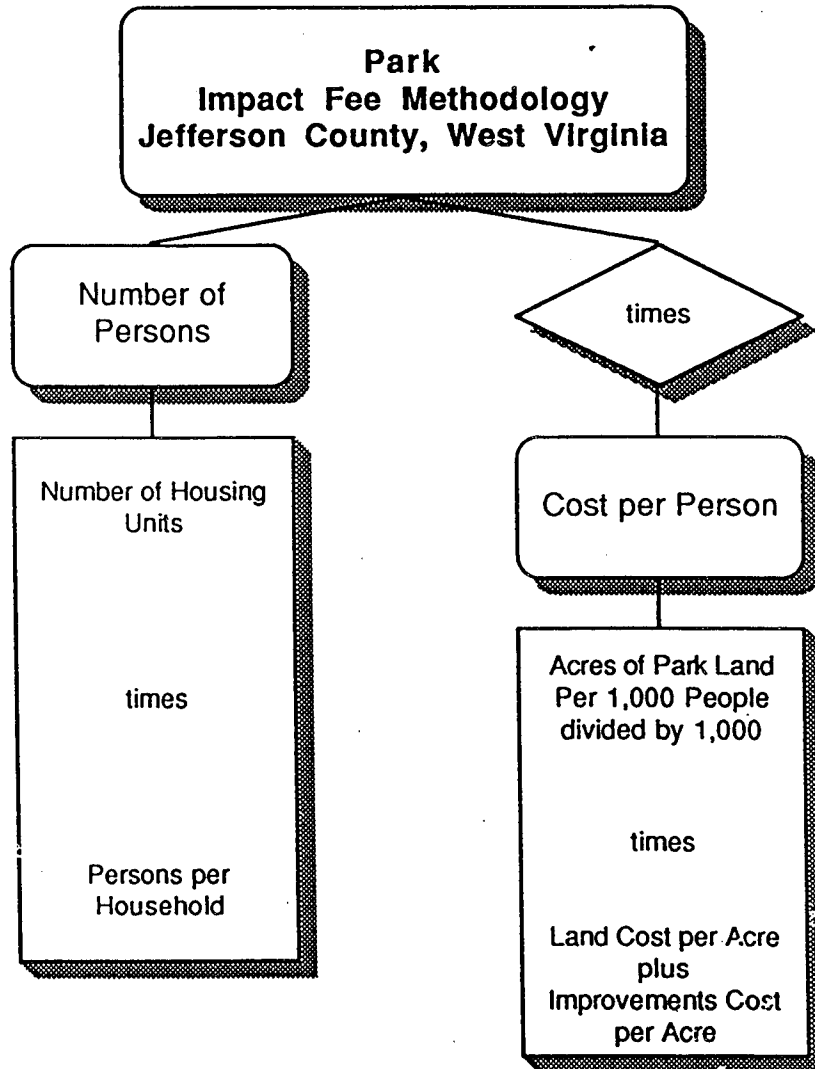
Park Improvements Cost per Acre

According to records maintained by the Jefferson County Parks Commission, existing parks have been improved by the construction of the facilities listed in Table 9. If Jefferson County had to replace these items, their value in constant 1990 dollars would total almost \$600,000.

The list of improvements and the original cost data were provided by the Jefferson County Parks Commission. TA obtained current replacement cost data for the major improvements of basketball courts, tennis courts, ballfields, and restrooms by calling jurisdictions in West Virginia and Virginia where park improvements had been recently constructed. Referrals and some capital cost data were obtained from grants administrators in the State of Virginia Department of Recreation and the State of West Virginia Community Development Division. Using the acreage figure discussed above, the average expenditure for park improvements is approximately \$2,600 per acre.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Chart 2: Park Impact Fee Methodology



JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 8: Park Impact Fee

Park Impact Fee

Jefferson County, West Virginia

	<i>Assumptions:</i>
<i>Persons Per Household</i>	
Single Family	2.75
Townhouse	2.41
Apartment	2.19
Mobile Home	2.86
<i>Level Of Service Standards</i>	
Acres of Park Land per 1,000 People	6.47
Land Cost Per Acre	\$5,000
Improvements Cost Per Acre	\$2,600
<i>Maximum Impact Fee Per Housing Unit</i>	
Single Family	\$135
Townhouse	\$119
Apartment	\$108
Mobile Home	\$141

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 9: Park Level Of Service Standards

Park Level of Service Standards

Jefferson County, West Virginia

<u>Site</u>	<u>Acreage</u>	<u>Improvement</u>	<u>Replacement Cost</u>
Bolivar Park	6.80	none	
Evitts Run Park (in Charles Town)	2.50	basketball courts (2)*	\$32,000
		pavilion	\$5,700
		playground equipment	\$5,700
		restrooms	\$5,000
		signs and landscaping	\$1,000
		tennis courts (2)*	\$35,000
Mount Mission Park	3.50	activity building	\$28,000
		ballfield *	\$30,000
		basketball court*	\$16,000
		fencing	\$8,500
		pavilion	\$5,700
		picnic tables and landscaping	\$1,000
		playground equipment	\$1,000
Summit Point Park	71.00	ballfield (2)*	\$60,000
		basketball court	\$8,000
		building	\$12,000
		fencing	\$6,000
		pavilion	\$5,700
		signs and landscaping	\$1,000
		utilities	\$8,300
Leetown Park	10.00	concession buildings (2)	\$22,000
		fencing	\$20,000
		lighted ballfields (2)*	\$128,000
		pavilion and tables	\$6,000
		playground equipment (2)	\$10,000
		restrooms*	\$25,000
		signs and landscaping	\$1,000
		tennis courts (2)*	\$35,000
John Moulton Park	0.50	boat ramp	\$6,000
		fencing and landscaping	\$11,000
		parking lot	\$2,000
Sam Michaels Park	138.00	fencing	\$18,000
		grading	\$10,000
		pavilion	\$15,000
		picnic tables	\$1,000
		signs and landscaping	\$1,000
		utilities	\$12,000
Total Acreage	232.30	Total Improvements	\$598,600
1990 Population	35,926	Cost Per Acre (rounded)	\$2,600
Acres Per 1,000 People	6.47		

Source: Improvements and original cost data provided by Jefferson County Parks Commission.

* See text for explanation of current replacement cost.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

VI. County Library Impact Fee

The Jefferson County library system consists of three branches located in Bolivar/Harpers Ferry, Shepherdstown, and Summit Point (referred to as the South Jefferson library). Although Jefferson County residents use the college library at Shepherdstown and the private library in Charles Town, these facilities will not receive funding from impact fees. Impact fees can be used to build new branch libraries, expand existing facilities, and acquire additional volumes for county libraries.

The library impact fee methodology is diagrammed in Chart 3. The level of service standards and cost factors used to calculate the library impact fee are shown in the boxed area of Table 10.

Acres of Library Land per 1,000 Persons

Library level of service standards are calibrated using data on the existing libraries in Jefferson County, as shown in Table 11. The three branch libraries have a total land area of 0.83 acres, which is an average of 0.02 acres per 1,000 people.

Land Cost Per Acre

The cost of land in developed areas is likely to be higher than the cost of park land and future school sites. Parks and schools will probably be located on raw land in a rural or suburban location and are assumed to have a land cost of \$5,000 per acre. Land for libraries (and fire stations) is likely to be in a more expensive "in town" setting. The Citizens Fire Company in Charles Town expects to spend approximately \$20,000 per

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

acre for additional land. This figure will be used as a reasonable proxy for the cost of a library site. This estimated land cost is close to the \$15,000 per acre figure paid for the Maddox Farm near Shepherdstown, which was purchased in 1989. The cost per acre for this large parcel of 130 acres is probably lower than the cost of a small site suitable for a fire station or library.

Square Footage Per Person

Table 11 lists the size of each library in Jefferson County. Based on the total of 3,980 square feet, the existing level of service is 0.11 square feet of library per capita.

Capital Cost Per Square Foot

To derive a projected cost for new county libraries (in constant 1990 dollars), TA used data published in Marshall Valuation Service (Marshall & Swift, 8/90 update). Capital costs for libraries (Class C, low cost construction) with current cost and local multipliers indicate that Jefferson County can expect to spend \$40 per square foot for construction. This cost figure includes average architecture and engineering fees, normal site costs for excavation and grading, and a typical contractor's overhead and profit. Marshall Valuation Service indicates furniture and equipment will likely add 15% to the cost of a library, for a total cost of \$46 per square foot. This figure is consistent with the planned expenditure of approximately \$35,000 to expand the Bolivar/Harpers Ferry library. The additional 752 square feet will have an average cost of \$47 per square foot.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Volumes per Person

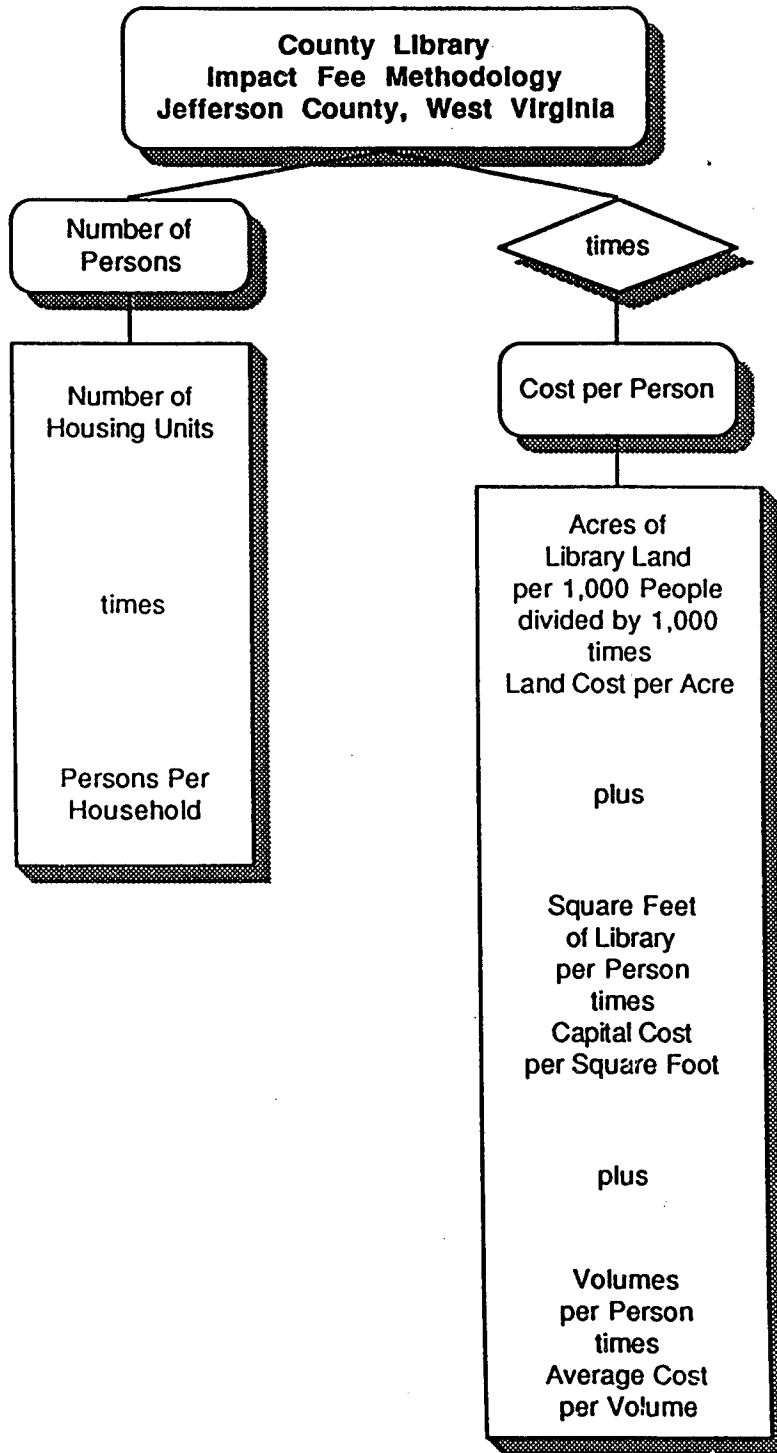
Jefferson County currently has 34,872 volumes in its three libraries. For the purpose of impact fees, the term "volume" includes all books, periodical subscriptions, and tapes (both audio and video). Using the 1990 total county population of 35,745, the existing level of service standard is 0.98 volumes per capita.

Average Cost per Volume

County librarians reviewed purchasing records from recent years and determined the average cost of library materials to be \$15 per volume.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Chart 3: County Library Impact Fee Methodology



JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 10: County Library Impact Fee

County Library Impact Fee

Jefferson County, West Virginia

	<i>Assumptions:</i>
Persons Per Household	
Single Family	2.75
Townhouse	2.41
Apartment	2.19
Mobile Home	2.86
Level Of Service Standards	
Acres of Library Land per 1,000 People	0.02
Land Cost Per Acre	\$20,000
Square Feet of Library per Person	0.11
Capital Cost per Square Foot (1)	\$46
Volumes per Person	0.97
Average Cost per Volume	\$15
(1) Includes design fees, construction, furnishings, and equipment.	
 Maximum Impact Fee Per Housing Unit	
Single Family	\$55
Townhouse	\$48
Apartment	\$44
Mobile Home	\$57

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 11: County Library Level Of Service Standards

County Library Level of Service (LOS) Standards
 Jefferson County, West Virginia

	Bolivar/ Harpers Ferry	Shepherds- town	South Jefferson	Total County	<u>Existing LOS</u>
Acres of Land	0.45	0.03	0.36	0.83	0.02 per 1,000 people
Square Footage	1,250	2,280	450	3,980	0.11 per capita
Volumes	15,172	14,600	5,100	34,872	0.97 per capita
Avg. \$/volume	\$14	\$14	\$21		\$15 weighted average
Population				35,926	

VII. Law Enforcement Impact Fee

The methodology used to calculate the law enforcement impact fee is diagrammed in Chart 4. As shown in the methodology chart, residential impact fees are a function of the number of persons in a new housing unit while new non-residential development will be assessed impact fees based on the trip generation characteristics of the non-residential land use. Trip generation is a more accurate indicator of law enforcement impact from non-residential development than other possible demand units such as square footage or number of employees. Among non-residential uses, trip generation rates are highest for retail land uses. The demand for law enforcement is also greatest at retail uses due to shoplifting, other types of theft, and burglaries. The Jefferson County Sheriff's Department also responds to traffic accidents, which are directly proportional to trip generation rates.

Law enforcement capital costs were divided by assigning 77% of the cost to residential development and 23% to non-residential development. These percentages were determined using local data provided by the Sheriff's Department. According to Uniform Crime Reporting (UCR) monthly statistics for January through October of 1990, 27 (or 23%) of the 118 actual offenses handled by the Jefferson County Sheriff's Department were robberies, burglaries, or thefts at non-residential properties. The UCR system, which was not designed to provide detailed information on the location of offenses, is the best available source of information to indicate the relative law enforcement impact of residential and non-residential development.

Table 12 shows the Law Enforcement Impact Fee, including assumptions

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

and calculated results. Law enforcement level of service standards are discussed below.

Patrol Cars per Person

Jefferson County currently has eight patrol cars in service. Multiplying this number by 77% (see discussion above) and then dividing by the 1990 population (35.926 when expressed in thousands), yields the level of service standard of 0.1715 patrol cars per 1,000 people.

Patrol Cars per 1,000 Non-Residential Average Weekday Vehicle Trip Ends

As shown in Table 15, the total number of non-residential vehicle trips on an average weekday in Jefferson County is estimated to be 108,497 in 1990. Taking 23% of the current patrol cars (8) and dividing by 108.497 yields a level of service standard of 0.0170 patrol cars per 1,000 non-residential Average Weekday Vehicle Trip Ends (AWVTE).

Capital Cost per Patrol Car

According to Jefferson County Sheriff Department records and information supplied by the Office of Emergency Services, patrol cars currently cost about \$20,000 for a fully equipped vehicle. A detailed replacement cost breakdown is shown at the bottom of Table 14.

Square Feet of Sheriff Station per Person

According to data collected by the County Engineer, the Sheriff's law enforcement headquarters has 2,786 square feet. This area includes

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

office space, a holding cell, locker area and storage. Assuming residential development accounts for 77% of the demand for law enforcement, and dividing by the 1990 population (35.926 when expressed in thousands), results in a level of service standard of 59.71 square feet per 1,000 people.

Square Feet of Sheriff Station per 1,000 Non-Residential AWWTE

Non-Residential development's proportionate share of the Sheriff's law enforcement building space (23% of 2,786 square feet), divided by the 1990 non-residential average weekday vehicle trip ends, indicates a level of service standard of 5.91 square feet of sheriff station per 1,000 non-residential AWWTE.

Capital Cost per Square Foot

To establish a current value for the Sheriff's law enforcement building, TA estimated the current replacement cost of the facility using Marshall Valuation Service information on building costs for government buildings. This category was selected because the Sheriff building is primarily used as office space, with only a small cell for temporary holding of prisoners. Using appropriate current cost and local multipliers, a Class C (type of construction) "low cost" government building would have a capital cost of approximately \$46 per square foot.

Equipment Cost per Person

In each of the public safety development impact fees (law enforcement, fire protection, and emergency medical service) the equipment cost calculations include the cost of the Emergency Services

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Dispatch / Communications Center, split proportionally according to the number of emergency calls dispatched. Table 13 lists the monthly emergency calls dispatched and indicates the percentage of calls for each service as follows: sheriff 21%, ambulance 11%, and fire 3%. These percentages were used to determine the proportional share of the total replacement cost of equipment currently in use at the Emergency Communications Center. The total cost of \$281,050 dollars includes the items shown at the bottom of Table 13. The proportional share of this cost for each type of public safety facility is included in the equipment cost calculations.

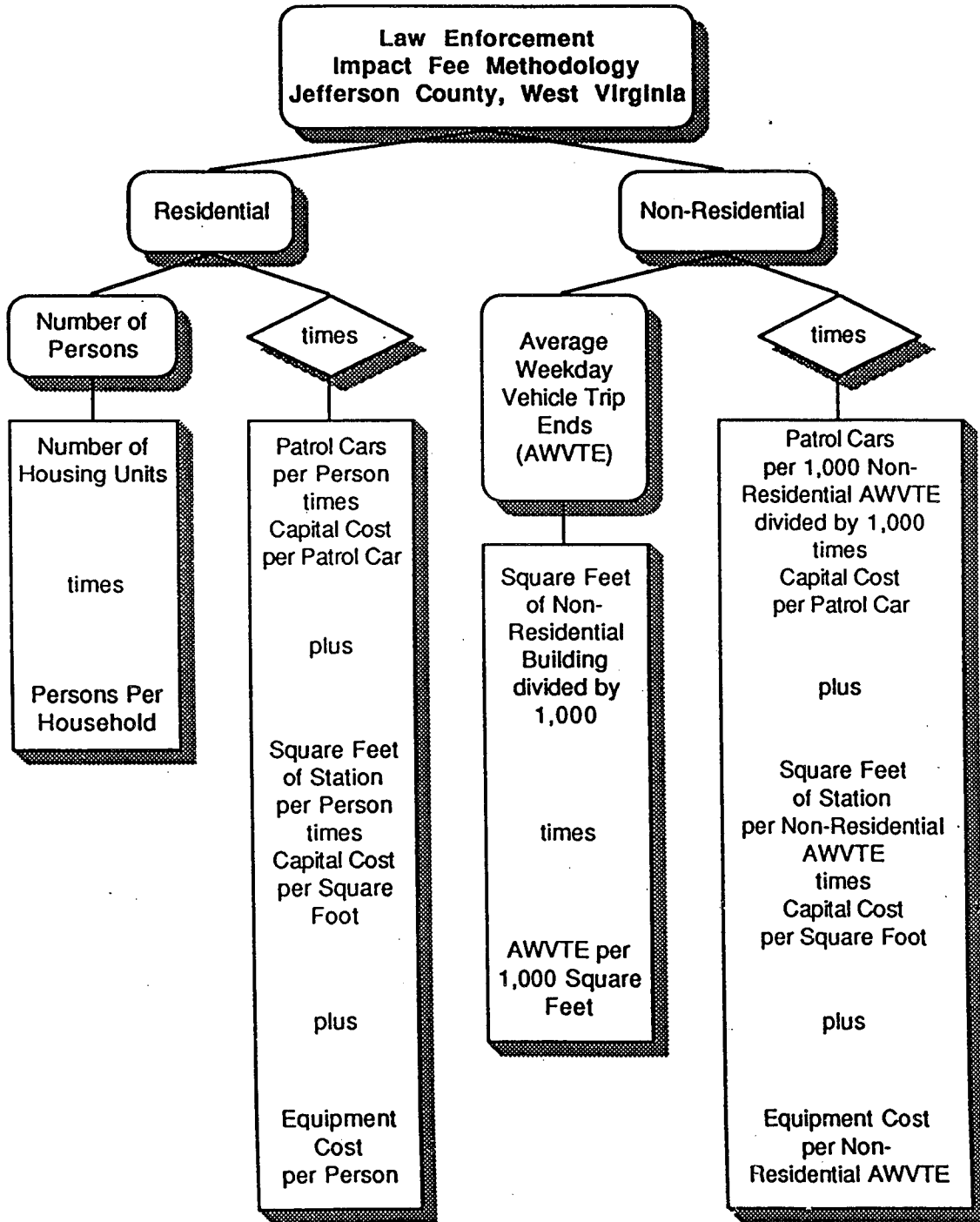
Table 14 lists the replacement cost of office equipment and personal equipment for sworn officers as reported by the Jefferson County Sheriff's Department. Seventy seven percent (77%) of the total equipment cost of \$91,920 divided by the 1990 population (35.926 when expressed in thousands), yields a cost of \$1.97 per capita.

Equipment Cost per 1,000 Non-Residential AWWTE

The non-residential share of the total equipment cost (23%), divided by the 1990 non-residential AWWTE (108.497 when expressed in thousands), indicates an equipment cost of \$0.19 per non-residential AWWTE.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Chart 4: Law Enforcement Impact Fee Methodology



JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 12: Law Enforcement Impact Fee

Law Enforcement Impact Fee

Jefferson County, West Virginia

		<i>Assumptions:</i>
Persons Per Household		
Single Family Detached		2.75
Townhouse		2.41
Apartment		2.19
Mobile Home		2.86
Average Weekday Vehicle Trip Ends (AWVTE)*		
		<u>Per 1,000 Sq. Ft.</u>
Shopping Center (1-30,000 sq. ft.)		166.35
Shopping Center (30,001-75,000 sq. ft.)		94.71
Shopping Center (75,001-150,000 sq. ft.)		74.31
General Office (1-30,000 sq. ft.)		24.39
General Office (30,001-75,000 sq. ft.)		16.31
Business Park**		12.42
General Light Industrial		6.97
* For land uses not in this list, County staff will use the most appropriate rates from the ITE reference book, Trip Generation (4th Edition).		
** Group of flex-type buildings serviced by a common roadway. Generally, 20-30% is office and the remainder is warehouse or light industrial.		
Level Of Service Standards		
Patrol Cars per 1,000 People		0.1715
Patrol Cars per 1,000 Non-Residential AWVTE		0.0170
Capital Cost per Patrol Car		\$20,000
Square Feet of Police Station per 1000 People		59.71
Sq. Ft. of Police Station per 1,000 Non-Res. AWVTE		5.91
Capital Cost per Square Foot***		\$46
Equipment Cost Per Capita		\$1.97
Equipment Cost Per Non-Residential AWVTE		\$0.19
*** Includes design fees, site development, construction, equipment, and furnishings.		

Maximum Impact Fee

<u>Residential</u>	<u>Per Housing Unit</u>
Single Family Detached	\$22
Townhouse	\$20
Apartment	\$18
Mobile Home	\$23
<u>Non-Residential</u>	<u>Per 1,000 Sq. Ft.</u>
Shopping Center (1-30,000 sq. ft.)	\$133
Shopping Center (30,001-75,000 sq. ft.)	\$76
Shopping Center (75,001-150,000 sq. ft.)	\$60
General Office (1-30,000 sq. ft.)	\$20
General Office (30,001-75,000 sq. ft.)	\$13
Business Park	\$10
General Light Industrial	\$6

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 13: Emergency Calls Dispatched

Emergency Calls

Jefferson County, West Virginia

	Sheriff	Total Fire	Total Ambulance	All Other*	Total Dispatched
Nov-89	462	56	190	1,240	1,948
Dec-89	372	74	277	1,093	1,816
Jan-90	433	59	211	1,108	1,811
Feb-90	371	80	185	975	1,611
Mar-90	418	59	185	1,187	1,849
Apr-90	397	49	188	1,178	1,812
May-90	403	48	193	1,418	2,062
Jun-90	366	67	214	1,433	2,080
Jul-90	446	59	189	1,322	2,016
Aug-90	406	61	244	1,383	2,094
Sep-90	383	43	217	1,287	1,930
Oct-90	350	57	217	1,353	1,977
Monthly Average	401	59	209	1,248	1,917
Pct. Dispatched	21%	3%	11%	65%	

* Includes calls dispatched to Police Departments in each municipality and the West Virginia State Police.

Emergency Communications Center Replacement Costs

Communication Tower	\$25,000
Antennas and Cables	\$5,800
VHF Transmitters	\$84,000
Communications Console	\$66,000
100 KW Emergency Generator	\$25,000
40 Channel Recorder	\$40,000
Alarm Panel Receivers	\$8,000
Computer and Printer	\$6,000
Furniture	\$5,000
Radio Receivers	\$1,250
Radio Remote Units	\$15,000
TOTAL	<u>\$281,050</u>

Source: Jefferson County Office of Emergency Services.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 14: Law Enforcement Equipment Costs

Law Enforcement Equipment Costs

Jefferson County, West Virginia

Office Equipment Replacement Costs

Item	1990 Inventory	Unit Price	Total Cost
Desks	11	\$150	\$1,650
Chairs	11	\$100	\$1,100
Filing Cabinets	22	\$300	\$6,600
Telephones	10	\$100	\$1,000
Typewriters	2	\$200	\$400
Computer & Printer	1	\$5,000	\$5,000
Bookcases	2	\$200	\$400
Copier	1	\$2,000	\$2,000
Subtotal			<hr/> \$18,150

Cost of Personal Equipment for Officers

Item	Sworn Officers	Cost Per Officer	Total Cost
Uniform/Clothing	7	\$1,041	\$7,287
Leather and Accessories	7	\$186	\$1,302
Handgun	7	\$525	\$3,675
Bullet Proof Vest	7	\$355	\$2,485
Subtotal		<hr/> \$2,107	\$14,749

Emergency Dispatch/Communications Center

\$59,021

TOTAL EQUIPMENT REPLACEMENT COST

\$91,920

Total Population 35,926

Non-Residential AWWTE 108,497

Cost Per Capita (77% of Total) \$1.97

Cost per Non-Residential AWWTE (23% of Total) \$0.19

Patrol Car Replacement Costs

Item	Cost
Automobile	\$13,600
Bar Light, Siren, Speaker (with controls)	\$1,100
Radio (with Pac RT and portable unit)	\$4,300
Scanner Unit	\$150
Camera	\$135
Identification Kit	\$150
Shotgun (with mount)	\$315
First Aid Kit and Blanket	\$29
Fire Extinguisher	\$35
Ankle Bracelets	\$35
Roller Tape	\$60
Rechargeable Light	\$100
Total (rounded)	<hr/> \$20,000

Source: Jefferson County Sheriff and Office of Emergency Services.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 15: Non-Residential Vehicle Trips on an Average Weekday

Non-Residential Vehicle Trips on an Average Weekday

Jefferson County, West Virginia

Employment In 1990

Ind/Whse/Ag/Constr	3,765
Retail	2,054
All Other	5,171

Source: See the Demand Base Projections in the General Data section.

Assumed Square Feet per Employee

Ind/Whse/Ag/Constr	435
Retail	400
All Other	286

Source: Calculated from data in the reference book Trip Generation, ITE, fourth edition, 1987.

Estimated Total Square Footage

Ind/Whse/Ag/Constr	1,636,957
Retail	821,600
All Other	1,477,429

Average Weekday Vehicle Trip Ends per 1,000 Sq. Ft.

Ind/Whse/Ag/Constr	6.97
Retail	74.31
All Other	24.39

*ITE Rate for General Light Industrial
ITE Rate for Shopping Center 75,001-150,000 sq. ft.
ITE Rate for General Office 1-30,000 sq. ft.*

Non-Residential Vehicle Trips on an Average Weekday (1990)

Ind/Whse/Ag/Constr	11,410
Retail	61,053
All Other	36,034
Total	<u>108,497</u>

VIII. Fire Protection Impact Fee

Fire protection in Jefferson County is currently provided by five Fire Companies with volunteer personnel. Calls for service are dispatched through the County's 911 system according to general geographic service areas. Level of service and cost factors were established on a countywide basis, although fees will be collected and spent by service areas. For a further discussion of this subject, see the "Collection and Expenditure Zones" section near the end of this report.

The capital costs for fire protection have been assigned 86% to residential development and 14% to non-residential development based on the estimated building square footage in Jefferson County, as shown in Table 17.

The methodology used to calculate the fire protection impact fee is diagrammed in Chart 5. Fire Protection Impact Fees will be assessed on both residential and non-residential development. After discussions with Fire Company officials in Jefferson County, it was determined that square footage of building area was the most appropriate demand unit for fire protection impact fees. Table 16 lists the fire protection level of service standards and the results of the impact fee calculations. To establish a fee per type of housing unit (see Table 16), an average size was determined for each residential type, as follows: 1900 sq. ft. for single family units, 1200 sq. ft. for a townhouse, 800 sq. ft. for an apartment, and 700 sq. ft. for the average mobile home.

Residential and Non-Residential Square Footage

Level of service standards for fire protection are calibrated using the

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

estimated residential and non-residential square footage of development in Jefferson County (see Table 17). To determine the square footage of residential development, the estimated number of housing units in 1990 (by type of unit) was multiplied by assumed average housing unit sizes (square feet by type of unit).

The square footage of non-residential development in 1990 was determined by multiplying Jefferson County's estimated employment by the assumed square feet of non-residential development per employee. The latter was calculated using data from the reference book Trip Generation (4th edition) published by the Institute of Transportation Engineers, 1987.

Acres of Fire Station Land per 1,000 Square Feet of Residential Development

Table 18 shows the data used to calculate the fire protection level of service standards for Jefferson County in 1990. The total acreage is multiplied by 86% and then divided by square footage of residential development in 1990 (23,856.9 when expressed in thousands).

Acres of Fire Station Land per 1,000 Square Feet of Non-Residential Development

Total fire station acreage (see Table 18) was multiplied by 14% and then divided by the square footage of non-residential development in 1990, to yield the level of service standard of 0.0002 acres of fire station land per 1,000 square feet of non-residential development.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Land Cost per Acre

The Citizens Fire Company in Charles Town expects to spend approximately \$20,000 per acre for additional land. This estimated land cost is close to the \$15,000 per acre figure paid for the Maddox Farm near Shepherdstown in 1989. The cost per acre for this large parcel of 130 acres is probably lower than the cost of a small site suitable for a fire station.

Square Feet of Fire Station per 1,000 Square Feet of Residential Development

Table 18 also shows the square footage of Jefferson County's fire stations. Three fire stations provide both fire protection and emergency medical service. Therefore, the total square footages of these stations were split between fire protection and emergency medical service according to percentages determined by each Fire Company President and/or Chief. The total-square footage for fire protection only was multiplied by 86% and then divided by the 1990 residential square footage (23,856.9 when expressed in thousands) to yield 1.25 square feet of fire station per 1,000 square feet of residential development.

Square Feet of Fire Station per 1,000 Square Feet of Non-Residential Development

Total 1990 fire station square footage was multiplied by 14% and then divided by the square footage of non-residential development in 1990 (see Table 18) to yield a standard of 1.23 square feet of fire station per

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

1,000 square feet of non-residential development.

Capital Cost Per Square Foot

The Independent Fire Company estimates that the planned addition to their fire station will cost approximately \$35 per square foot. This cost estimate is consistent with Marshal Valuation Service construction cost data for volunteer fire stations.

Equipment Cost per 1,000 Square Feet of Residential Development

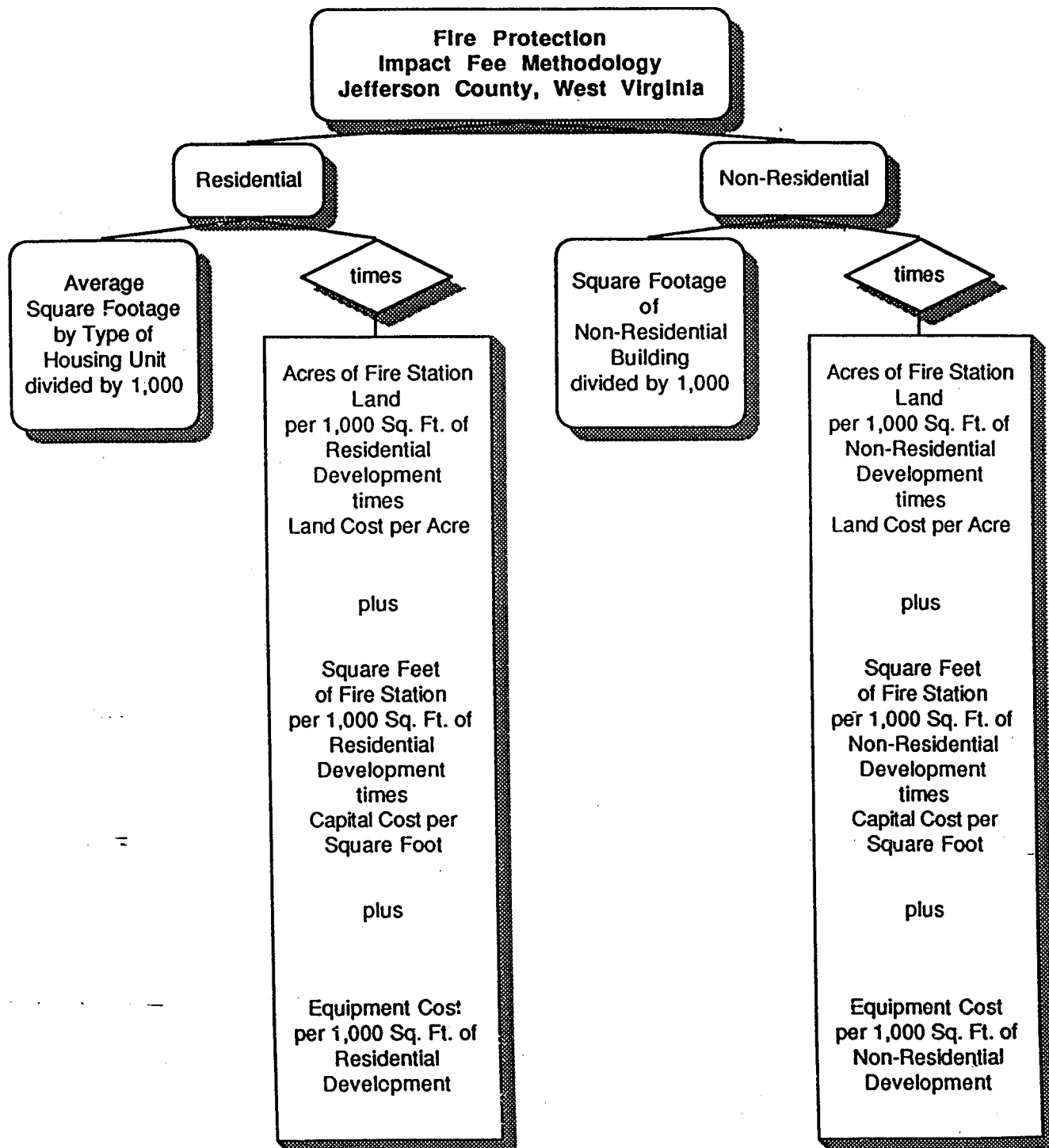
The replacement cost of fire protection equipment is shown in Table 19. Variations in the cost of equipment reported by each Fire Company reflects the differences in equipment needed in the rural, mountainous Blue Ridge area versus the more urban areas in the remainder of Jefferson County. When added together, Jefferson County Fire Companies have approximately \$5 million in equipment. The equipment costs were multiplied by 86% and then divided by the square footage of residential development in 1990, to yield the level of service standard of \$180 per 1,000 square feet of residential development.

Equipment Cost per 1,000 Square Feet of Non-Residential Development

Jefferson County's estimated non-residential square footage in 1990, as shown in Table 17, was used to calculate a fire protection equipment cost of \$178 per 1,000 square feet of non-residential development. This figure is based on 14% of the total equipment costs, as shown in Table 19.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Chart 5: Fire Protection Impact Fee Methodology



JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 16: Fire Protection Impact Fee

Fire Protection Impact Fee

Jefferson County, West Virginia

Level Of Service Standards	Assumptions:
Acres of Fire Station Land per 1,000 Sq. Ft. (Res.)	0.0002
Acres of Fire Station Land per 1,000 Sq. Ft. (Non-Res.)	0.0002
Land Cost per Acre	\$20,000
Square Feet of Fire Station per 1,000 Sq. Ft. (Res.)	1.25
Square Feet of Fire Station per 1,000 Sq. Ft. (Non-Res.)	1.23
Capital Cost per Square Foot*	\$35
Equipment Cost per 1,000 Sq. Ft. (Res.)	\$180
Equipment Cost per 1,000 Sq. Ft. (Non-Res.)	\$178

* Includes design fees, site development, construction, and furnishings.

Maximum Impact Fee

<u>Residential</u>	<u>Per 1,000 Sq. Ft.</u>	<u>Avg. Sq. Ft.</u>	<u>Per Housing Unit</u>
Single Family Detached	\$228	1,900	\$433
Townhouse	\$228	1,200	\$273
Apartment	\$228	800	\$182
Mobile Home	\$228	700	\$159
<u>Non-Residential</u>	<u>Per 1,000 Sq. Ft.</u>		
Shopping Center (1-30,000 sq. ft.)	\$225		
Shopping Center (30,001-75,000 sq. ft.)	\$225		
Shopping Center (75,001-150,000 sq. ft.)	\$225		
General Office (1-30,000 sq. ft.)	\$225		
General Office (30,001-75,000 sq. ft.)	\$225		
Business Park***	\$225		
General Light Industrial	\$225		

*** Group of flex-type buildings serviced by a common roadway.
Generally, 20-30% is office and the remainder is warehouse or light industrial.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 17: Residential and Non-Residential Square Footage

Residential and Non-Residential Square Footage
Jefferson County, West Virginia

Estimated Housing Units in 1990

Single Family	10,951
Townhouse	776
Apartment	1,371
Mobile Home	1,460

Source: See the Demand Base Projections in the General Data section.

Assumed Average Housing Unit Size (sq. ft.)

Single Family	1,900
Townhouse	1,200
Apartment	800
Mobile Home	700

Source:
-> Jefferson County Planning Dept.
-> Jefferson County Planning Dept.
-> Jefferson County Planning Dept.
-> Jefferson County Property Appraiser

Residential Square Footage (1990)

Single Family	20,806,900	
Townhouse	931,200	
Apartment	1,096,800	
Mobile Home	<u>1,022,000</u>	
Total	23,856,900	86%

Projected Employment in 1990

Ind/Whse/Ag/Constr	3,765
Retail	2,054
All Other	5,171

Source: See the Demand Base Projections in the General Data section.

Assumed Square Feet per Employee

Ind/Whse/Ag/Constr	435
Retail	400
All Other	286

Source: Calculated from data in the reference book Trip Generation, ITE, fourth edition, 1987.

Non-Residential Square Footage (1990)

Ind/Whse/Ag/Constr	1,637,000	
Retail	822,000	
All Other	<u>1,477,000</u>	
Total	3,936,000	14%

TOTAL SQUARE FOOTAGE 27,792,900

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 18: Fire Station Acreage and Square Footage

Fire Station Acreage and Square Footage
Jefferson County, West Virginia

	Total Station		% Fire	Fire Protection Only	
	Acreage	Sq. Ft. of Building		Acreage	Square Footage of Building
Friendship	0.38	5,600	67%	0.25	3,752
Citizen's	0.14	4,000	100%	0.14	4,000
Shepherdstown	3.00	18,640	80%	2.40	14,912
Independent	1.00	7,500	84%	0.84	6,300
Blue Ridge	2.50	5,600	100%	2.50	5,600
Total	7.02	41,340		6.13	34,564

Estimated Residential Square Footage (1990) 23,856,900
 Estimated Non-Residential Square Footage (1990) 3,936,000

Acres per 1,000 Sq. Ft. of Residential Development 0.0002
 Acres per 1,000 Sq. Ft. of Non-Residential Development 0.0002

Sq. Ft. of Fire Station per 1,000 Sq. Ft. of Res. Dev. 1.25
 Sq. Ft. of Fire Station per 1,000 Sq. Ft. of Non-Res. Dev. 1.23

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 19: Fire Protection Equipment Costs

Fire Protection Equipment Costs
Jefferson County, West Virginia

Item	1990 Inventory	Unit Price*	Total 1990 Replacement Cost	
Friendship Fire Company (Harpers Ferry)				
Attack Truck			\$69,000	
Boat, Motor & Trailer			\$5,000	
Engine (Pumper)	2	\$210,000	\$420,000	
Engine (Pumper)			\$170,000	
Equipment/Clothing for Personnel			\$41,000	
Fixed Assests (67% of Total)			\$52,528	
Pumper/Tanker			\$207,000	
Subtotal			<u>\$964,528</u>	
Citizens Fire Company (Charles Town)				
Attack Truck			\$75,000	
Boat, Motor & Trailer			\$2,000	
Engine (Pumper)	2	\$215,000	\$430,000	
Equipment/Clothing for Personnel			\$55,580	
Fixed Assests			\$58,820	
Ladder Truck			\$375,000	
Rescue Squad Truck			\$185,000	
Subtotal			<u>\$1,181,400</u>	
Shepherdstown Fire Company				
Boat, Motor & Trailer			\$5,000	
Engine (Pumper)	3	\$150,000	\$450,000	
Equipment/Clothing for Personnel			\$44,000	
Fixed Assests (80% of Total)			\$168,000	
Ladder Truck			\$375,000	
Tanker Truck			\$100,000	
Utility Van			\$25,000	
Subtotal			<u>\$1,167,000</u>	
Independent Fire Company (Ranson)				
Engine (Pumper)	2	\$215,000	\$430,000	
Equipment/Clothing for Personnel			\$51,200	
Fixed Assests (84% of Total)			\$43,680	
Portable Equipment			\$25,000	
Pumper/Tanker			\$175,000	
Rescue Squad Truck			\$184,000	
Subtotal			<u>\$908,880</u>	
Blue Ridge Mountain Fire Company				
Attack Truck			\$125,000	
Boat, Motor & Trailer			\$5,000	
Engine (Pumper)	2	\$125,000	\$250,000	
Equipment/Clothing for Personnel			\$46,000	
Fixed Assests			\$40,200	
Rescue Squad Truck			\$100,000	
Tanker Truck	2	\$100,000	\$200,000	
Subtotal			<u>\$766,200</u>	
Emergency Dispatch/Communications Center			\$8,432	
TOTAL REPLACEMENT COST				\$4,996,440
Projected Residential Square Footage (1990)			23,856,900	
Projected Non-Residential Square Footage (1990)			3,936,000	
Equipment Cost per 1,000 Sq. Ft. of Residential Development				\$180
Equipment Cost per 1,000 Sq. Ft. of Non-Residential Development				\$178

Source: Inventory and cost data provided by each Fire Company in Jefferson County.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

IX. Emergency Medical Service Impact Fee

Countywide Emergency Medical Service (EMS) is provided by the Friendship Fire Company in Harpers Ferry, the Shepherdstown Fire Company, and the Independent Fire Company in Charles Town. Each Company has volunteer emergency medical technicians who respond to calls dispatched through the County's 911 system. Primary service areas have been established for each EMS station, but the demand for service necessitates backup coverage to all parts of the County. Thus emergency medical service is regarded as a countywide function.

The EMS impact fee methodology is diagrammed in Chart 6. This methodology chart shows the factors and formulas used to calculate the EMS impact fee. Because emergency medical services are provided to all people living or working in Jefferson County, the impact fee methodology has both residential and non-residential demand generators. The fee for non-residential development is based on the number of employees. The EMS impact fee and all assumptions are shown in Table 20.

Acres of Station Land per 1,000 People or Employees

Table 21 lists the EMS portion of the total Fire Company land area for the three stations in Jefferson County. Based on 1990 data (35,926 people and 11,000 employees), the level of service standard is 0.019 acres per 1,000 people or employees.

Land Cost per Acre

EMS station land cost is the same as the cost of land for a fire

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

protection station. As discussed under Fire Protection, a land cost of \$20,000 per acre will be used.

Square Feet of Station per Person or Employee

The EMS portion of the three Fire Company stations, divided by the number of people and employees in Jefferson County (1990 estimates) yields a level of service standard of 0.14 square feet per person or employee.

Capital Cost per Square Foot

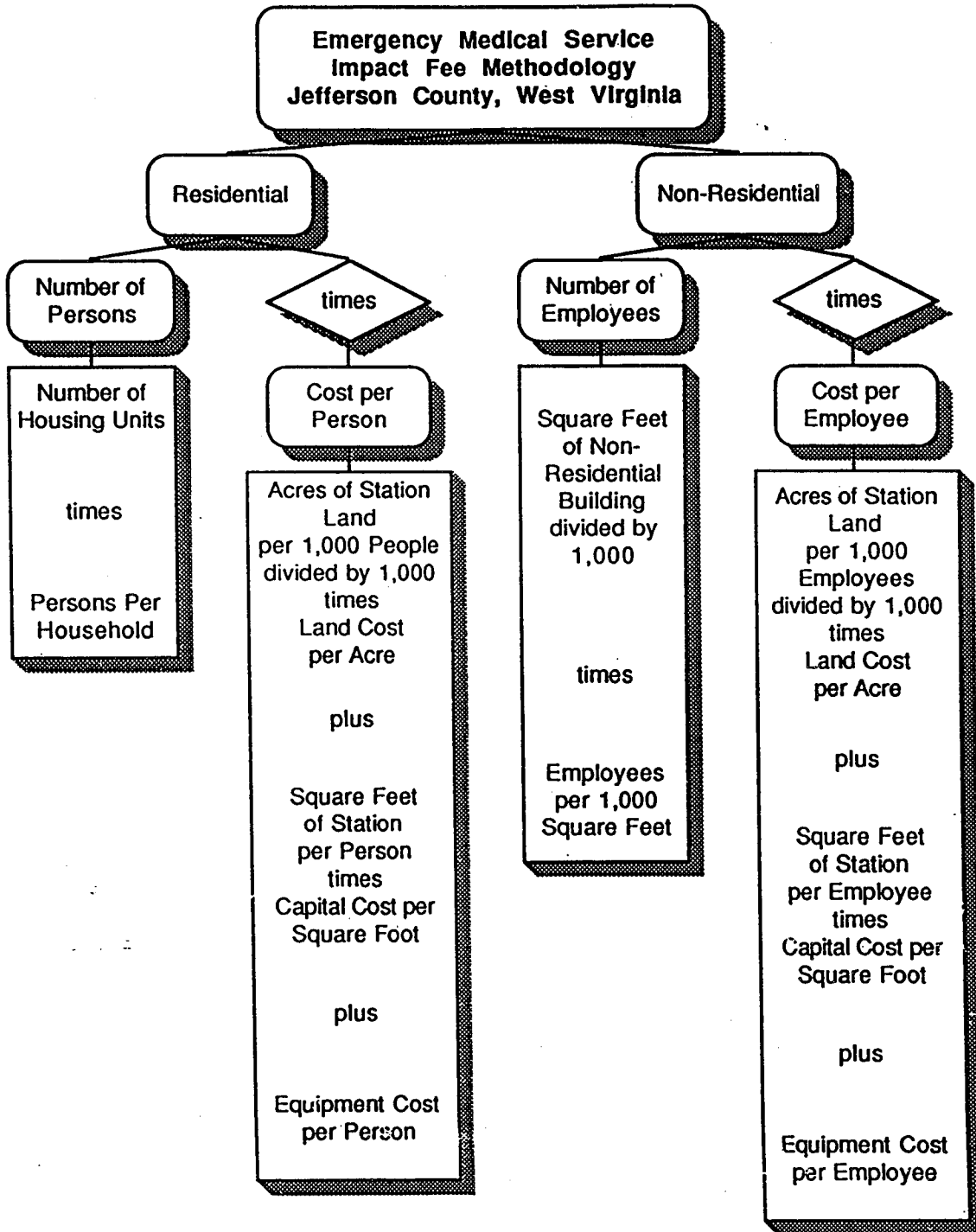
See the Fire Protection section for a discussion of the capital cost per square foot, which is \$35 per square foot.

Equipment Cost per Person or Employee

Table 22 indicates a total replacement cost of \$537,108 for all emergency medical equipment currently being used in Jefferson County. Dividing the total replacement cost by the number of people and employees, yields a cost of approximately \$11 per person or employee. The majority of the equipment cost is for ambulances, with each Fire Company needing two vehicles to provide continuous EMS coverage.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Chart 6: Emergency Medical Service Impact Fee Methodology



JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 20: Emergency Medical Service Impact Fee

Emergency Medical Service Impact Fee

Jefferson County, West Virginia

	<i>Assumptions:</i>
Persons Per Household	
Single Family	2.75
Townhouse	2.41
Apartment	2.19
Mobile Home	2.86
Employees Per 1,000 Square Feet	
Shopping Center (1-30,000 sq. ft.)	2.50
Shopping Center (30,001-75,000 sq. ft.)	2.50
Shopping Center (75,001-150,000 sq. ft.)	2.50
General Office (1-30,000 sq. ft.)	5.17
General Office (30,001-75,000 sq. ft.)	4.14
Business Park***	2.71
General Light Industrial	2.31
Level Of Service Standards	
Acres of Station Land per 1,000 People	0.019
Acres of Station Land per 1,000 Employees	0.019
Land Cost per Acre	\$20,000
Square Feet of Station per Person	0.14
Square Feet of Fire Station per Employee	0.14
Capital Cost per Square Foot*	\$35
Equipment Cost per Person	\$11.45
Equipment Cost per Employee	\$11.45

* Includes design fees, site development, construction, and furnishings.

Maximum Impact Fee

<u>Residential</u>	<u>Per Housing Unit</u>
Single Family Detached	\$46
Townhouse	\$40
Apartment	\$37
Mobile Home	\$48
<u>Non-Residential</u>	<u>Per 1,000 Square Feet</u>
Shopping Center (1-30,000 sq. ft.)	\$42
Shopping Center (30,001-75,000 sq. ft.)	\$42
Shopping Center (75,001-150,000 sq. ft.)	\$42
General Office (1-30,000 sq. ft.)	\$86
General Office (30,001-75,000 sq. ft.)	\$69
Business Park**	\$45
General Light Industrial	\$39

** Group of flex-type buildings serviced by a common roadway.

Generally, 20-30% is office and the remainder is warehouse or light industrial.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 21: Emergency Medical Station Acreage and Square Footage

Emergency Medical Service Acreage and Square Footage
Jefferson County, West Virginia

Company	Location	Acreage*	Square Footage* of Building
Friendship	Harpers Ferry	0.13	1,848
Shepherdstown	Shepherdstown	0.60	3,728
Independent	Charles Town	0.16	1,200
Total		0.89	6,776

* EMS portion only.

Population (1990)	35,926
Employment (1990)	11,000
Acres per 1,000 People	0.019
Acres per 1,000 Employees	0.019
Square Feet of Fire Station per Person	0.14
Square Feet of Fire Station per Employee	0.14

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 22: Emergency Medical Equipment Costs

Emergency Medical Service Equipment Costs
Jefferson County, West Virginia

Item	1990 Inventory	Unit Price*	Total Cost*
<i>Friendship Fire Company</i>			
Ambulances	2	\$80,000	\$160,000
Fixed Assests (33% of total)			<u>\$25,872</u>
Subtotal			\$185,872
<i>Shepherdstown Fire Company</i>			
Ambulances	2	\$75,000	\$150,000
Fixed Assests (20% of total)			<u>\$42,000</u>
Subtotal			\$192,000
<i>Independent Fire Company</i>			
Ambulances	2	\$60,000	\$120,000
Fixed Assests (16% of total)			<u>\$8,320</u>
Subtotal			\$128,320
Emergency Dispatch/Communications Center			\$30,916
TOTAL REPLACEMENT COST			\$537,108
Population (1990)			35,926
Employment (1990)			11,000
Cost per Person			\$11.45
Cost per Employee			\$11.45

* Equipment inventory and 1990 replacement cost provided by each Fire Company.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

X. General Credits

As discussed previously, part of the legal foundation for development impact fees is the concept that new development will pay its fair share of capital improvement costs for public facilities needed to accommodate the new development. For example, assume that the maximum gross cost of additional public school facilities demanded by a new single family house is \$3,468. If this amount is collected "up-front" by Jefferson County, then to maintain equity the new development should not make any additional payment for new public school facilities. However, property taxes will continue to be collected from all development and a portion of the property tax will be used for debt service on public school facilities. Therefore, to avoid a possible double payment (future property taxes and the \$3468 development impact fee), a credit should be given for property tax payments anticipated over a normal bond period.

The general methodology used to calculate the amount of the general credit was to project property taxes generated by new development, then determine the amount of the taxes which will be used to pay for debt service, and finally make adjustments for the appreciation rate of future property taxes and the net present value of future payments. The assumptions used in the calculation of general credits are shown in the boxed area of the public school development impact fee table. These assumptions are discussed below.

Value of Residential Units

Jefferson County planning staff examined the construction value of single family detached units from 1989 through the first quarter of 1991, as

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

reported on building permit applications. Because of market conditions, the construction value of single family detached units remained stable during 1989 and 1990. To more accurately reflect the current value of single family detached units, an average construction value was determined based on permits from 1990 through the first quarter of 1991. During this 15 month period, there were 433 permits for single family detached units, which had a combined construction value of \$40,907,508. The average construction value per unit (\$94,475) was increased by 10% because the market value of these units will include a builder's profit and the self reported construction values are likely to be underestimated. According to the planning staff, an average land cost per single family detached unit in Jefferson County is currently \$25,000. Therefore, the total market value of an average single family detached unit is currently \$129,000 (rounded).

Using data from the Office of Assessor of Jefferson County, the planning staff obtained market values from the real estate transfers of townhouse and duplex units which occurred from late 1989 to mid 1990. Table 23 lists the individual transfer amounts in alphabetical order by development name. The average market value of a townhouse/duplex unit was \$69,000.

Because there are relatively few apartment units in Jefferson County, with no recent sales of apartment buildings, TA determined the average assessed value of an apartment unit. Table 24 shows the sample of apartment developments and data from the Office of Assessor, which was used to calculate an average 1991 assessed value of \$10,000 per

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

apartment unit. The formula used to derive the general credits for an apartment unit does not include an assessment rate because the \$10,000 figure is the assessed value.

In Jefferson County, mobile homes located on separate parcels of land (i.e., not in a mobile home park where each space is rented) are taxed as real estate. According to the Property Assessor's Office, new mobile homes in Jefferson County are typically located in a rural setting and have an average market value of approximately \$11,000.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 23: Market Value of Townhouse/Duplex Units

Market Value of Townhouse/Duplex Units
Jefferson County, West Virginia

<u>Townhouse/Duplex</u>	<u>Market Value*</u>	<u>Average</u> \$69,000
Tusculwilla Hills	\$86,800	
Tusculwilla Hills	\$86,000	
Tusculwilla Hills	\$85,000	
Tusculwilla Hills	\$83,000	
Tusculwilla Hills	\$82,000	
Tusculwilla Hills	\$80,000	
Tusculwilla Hills	\$80,000	
Tusculwilla Hills	\$80,000	
Tusculwilla Hills	\$78,000	
Tusculwilla Hills	\$77,000	
Tusculwilla Hills	\$76,500	
Tusculwilla Hills	\$76,500	
Tusculwilla Hills	\$76,000	
Tusculwilla Hills	\$76,000	
Tusculwilla Hills	\$75,800	
Tusculwilla Hills	\$75,000	
Tusculwilla Hills	\$74,500	
Tusculwilla Hills	\$70,000	
Tusculwilla Hills	\$68,000	
Tusculwilla Hills	\$67,400	
Tusculwilla Hills	\$67,200	
Tusculwilla Hills	\$67,000	
Tusculwilla Hills	\$66,000	
Tusculwilla Hills	\$65,000	
Tusculwilla Hills	\$63,000	
Tusculwilla Hills	\$62,000	
Tusculwilla Hills	\$60,000	
Tusculwilla Hills	\$59,800	
Tusculwilla Hills	\$59,500	
Tusculwilla Hills	\$58,000	
Tusculwilla Hills	\$57,500	
Tusculwilla Hills	\$57,000	
Tusculwilla Hills	\$57,000	
Tusculwilla Hills	\$56,400	
Willow Springs	\$68,000	
Willow Springs	\$68,000	
Willow Springs	\$65,600	
Willow Springs	\$65,000	
Willow Springs	\$64,400	
Willow Springs	\$64,200	
Willow Springs	\$64,000	
Willow Springs	\$64,000	
Willow Springs	\$63,900	
Willow Springs	\$63,000	
Willow Springs	\$63,000	
Willow Springs	\$60,000	
Willow Springs	\$58,500	
Willow Springs	\$55,100	

* Market values based on real estate transfers from late 1989 to mid 1990.
Data from Office of Assessor of Jefferson County.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Table 24: Assessed Value of Apartment Units

Assessed Value of Apartment Units

Jefferson County, West Virginia

Development	1991 Assessed Value (land + improvements)	Number of Apartments	Average Value Per Unit
Maddox Court	\$500,000	44	\$11,364
North Ridge	\$86,000	8	\$10,750
Oak Ridge	\$170,000	18	\$9,444
South Ridge	\$150,000	12	\$12,500
Willow Spring Farms	\$1,320,000	132	\$10,000
WEIGTHED AVERAGE (rounded)			\$10,000

Data Source: Office of Assessor of Jefferson County.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Assessment Rate

According to the Jefferson County Property Assessor's Office, the current residential assessment rate is approximately 40% of market value. If a family purchased a new single family house costing \$200,000, then with a 40% assessment rate, this house would have an assessed value of \$80,000.

Class II and III Property Levy Rate for Bond Purposes

For property tax purposes, West Virginia has established four classes of property, which can have different property tax levies. In the calculation of general credits, all single family, townhouse, and mobile home units are assumed to be owner occupied and therefore Class II property. Apartments are assumed to be rental units and therefore Class III property which is taxed at a higher rate than Class II property. The current rate per \$100 of assessed value is \$0.2034 for Class II and \$0.4068 for Class III property.

Discount Rate

The future property tax revenue stream was projected for 20 years and then discounted at a rate of 6.85% to yield the net present value. According to the Treasurer of Jefferson County Schools, this discount rate is the net effective average annual interest rate on the latest school construction bonds.

Appreciation Rate

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

The methodology for calculating general credits includes an appreciation rate. This factor was included because in most communities, property taxes tend to increase over time. There are three factors which determine the amount of property taxes: the market value of the property, the assessment rate, and the tax rate. In West Virginia assessment rates and property tax rates are undergoing a multi-year adjustment to eventually bring assessed values up to full market value. Because of this adjustment period, it will be very difficult to project the overall change in property tax collections. In addition, the real estate market is currently flat with little appreciation in property value. Therefore, TA recommends the use of a 0% appreciation rate in the calculation of credits.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

XI. Administrative Procedures

Some of the public facilities for which impact fees have been developed (junior and senior high schools, parks, law enforcement, and emergency medical service) have countywide service areas. Therefore, TA recommends the implementation of these impact fees on a countywide basis without the use of collection and expenditure zones, which are discussed below.

TA recommends that Jefferson County set up fourteen (14) separate accounts for impact fee revenues. Although impact fees have been calculated for only six types of public facilities, collection and expenditure zones will require multiple accounts for several types of public facilities. The number of recommended impact fee accounts is summarized in the list below.

Elementary Schools	3
Junior and Senior High Schools	1
Parks	1
Libraries	3
Law Enforcement	1
Fire Protection	4
Emergency Medical Service	1
TOTAL	14

Collection and Expenditure Zones

In legal challenges, the reasonableness of development impact fees has been determined by what is known as the rational nexus test. The substantial benefit component of the rational nexus test usually leads

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

communities to set up collection and expenditure zones for public facilities which have geographic service areas. These zones are used to document where in the jurisdiction the development impact fee money is coming from and where new facilities will be constructed that are funded, at least in part, through the use of development impact fees. The collection and expenditure zone maps in this report are provided to give the reader a general indication of the proposed boundaries. Larger, detailed maps will be maintained by the Planning Department and displayed in the County office which issues building permits.

Collection and expenditure zones will be necessary for elementary schools, but not junior or senior high schools. Because there is only one senior high school, which serves all of Jefferson County, this type of public facility has a countywide service area. Likewise, the three junior high schools do not require collection and expenditure zones because the expansion of any junior high school, or the construction of a new facility, will lead to redistricting and have the effect of creating capacity in the other junior high schools. The recommended collection and expenditure zones for elementary schools are shown in Map 1. The zones are based on the current attendance districts for elementary schools. These have been combined into three areas according to Jefferson County's "feeder system", whereby elementary school students progress to designated junior high schools.

County libraries do not have clearly defined geographic service areas in Jefferson County. However, TA recommends the establishment of collection and expenditure zones for libraries, as shown in Map 2. The

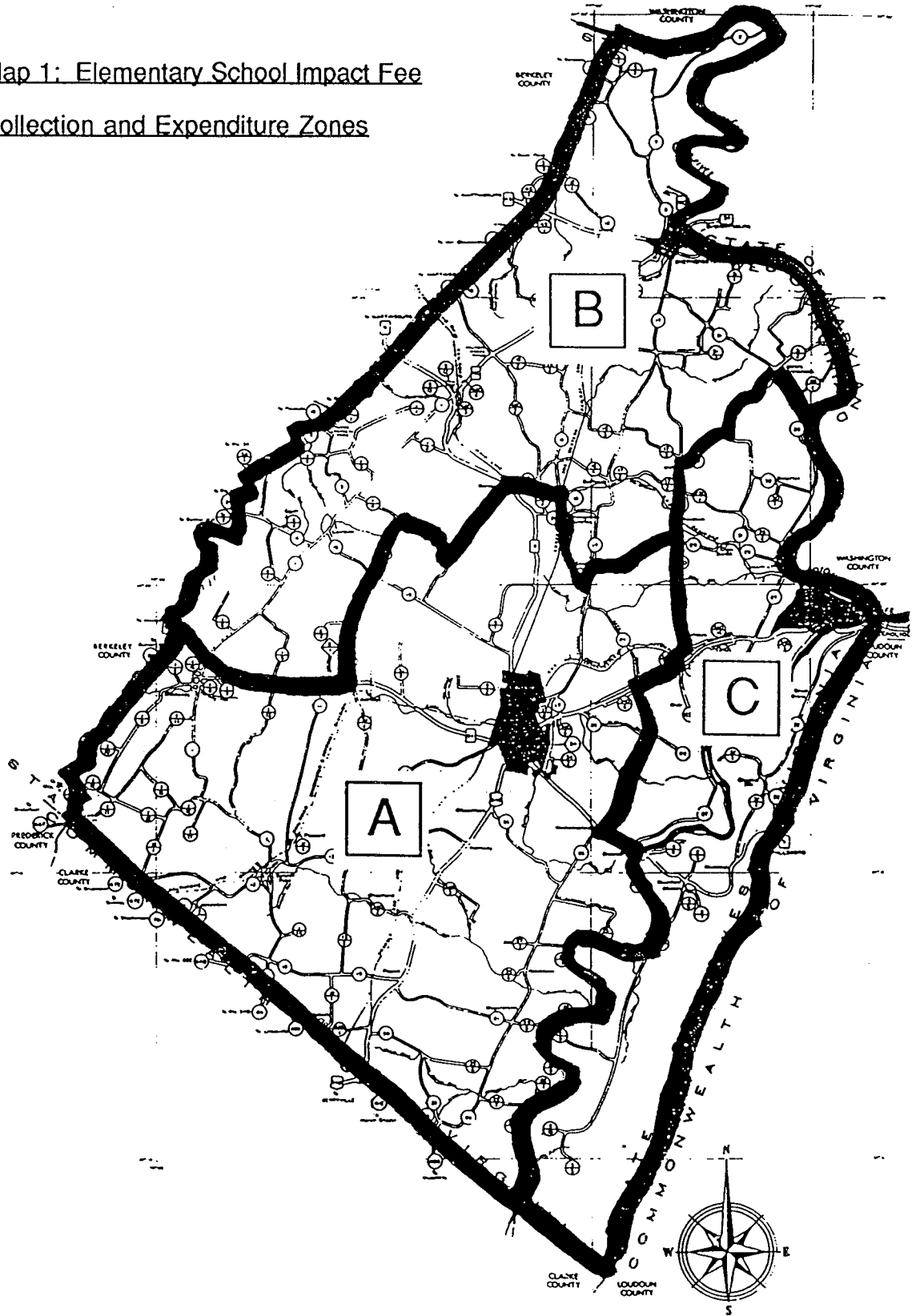
JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Planning Department designated these zones based on travel patterns and distance to the three existing County libraries. Consideration was also given to approved and projected development in order to equalize anticipated impact fee revenue for each of the three county libraries.

The primary service areas of the five Fire Companies in Jefferson County have been used as the collection and expenditure zones for the fire protection impact fee. Map 3 shows the general delineation of these four zones. Citizen and Independent Fire Companies, both located in the Charles Town / Ranson area, will share the same collection and expenditure zone and equally split all impact fee revenues collected from new development in the combined service area. Because only three Fire Companies provide emergency medical service, and EMS calls are 3-4 times more numerous than fire protection calls, it is far more common for EMS units to respond to calls in all parts of Jefferson County. Given the countywide service delivery pattern, collection and expenditure zones for EMS are not necessary. EMS impact fee revenues will be split equally between the three service providers.

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Map 1: Elementary School Impact Fee
Collection and Expenditure Zones



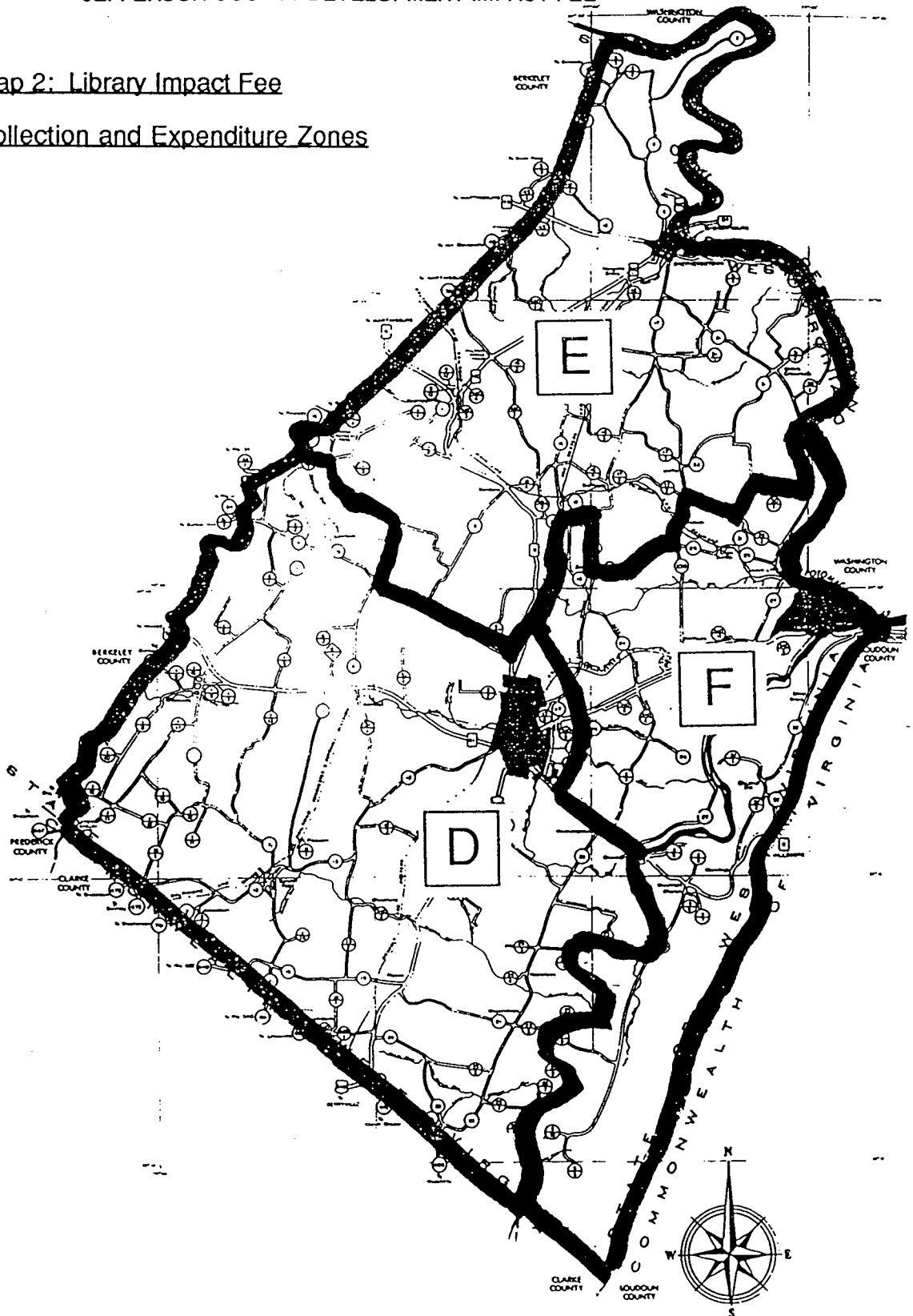
SCALE: 1 inch = 12,000 feet
1" = 144,000'

JEFFERSON COUNTY
WEST VIRGINIA

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Map 2: Library Impact Fee

Collection and Expenditure Zones

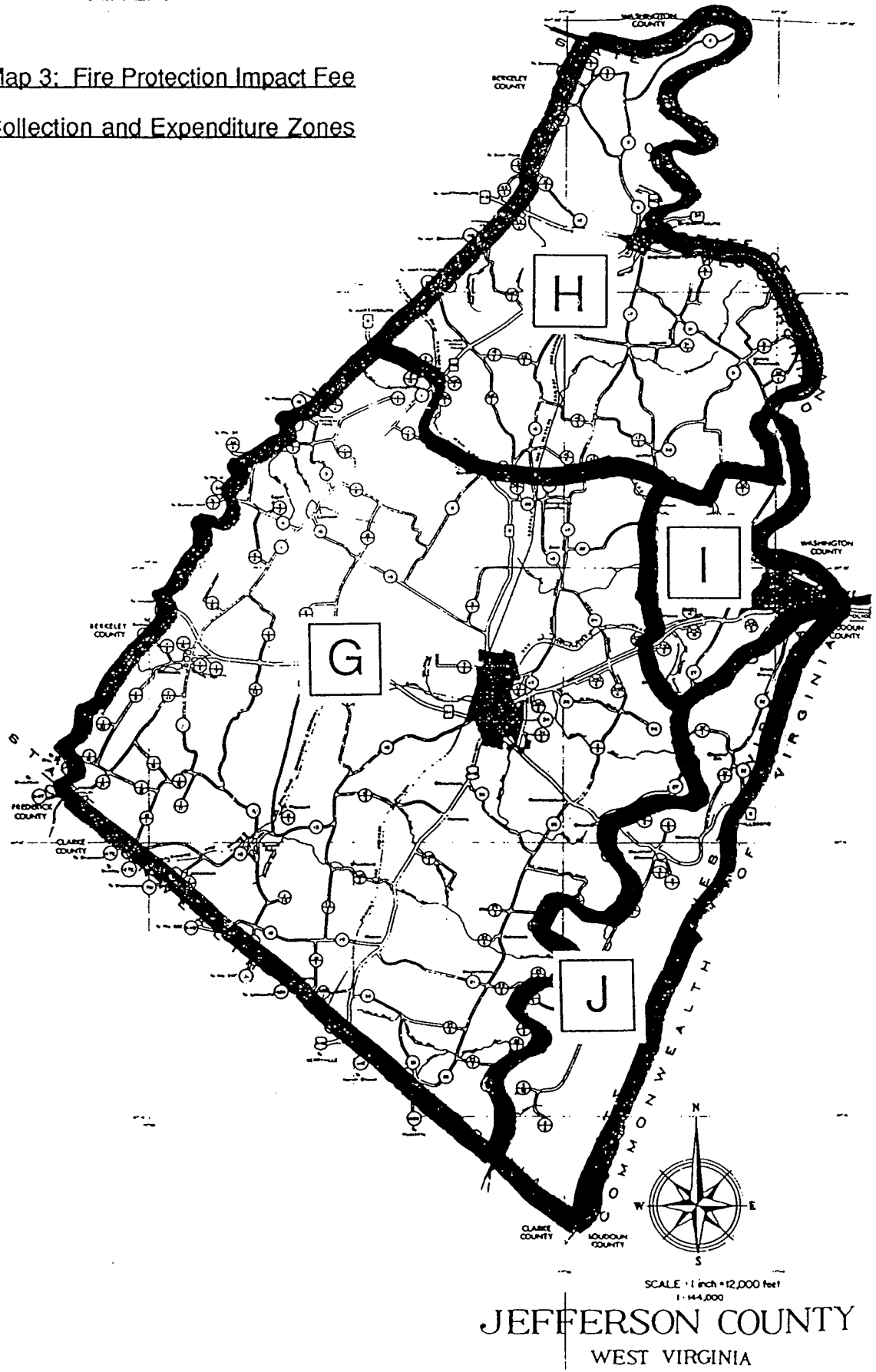


SCALE · 1 inch = 12,000 feet
1:144,000

JEFFERSON COUNTY
WEST VIRGINIA

JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Map 3: Fire Protection Impact Fee
Collection and Expenditure Zones



JEFFERSON COUNTY DEVELOPMENT IMPACT FEE

Site Specific Credits

In addition to the general credits discussed above, there is the possibility that site specific credits may be given for particular capital improvements provided by a developer. For example, an individual developer may want to donate land within a proposed development for use as a new County park. If Jefferson County determined that the potential park site was acceptable, the donation of a park site should be credited against the park impact fee, provided that the entity paying the fee is the same entity that made the land donation. If a change of ownership has taken place, the new owners is not eligible for a site specific credit.

Updating Procedures

An annual report should be prepared and presented publicly to Jefferson County's elected officials to keep government and private sector leaders informed of the performance of development impact fees. The report should contain basic information such as the revenue generated by each type of public facility. At the time of the annual report, suggested improvements can be acted upon and necessary updates incorporated in the adopted ordinance.

Each variable used in the development impact fee calculations is discussed in this report, including data sources and explanations of how level of service standards and cost factors were derived. The formulas used to calculate the development impact fees are diagrammed in the methodology charts for each type of public facility (see Charts 1-6).