



Fire/EMS Impact Fee Study for Lee County, Florida

prepared by

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cover photo from Lehigh Acres Fire Protection and Rescue District's website

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EXECUTIVE SUMMARY

Fire rescue and emergency medical services (EMS) in Lee County are provided by the County, independent fire districts and municipalities. The services provided can be grouped in three broad categories. The first is fire service, which includes fire suppression, fire safety, inspections and other activities related to fire prevention. The second is rescue service, which incorporates all responses of an emergency nature other than for fire or EMS. The third is EMS, which includes the provision of advanced life support and patient transportation.

Independent fire districts and municipal fire departments provide fire rescue service in most of the county. The County provides fire and rescue service to the airports. Some fire districts and departments also provide advanced life support, but do not, with two exceptions, provide patient transportation.

The County provides EMS service to most of the geographic areas of the county, with the exceptions of Fort Myers Beach and Lehigh. The Fort Myers Beach Fire Control District and the Lehigh Acres Fire Protection and Rescue District provide their own primary EMS service.

The Lee County Board of County Commissioners first adopted fire rescue and EMS impact fees in 1989. Both were most recently updated in 2012. The current fees were adopted based on an addendum to the 2012 study that ensured that the updated fees were not higher than the fees in place at the time for any land use type. The fees in place at the time were based on the 2006 study

Methodology

The updated fire rescue fees are “capped” so that the fees do not exceed the average cost per service unit for the larger districts (those with four or more stations). The intent is to avoid extremely high fees for districts with little existing development based on a high existing level of service that may be difficult to sustain in the future. This is consistent with the approach used in the County’s impact fee studies since 1999. The fees by land use continue to be based on the “functional population” methodology, consistent with the change from a calls-for-service basis made in the 2012 study.

Comparative Fees

The updated fire rescue and EMS impact fees are compared with the current fees in Table 1. Although fire rescue fees vary by district, the “capped” fees shown apply to over two-thirds of the participating fire districts (fees for the other districts are lower). The fire rescue fees are going up considerably from the current (2012) fees. Updated EMS fees are higher than current fees for most land uses.

Table 1. Comparison of Current and Updated Fire and EMS Fees

Land Use	Unit	2012 Fees	Updated Fees	Percent Change
Fire Fees (maximums*)				
Single-Family Detached	Dwelling	\$474	\$766	62%
Multi-Family	Dwelling	\$356	\$582	63%
Mobile Home/RV Park	Space	\$327	\$559	71%
Hotel/Motel	Room	\$289	\$368	27%
Retail	1,000 sq. ft.	\$559	\$820	47%
Office	1,000 sq. ft.	\$261	\$398	52%
Public/Institutional	1,000 sq. ft.	\$171	\$237	39%
Industrial	1,000 sq. ft.	\$133	\$146	10%
Warehouse	1,000 sq. ft.	\$62	\$84	35%
EMS Fees				
Single-Family Detached	Dwelling	\$50	\$55	10%
Multi-Family	Dwelling	\$37	\$42	14%
Mobile Home/RV Park	Space	\$34	\$40	18%
Hotel/Motel	Room	\$30	\$26	-13%
Retail	1,000 sq. ft.	\$58	\$59	2%
Office	1,000 sq. ft.	\$27	\$29	7%
Public/Institutional	1,000 sq. ft.	\$18	\$17	-6%
Industrial	1,000 sq. ft.	\$14	\$10	-29%
Warehouse	1,000 sq. ft.	\$6	\$6	0%
Combined Fire/EMS Fees				
Single-Family Detached	Dwelling	\$524	\$821	57%
Multi-Family	Dwelling	\$393	\$624	59%
Mobile Home/RV Park	Space	\$361	\$599	66%
Hotel/Motel	Room	\$319	\$394	24%
Retail	1,000 sq. ft.	\$617	\$879	42%
Office	1,000 sq. ft.	\$288	\$427	48%
Public/Institutional	1,000 sq. ft.	\$189	\$254	34%
Industrial	1,000 sq. ft.	\$147	\$156	6%
Warehouse	1,000 sq. ft.	\$68	\$90	32%

* "capped" fees that apply to two-thirds of the districts (12-13 of 18-19 districts – fees for others are lower).

Source: 2012 fees from Duncan Associates, *Addendum to Park and Fire/EMS Impact Fee Studies*, April 2012 (same as current fees from Lee County Land Development Code Sec. 2-385); updated fees from Table 9 (fire rescue) and Table 19 (EMS).

LEGAL FRAMEWORK

Impact fees are a way for local governments to require new developments to pay a proportionate share of the infrastructure costs they impose on the community. In contrast to traditional “negotiated” developer exactions, impact fees are charges that are assessed on new development using a standard formula based on objective characteristics, such as the number and type of dwelling units constructed. The fees are one-time, up-front charges, with the payment usually made at the time of building permit issuance. Impact fees require each new development project to pay its pro-rata share of the cost of new capital facilities required to serve that development.

Since impact fees were pioneered in states like Florida that lacked specific enabling legislation, they have been defended as a legal exercise of local government’s broad “police power” to regulate land development in order to protect the health, safety and welfare of the community. The courts have developed guidelines for constitutionally valid impact fees, based on “rational nexus” standards.¹ The standards set by court cases generally require that an impact fee meet a two-part test:

- 1) The fees must be proportional to the need for new facilities created by new development, and
- 2) The expenditure of impact fee revenues must provide benefit to the fee-paying development.

A Florida district court of appeals described the dual rational nexus test in 1983 as follows, and this language was quoted and followed by the Florida Supreme Court in its 1991 St. Johns County decision:

In order to satisfy these requirements, the local government must demonstrate a reasonable connection, or rational nexus, between the need for additional capital facilities and the growth in population generated by the subdivision. In addition, the government must show a reasonable connection, or rational nexus, between the expenditures of the funds collected and the benefits accruing to the subdivision. In order to satisfy this latter requirement, the ordinance must specifically earmark the funds collected for use in acquiring capital facilities to benefit the new residents.²

¹ There are six major Florida cases that have guided the development of impact fees in the state: *Contractors and Builders Association of Pinellas County v. City of Dunedin*, 329 So.2d 314 (Fla. 1976); *Hollywood, Inc. v. Broward County*, 431 So.2d 606 (Fla. 1976); *Home Builders and Contractors Association of Palm Beach County, Inc. v. Board of County Commissioners of Palm Beach County*, 446 So.2d 140 (Fla. 4th DCA 1983); *Seminole County v. City of Casselberry*, 541 So.2d 666 (Fla. 5th DCA 1989); *City of Ormond Beach v. County of Volusia*, 535 So.2d 302 (Fla. 5th DCA 1988); and *St. Johns County v. Northeast Florida Builders Association*, 583 So. 2d 635, 637 (Fla. 1991).

² *Hollywood, Inc. v. Broward County*, 431 So. 2d 606, 611-12 (Fla. 4th DCA), review denied, 440 So. 2d 352 (Fla. 1983), quoted and followed in *St. Johns County v. Northeast Florida Builders Ass'n*, 583 So. 2d 635, 637 (Fla. 1991).

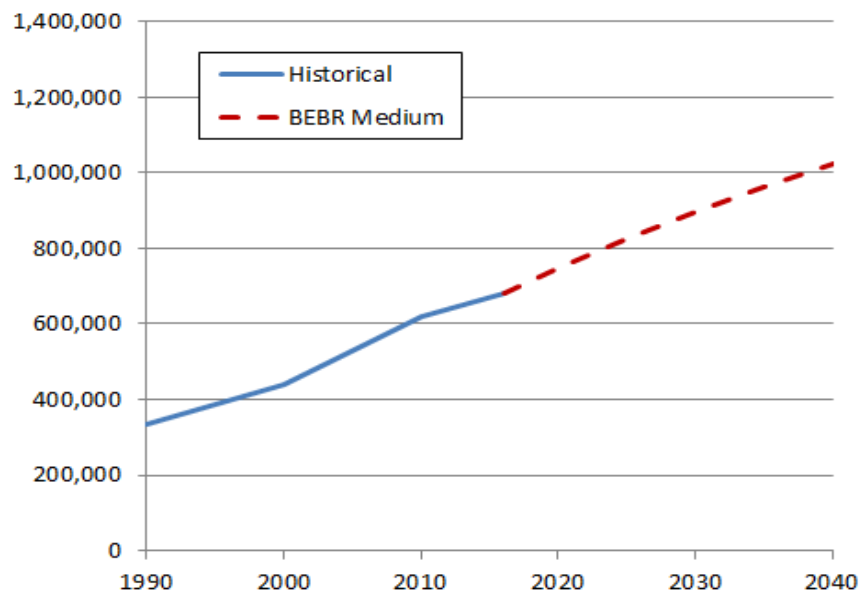
The Need Test

To meet the first prong of the dual rational nexus test, it is necessary to demonstrate that new development creates the need for additional fire rescue and EMS facilities. The permanent, year-round population of the county grew 32 percent during the 1990s, and even more rapidly during the last decade, even with the housing crisis of the late 2000s. During the first six years of this decade, growth has slowed, increasing only 10% since 2010. The number of new residents added per year since 2010 was less than during the last decade, but about the same as in the 1990s.

While the Bureau of Economic and Business Research (BEBR) of the University of Florida acknowledges that there is currently great uncertainty about future growth, as indicated by the range of its most recent projections, it believes that its medium growth projection is the most likely to occur. BEBR's medium growth projection shows a slight tapering off from Lee County's historical growth, illustrated in Figure 1. The medium projection indicates that the population of the county will exceed one million by 2040. Future growth, both residential and nonresidential, will create growing demands for fire rescue and EMS facilities and equipment.

The County's fire rescue and EMS impact fees are reasonably related to the demands for service arising from various land use types, based on an analysis of calls-for-service over the last several years as well as functional population analysis, as demonstrated in the 2012 study. This methodology ensures that the fire rescue and EMS impact fees assessed are proportional to the impacts of the development.

Figure 1. County Population Growth, 1990-2040



Source: 1990, 2000, and 2010 U.S. Census; 2016 estimate and projections from University of Florida, Bureau of Economic and

The Benefit Test

To meet the second prong of the dual rational nexus test, it is necessary to demonstrate that new development subject to the fee will benefit from the expenditure of the impact fee funds. One requirement is that the fees actually be used to fill the need that serves as the justification for the fees under the first part of the test. The fire rescue and EMS impact fee ordinance requires that impact fee revenues be spent only on growth-related capital improvements for the type of facility for which the fee was collected, and within the benefit district in which the fees were collected:

Funds collected from fire and EMS impact fees must be used for the purpose of capital improvements to and expansion of fire protection and emergency medical services. Fire and EMS impact fee collections, including any interest earned thereon, less administrative costs retained pursuant to subsection (e) of this section, will be used exclusively for capital improvements or expansion within or for the benefit of the fire and EMS impact fee benefit district from which the funds were collected. These impact fee funds must be segregated from other kinds and expended in the order in which they are collected. Funds may be used or pledged in the course of bonding or other lawful financing techniques, so long as the proceeds raised thereby are used for the purpose of land acquisition and capital improvements to and expansion within or for the benefit of the fire and EMS impact fee benefit district from which the funds were used or pledged. If these funds or pledge of funds are combined with other revenue sources in a dual or multipurpose bond issue or other revenue-raising device, then the proceeds raised thereby must be divided and segregated in a manner that will cause the amount of the proceeds reserved for the benefit of the participating fire and EMS impact fee benefit district to bear the same ratio to the total funds collected as the amount of the participating fire and EMS impact fee benefit district funds used or pledged bears to the total funds used or pledged.³

The Land Development Code ensures that fire rescue and EMS impact fee revenues are spent on improvements and equipment that expand the capacity to accommodate new development, rather than on maintenance or rehabilitation of existing facilities or equipment or other purposes unrelated to the impacts of growth.

Another way to ensure that the fees be spent for their intended purpose is to require that the fees be refunded if they have not been used within a reasonable period of time. The Florida District Court of Appeals upheld Palm Beach County's road impact fee in 1983, in part because the ordinance included refund provisions for unused fees.⁴ Lee County's fire rescue and EMS impact fee ordinance contains provisions requiring that the fees be returned to the fee payer if they have not been spent or encumbered within a fixed period of time from the date of fee payment.⁵

³ Lee County Land Development Code, Sec. 2-390(a)

⁴ *Home Builders Ass'n v. Board of County Commissioners of Palm Beach County*, 446 So. 2d 140 (Fla. Dist. Ct. App. 1983)

⁵ Lee County Land Development Code, Sec. 2-391(b)

In sum, the Land Development Code ensures that the fees are spent to benefit the fee-paying development by requiring the earmarking of funds, restricting impact fee revenues to be spent within the benefit districts collected and providing refunds of unexpended funds to fee payers.

Florida Statutes

Florida law requires that impact fees must “be based on the most recent and localized data.”⁶ The County’s impact fee ordinance requires that the fire and EMS fees be updated every three years to ensure consistency with this requirement.⁷ Recent, local data has been gathered for use in the impact fee calculations, including land use data, appraised land values, recent station construction costs and current equipment costs. This report complies with the substantive requirements of the Florida Impact Fee Act.

The Florida Impact Fee Act requires 90 days’ notice be provided before a new or increased impact fee may go into effect. However, no waiting period is required to decrease, suspend or eliminate an impact fee.⁸ The updated fire rescue fees are almost all higher (only nonresidential fees in Fort Myers are lower) than existing fees, while the updated EMS fees are higher for most land uses. Consequently, the updated fees would not be effective until 90 days after adoption.

⁶ Florida Impact Fee Act, Sec. 163.31801(3)(a), Florida Statutes

⁷ Lee County Land Development Code, Sec. 2-386(5)

⁸ Florida Impact Fee Act, Sec. 163.31801(3)(d), Florida Statutes

FIRE RESCUE

In Lee County, fire and rescue services and advanced life support services are provided by municipal fire departments and independent fire protection districts. The County does not directly provide fire and rescue services except for the airports, but does collect the fees for the fire districts in the unincorporated area and for municipalities for which the County issues building permits on a contractual basis. The fees collected by the County are turned over to the districts to be spent on eligible capital expenditures in accordance with governing interlocal agreements.

Lee County originally adopted fire rescue impact fees in 1989, and updated the fees for two of the fire districts in 1995. The original 1989 fire rescue impact fee study and the 1995 update for the Estero and San Carlos Park districts were prepared by Dr. James C. Nicholas. A comprehensive update of the fire rescue fees was undertaken in 1999, based on a study by Duncan Associates. The 1999 fire rescue impact fee update changed in the methodology for calculating the fees. Subsequent updates were prepared using the same methodology in 2002, 2006, and 2012. This update retains the methodology used in the prior four studies, with the exception that the service unit multipliers are based on functional population, a change from calls-for-service that was made in the 2012 study.

Benefit Districts

A “benefit district” is a geographic area in which the fees collected are spent on improvements that primarily benefit development in the area. A similar concept is a “service area,” which is an area to which an integrated set of facilities provide a public service. In the case of fire rescue facilities, the benefit districts and service areas are the same.

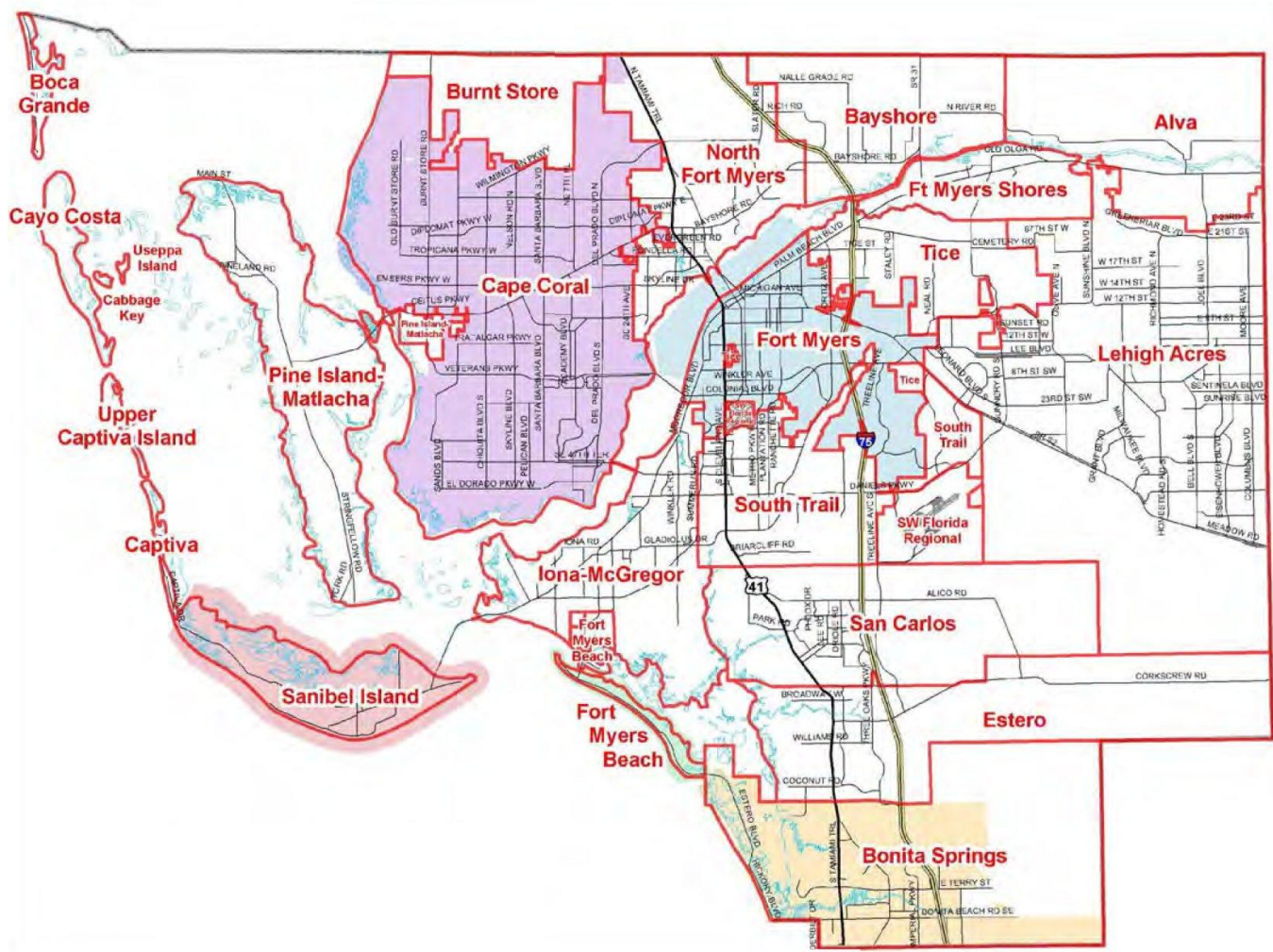
The current fire rescue impact fee ordinance includes fee schedules for 19 benefit districts. The benefit districts include 17 independent fire districts, the Fort Myers municipal fire department and the Lee County Airports Fire Department. The City of Cape Coral and the Burnt Store Fire Protection and Rescue District, which is served by contract by the City of Cape Coral, have traditionally not participated in the County impact fee system, and the Boca Grande Fire Control District is not participating in this study. Updated fire rescue fees are calculated for the following 18 benefit districts.

- ☐ Alva Fire Control and Rescue Service District
- ☐ Bayshore Fire Protection and Rescue Service District
- ☐ Bonita Springs Fire Control and Rescue District
- ☐ Captiva Island Fire Control District
- ☐ Estero Fire Protection and Rescue Service District
- ☐ Fort Myers Fire Department
- ☐ Fort Myers Beach Fire Control District
- ☐ Fort Myers Shores Fire Protection and Rescue District
- ☐ Iona-McGregor Fire Protection and Rescue Service District
- ☐ Lehigh Acres Fire Control and Rescue Service District

- Lee County Airports Fire Department
- Matlacha-Pine Island Fire Control District
- North Fort Myers Fire Control and Rescue Service District
- San Carlos Park Fire Control and Rescue Service District
- Sanibel Fire Control District
- South Trail Fire Protection and Rescue Service District
- Tice Fire Protection and Rescue Service District
- Upper Captiva Fire Protection and Rescue Service District

The geographic boundaries of the fire rescue districts are illustrated in Figure 2. The Bonita Springs fire district serves both City of Bonita Springs and adjacent unincorporated area, the Fort Myers Beach Fire Control District serves both the Town of Fort Myers Beach and unincorporated area, and the Estero Fire Protection and Rescue Service District serves the Village of Estero and unincorporated area. The Cape Coral Fire Department serves the city as well as the Burnt Store Fire Protection and Rescue District.

Figure 2. Fire Rescue Districts



Fire rescue and EMS impact fee revenues collected since fiscal year 2013 in each participating benefit district are summarized in Table 2. Sufficient revenues are being collected in all districts to fund some equipment.

Table 2. Fire Rescue and EMS Impact Fee Revenues, FY 2013 to FY 2017

Benefit District	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	5-Yr Total
Alva	\$2,252	\$1,896	\$5,570	\$11,249	7296	\$28,263
Bayshore	\$8,699	\$4,222	\$23,741	\$2,844	\$6,575	\$46,081
Bonita Springs*	\$694	\$2,808	\$0	\$0	\$2,787	\$6,289
Captiva	\$474	\$474	\$0	\$948	\$1,422	\$3,318
Estero	\$109,459	\$146,069	\$276,888	\$108,313	\$77,240	\$717,970
Fort Myers	\$93,095	\$177,447	\$127,055	\$188,269	n/a	\$585,866
Ft Myers Beach*	\$404	\$492	\$808	\$1,616	\$1,212	\$4,532
Ft Myers Shores	\$49,573	\$45,833	\$53,830	\$89,556	\$111,631	\$350,423
Iona-McGregor	\$56,624	\$178,389	\$151,069	\$79,385	\$97,791	\$563,259
Lee Co Airports	\$3,053	\$0	\$0	\$9	\$36,486	\$39,548
Lehigh Acres	\$15,885	\$20,016	\$38,196	\$110,867	\$135,150	\$320,113
North Fort Myers	\$16,384	\$23,088	\$40,434	\$25,432	\$28,846	\$134,184
Pine Is.-Matlacha	\$24,519	\$38,137	\$42,796	\$26,381	\$6,879	\$138,713
San Carlos Park	\$114,461	\$152,074	\$562,000	\$104,025	\$218,657	\$1,151,216
Sanibel**	n/a	n/a	n/a	n/a	n/a	n/a
South Trail	35709.55	93965	203477.11	86149	206160.06	\$625,461
Tice	\$62,962	\$42,116	\$132,911	\$15,060	\$15,269	\$268,318
Upper Captiva	\$1,422	\$1,896	\$3,318	\$1,422	\$1,422	\$9,480
Total Fire	\$595,671	\$928,922	\$1,662,094	\$851,525	\$954,822	\$4,993,034
EMS***	\$186,239	\$228,166	\$379,770	\$263,759	\$245,973	\$1,303,907
Total Fire/EMS	\$781,910	\$1,157,088	\$2,041,864	\$1,115,284	\$1,200,796	\$6,296,942

* collections in unincorporated area only

** includes collections from Village of Estero in FY 2015 and 2016, when the County collected fees within the municipality

*** not available (collected by municipality)

Source: Revenues by fiscal year (October through September) from Lee County Community Development Department, October 24, 2017.

Methodology

The calculation of fire rescue impact fees is based on the existing level of service in each district. That level of service is expressed as the ratio of the equity value of existing facilities and equipment to existing service units. Fire rescue service units, or “equivalent dwelling units” (EDUs), represent the demand for fire rescue service generated by a typical single-family dwelling.

To ensure that new development does not pay twice for the same level of service, outstanding debt on existing facilities is netted out of replacement value. It is recommended that the fees continue to be capped as they have been since the 1999 study, in order to avoid excessively high fees in fire districts with the least amount of development. Outstanding debt and historical grant funding is netted out of the fee calculations. The recommended formula for calculating the fire rescue fees is shown in Figure 3. The recommended EMS impact fee formula is detailed in Figure 5.

Figure 3. Fire Rescue Impact Fee Formula

IMPACT FEE	=	PROJECT EDUs x MAX FEE
MAX FEE	=	NET COST/EDU or CAP/EDU, whichever is less
CAP/EDU	=	\$766
NET COST/EDU	=	NET COST ÷ DISTRICT EDUs
NET COST	=	CAPITAL COST – CREDIT
CAPITAL COST	=	Replacement cost of existing capital facilities of the fire district
CREDIT	=	Outstanding debt on existing capital facilities + capital grants over last 5 years
EDU	=	Equivalent Dwelling Unit (demand generated by a single-family unit)
UNITS	=	Development units (dwelling units, hotel/motel rooms, or 1,000s of square feet)
EDUs/UNIT	=	The number of EDUs associated with a UNIT of a particular land use category
PROJECT EDUs	=	Total EDUs for a development project
DISTRICT EDUs	=	Total EDUs for a fire district (sum of UNITS x EDUs/UNIT for each land use)

Service Unit

Disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for fire rescue service. This unit of measurement is called a “service unit.” A common service unit used in impact fee analysis is the “equivalent dwelling unit” or EDU, which represents the impact of a typical single-family dwelling.

In studies prior to the 2012 update, the EDU multipliers were based on the annual number of fire rescue calls per development unit for various land use categories. The problem with relying on call data is that it is unstable over time. This means that fees go up or down significantly for individual land uses each time the fees are updated. Call multipliers are a ratio between two data sets: call records and land use inventory. The method of classifying calls by land use can change over time, and land use estimates can also change. The result can be rather extreme volatility over time.

The most commonly-used alternative to call data in fire rescue and EMS impact fees is based on a concept called “functional population.” Similar to the concept of full-time equivalent employees, functional population represents the number of “full-time equivalent” people present at the site of a land use. Functional population represents the average number of equivalent persons present at the site of a land use for an entire 24-hour day. For residential development, functional population is simply average household size times the percent of time people spend at home. For nonresidential development, functional population is based on a formula that includes square foot per employee ratios, trip generation rates, average vehicle occupancy and average number of hours spent by employees and visitors at a land use. These all tend to be stable characteristics that do not change significantly over short periods of time. Functional population multipliers by land use are calculated in Appendix B.

To determine the total number of service units for each fire district, existing land use data compiled by the Lee County Department of Community Development were applied to the functional population-based EDU multipliers shown in the appendix. The EDUs for all land uses in each district were summed to determine total service units. The results are displayed in Table 3.

Table 3. Existing Service Units by Fire District

Fire District	Family (unit)	Family (unit)	Home (unit)	Motel (room)	Retail (1000sf)	Office (1000sf)	Institut. (1000sf)	trial (1000sf)	house (1000sf)	Total
Alva	1,257	47	199	0	16	27	234	6	9	n/a
Bayshore	1,846	166	856	177	67	58	234	47	53	n/a
Bonita Springs	14,304	15,311	5,699	917	3,929	2,293	2,174	291	1,429	n/a
Captiva	511	701	0	562	301	7	18	0	0	n/a
Estero	9,712	11,206	2,423	1,053	3,924	1,170	1,397	3	224	n/a
Fort Myers	14,790	22,648	746	1,919	9,015	5,281	10,161	2,634	5,998	n/a
Ft Myers Beach	2,754	7,343	1,791	1,407	599	63	263	99	187	n/a
Ft Myers Shores	4,147	756	533	7	581	98	652	3	71	n/a
Iona-McGregor	12,640	24,123	6,594	1,660	3,924	1,997	4,334	176	935	n/a
Lehigh Acres	30,554	7,700	0	75	1,590	816	2,227	345	824	n/a
Lee Co Airports	0	0	0	0	6	121	2,953	0	0	n/a
Matlacha-Pine Is.	4,598	708	1,879	671	375	306	180	82	247	n/a
North Fort Myers	11,887	3,984	14,273	1,039	3,751	485	2,206	704	1,237	n/a
San Carlos Park	10,071	5,381	967	1,421	3,403	754	2,763	962	1,548	n/a
Sanibel	3,714	3,908	315	925	559	169	371	0	11	n/a
South Trail	11,495	15,408	1,656	1,822	7,449	6,350	3,762	3,457	3,908	n/a
Tice	4,300	760	1,641	667	791	478	2,201	594	792	n/a
Upper Captiva	310	43	0	0	9	0	6	0	0	n/a
Total Units	138,890	120,193	39,572	14,322	40,289	20,473	36,136	9,403	17,473	n/a
EDUs per Unit	1.00	0.76	0.73	0.48	1.07	0.52	0.31	0.19	0.11	n/a
Alva	1,257	36	145	0	17	14	73	1	1	1,544
Bayshore	1,846	126	625	85	72	30	73	9	6	2,872
Bonita Springs	14,304	11,636	4,160	440	4,204	1,192	674	55	157	36,822
Captiva	511	533	0	270	322	4	6	0	0	1,646
Estero	9,712	8,517	1,769	505	4,199	608	433	1	25	25,769
Fort Myers	14,790	17,212	545	921	9,646	2,746	3,150	500	660	50,170
Ft Myers Beach	2,754	5,581	1,307	675	641	33	82	19	21	11,113
Ft Myers Shores	4,147	575	389	3	622	51	202	1	8	5,998
Iona-McGregor	12,640	18,333	4,814	797	4,199	1,038	1,344	33	103	43,301
Lehigh Acres	30,554	5,852	0	36	1,701	424	690	66	91	39,414
Lee Co Airports	0	0	0	0	6	63	915	0	0	984
Matlacha-Pine Is.	4,598	538	1,372	322	401	159	56	16	27	7,489
North Fort Myers	11,887	3,028	10,419	499	4,014	252	684	134	136	31,053
San Carlos Park	10,071	4,090	706	682	3,641	392	857	183	170	20,792
Sanibel	3,714	2,970	230	444	598	88	115	0	1	8,160
South Trail	11,495	11,710	1,209	875	7,970	3,302	1,166	657	430	38,814
Tice	4,300	578	1,198	320	846	249	682	113	87	8,373
Upper Captiva	310	33	0	0	10	0	2	0	0	355
Total EDUs	138,890	91,348	28,888	6,874	43,109	10,645	11,204	1,788	1,923	334,669

Source: Existing units from Lee County Department of Community Development, October 30, 2017; EDUs per unit are functional population multipliers from Table 42 in Appendix B.

Capital Costs

Because of the large number of fire districts in Lee County, a standardized approach was developed to measure the replacement value of each fire district's capital facilities. An average fire station cost per square foot, which includes furniture, fixtures and equipment but does not include fire-fighting apparatus and associated fire rescue and medical equipment, was used to estimate the replacement cost of existing fire stations. As can be seen in Table 4, construction costs for stations built since 2003 have averaged \$207 per square foot. However, because the most recent station built in Captiva may not be representative, the average cost without that station of \$196 per square foot will be used in this update.

Table 4. Fire Station Cost per Square Foot

Fire District	Station	Date	Amount	Sq. Feet	Cost/SF
Iona-McGregor	Station 4	8/2003	\$2,800,000	27,035	\$104
San Carlos Park	Station 3	11/2003	\$3,436,826	26,671	\$129
Bonita Springs	Station 4	1/2004	\$5,279,252	30,000	\$176
Tice	Main Station	11/2004	\$1,640,000	13,764	\$119
Fort Myers	Station 5	2/2005	\$2,800,000	11,200	\$250
Bonita Springs	Station 2	5/2005	\$1,611,700	9,265	\$174
Sanibel	Station 1	7/2005	\$2,750,000	14,000	\$196
Lehigh Acres	Station 104	4/2005	\$3,267,547	13,322	\$245
Lehigh Acres	Station 105	4/2005	\$3,006,090	13,977	\$215
Matlacha-Pine Is.	n/a	8/2006	\$2,485,987	9,965	\$249
Bonita Springs	Station 1 Rebuild	10/2006	\$2,442,369	10,461	\$233
Ft. Myers Beach	Station 32	8/2007	\$3,059,433	12,376	\$247
Ft. Myers Beach	Station 33	8/2007	\$1,982,028	6,808	\$291
Iona-McGregor	Station 75	7/2008	\$2,905,462	13,612	\$213
Bonita Springs	Station 5	3/2009	\$1,094,562	8,688	\$126
South Trail	n/a	1/2010	\$3,176,723	19,458	\$163
Captiva	Station 181	2015	\$3,500,000	9,155	\$382
Average Cost per Square Foot					\$207
Average without Captiva Station					\$196

Source: Survey of Lee County fire districts summarized in Duncan Associates, *Fire/EMS Impact Fee Study*, January 2012; information for Captiva station from Captiva Island Fire Control District, October 16, 2017.

Land costs for 13 of the 18 fire districts were based on an analysis conducted by a local real estate appraisal firm (land costs were considered irrelevant in the other six districts, since the potential impact fees will far exceed the maximum fee recommended in this report). The appraiser identified sales throughout Lee County that were comparable to fire station sites within the various fire districts. Comparable sales were generally defined as between one-half to three or four acres in size. In some of the more rural districts, sales of larger tracts were included due to the unavailability of smaller subdivided tracts. Comparable sales were located along major roadways, or at least just off major roads with relatively easy access. For the most part, the sales were commercial, although some industrial sales were considered but mostly not utilized. The appraiser interviewed the buyer, seller or agent involved in each transaction to verify the selling price, financing, motivation to purchase and sell and any lease and/or income expense information. The appraiser's opinion of average acquisition costs for fire station sites in the various districts is presented in Table 5.

Table 5. Average Land Cost by Fire District

Fire District	Cost/ Acre
Alva	\$130,680
Bayshore	\$174,240
Bonita Springs	\$435,600
Captiva	na
Estero	\$435,600
Fort Myers	\$348,480
Fort Myers Beach	na
Fort Myers Shores	\$261,360
Iona-McGregor	\$348,480
Lee County Airports	na
Lehigh Acres	\$326,700
Matlacha-Pine Island	na
North Fort Myers	\$217,800
San Carlos Park	\$348,480
Sanibel	\$871,200
South Trail	\$348,480
Tice	\$304,920
Upper Captiva	na

Source: Maxwell Hendry Simmons, *Lee County Fire/EMS Impact Fee Study (Land Component)*, October 9, 2017.

The replacement costs of fire-fighting apparatus and other vehicles are based on current pricing for fully-equipped vehicles meeting Federal and State laws and National Fire Protection Association requirements, as shown in Table 6.

Table 6. Fire Rescue Equipment Costs

Equipment	Apparatus	Fire Equipment	Medical Equipment	Total Cost
Mini Pumper	\$185,000	\$45,519	\$40,400	\$270,919
Pumper	\$500,000	\$115,000	\$50,000	\$665,000
Tanker	\$250,000	\$23,801	\$0	\$273,801
Wildland Brush Truck-Small	\$152,000	\$45,000	\$0	\$197,000
Wildland Brush Truck-Large	\$245,000	\$52,793	\$0	\$297,793
Hazardous Materials Truck	\$310,000	\$205,707	\$8,400	\$524,107
Aerial Ladder 75'	\$800,000	\$175,000	\$50,000	\$1,025,000
Aerial Ladder 105'	\$900,000	\$175,000	\$50,000	\$1,125,000
Aerial Platform 65'	\$807,000	\$158,926	\$40,400	\$1,006,326
Aerial Platform 100'	\$990,000	\$200,000	\$50,000	\$1,240,000
Command Vehicle	\$90,000	\$31,893	\$8,400	\$130,293
Staff/Support Vehicle	\$56,000	\$0	\$5,000	\$61,000
Rescue Squad	\$100,000	\$0	\$50,000	\$150,000
Fire/Rescue Boat	\$250,000	\$25,000	\$6,000	\$281,000
Transport Capable Rescue	\$210,000	\$0	\$60,000	\$270,000
Technical Rescue Trailer	\$105,000	\$0	\$0	\$105,000
1500 Gallon ARFF Crash Truck	\$600,000	\$115,000	\$9,000	\$724,000
3000 Gallon ARFF Crash Truck	\$775,000	\$115,000	\$9,000	\$899,000

Source: Lee County Fire Chiefs' Association, September 29, 2017.

Another issue to be considered is the possibility of extreme variations in existing levels of service. Because there is a minimum amount of capital equipment required to provide fire rescue service, the cost is much higher per service unit in fire districts with relatively little development. Consequently, the consultant has consistently recommended that the fees be capped at the average cost per service unit for districts with at least four fire stations. A generalized analysis has been performed to suggest a recommended cap. As shown in Table 7, the total capital cost among the six districts that have four or more stations averages \$5.4 million per station, and a station serves an average of 7,080 EDUs. These figures are used as a reasonable threshold to establish an upper limit for fire rescue impact fees assessed in Lee County of \$766 per service unit.

Table 7. Fire Rescue Recommended Maximum Capital Cost per Service Unit

Fire Rescue District	No. of Stations	Capital Cost	EDUs	Cost/ Station	EDUs/ Station	Cost/ EDU
Bonita Springs	7	\$37,054,479	31,216	\$5,293,497	4,459	\$1,187
Fort Myers	6	\$27,175,507	46,343	\$4,529,251	7,724	\$586
Iona-McGregor	5	\$26,470,038	41,504	\$5,294,008	8,301	\$638
Lehigh Acres	5	\$28,250,200	39,125	\$5,650,040	7,825	\$722
Estero	4	\$28,628,448	22,710	\$7,157,112	5,678	\$1,261
South Trail	4	\$20,608,603	38,570	\$5,152,151	9,643	\$534
Total or Weighted Average	31	\$168,187,275	219,468	\$5,425,396	7,080	\$766

Source: Number of stations and capital costs from Appendix A; EDUs from Table 3.

Net Cost per Service Unit

New development should not be required to pay for fire rescue facilities twice – once through impact fees and again through property taxes or other taxes or fees used to retire outstanding debt for existing capital facilities. To avoid double-charging, the amount of outstanding debt on existing capital facilities in each fire district has been deducted from the estimated replacement cost of existing facilities. Equipment funded by grants over the last five years has also been excluded from the net replacement value.

Based on standardized unit costs and an inventory of existing facilities and information on outstanding debt and recent grants provided by each fire district, the net cost of existing capital facilities was determined for each district. These calculations are presented in Appendix A.

The net cost per service unit is calculated by dividing the net cost of a fire district's existing capital facilities (replacement cost less outstanding debt and capital grants received over the last five years) by the existing number of fire rescue service units (Equivalent Dwelling Units or EDUs) in the district. It is recommended that the fire rescue impact fees be capped so as not to exceed \$766 per service unit, to ensure that the fees are not based on extremely high levels of service that may currently be provided in districts with relatively little development. The calculated net costs per service unit and recommended maximum fees per service unit for each fire district are shown in Table 8.

Table 8. Fire Rescue Maximum Fees per Service Unit

Fire Rescue District	Capital Cost	Debt & Grants	Net Cost	EDUs	Net Cost/ EDU	Max. Fee/ EDU
Alva	\$4,544,063	\$0	\$4,544,063	1,538	\$2,955	\$766
Bayshore	\$7,566,045	-\$333,914	\$7,232,131	2,812	\$2,572	\$766
Bonita Springs	\$37,054,479	-\$2,310,676	\$34,743,803	31,216	\$1,113	\$766
Captiva	\$4,952,000	-\$3,535,768	\$1,416,232	1,412	\$1,003	\$766
Estero	\$28,628,448	-\$1,536,454	\$27,091,994	22,710	\$1,193	\$766
Fort Myers	\$27,175,507	-\$11,534,393	\$15,641,114	46,343	\$338	\$338
Fort Myers Beach	\$10,080,061	-\$905,078	\$9,174,983	10,465	\$877	\$766
Fort Myers Shores	\$4,869,577	\$0	\$4,869,577	5,654	\$861	\$766
Iona-McGregor	\$26,470,038	-\$508,695	\$25,961,343	41,504	\$626	\$626
Lee County Airports	\$10,180,916	-\$481,938	\$9,698,978	1,043	\$9,299	\$766
Lehigh Acres	\$28,250,200	-\$2,293,293	\$25,956,907	39,125	\$663	\$663
Matlacha-Pine Island	\$10,222,839	-\$661,967	\$9,560,872	7,563	\$1,264	\$766
North Fort Myers	\$8,689,148	-\$252,552	\$8,436,596	30,608	\$276	\$276
San Carlos Park	\$21,729,855	-\$1,284,387	\$20,445,468	19,133	\$1,069	\$766
Sanibel	\$13,737,701	-\$2,450,000	\$11,287,701	8,969	\$1,259	\$766
South Trail	\$20,608,603	\$0	\$20,608,603	38,570	\$534	\$534
Tice	\$10,122,059	-\$350,000	\$9,772,059	7,886	\$1,239	\$766
Upper Captiva	\$3,079,443	\$0	\$3,079,443	340	\$9,057	\$766

Source: Capital cost, outstanding debt and grants from Appendix A; Equivalent Dwelling Units (EDUs) from Table 3 maximum fee per EDU is net cost per EDU or recommended upper limit calculated in Table 7, whichever is less.

Net Cost Schedule

The updated fees are calculated by multiplying the maximum fee per EDU (same as single-family fee) by the EDU multiplier for each land use type, as shown in Table 9 on the following page. The fees for 13 of the 18 districts are the same, based on the maximum fee per EDU determined in this study.

The following table also shows the percentage changes in fees by land use for each fire district. The updated fire rescue fees are higher than current fees for all districts and all land use types, except for nonresidential uses in the City of Fort Myers.

Table 9. Fire Rescue Maximum Impact Fees by Land Use

Fire District	Single-Family (unit)	Multi-Family (unit)	Mobile Home (unit)	Hotel/Motel (room)	Retail (1000sf)	Office (1000sf)	Public/Instit. (1000sf)	Industrial (1000sf)	Warehouse (1000sf)
EDUs per Unit->	1.00	0.76	0.73	0.48	1.07	0.52	0.31	0.19	0.11
Alva	\$766	\$582	\$559	\$368	\$820	\$398	\$237	\$146	\$84
Bayshore	\$766	\$582	\$559	\$368	\$820	\$398	\$237	\$146	\$84
Bonita Springs	\$766	\$582	\$559	\$368	\$820	\$398	\$237	\$146	\$84
Captiva	\$766	\$582	\$559	\$368	\$820	\$398	\$237	\$146	\$84
Esterio	\$766	\$582	\$559	\$368	\$820	\$398	\$237	\$146	\$84
Fort Myers	\$338	\$257	\$247	\$162	\$362	\$176	\$105	\$64	\$37
Ft Myers Beach	\$766	\$582	\$559	\$368	\$820	\$398	\$237	\$146	\$84
Ft Myers Shores	\$766	\$582	\$559	\$368	\$820	\$398	\$237	\$146	\$84
Iona-McGregor	\$626	\$476	\$457	\$300	\$670	\$326	\$194	\$119	\$69
Lee Co Airports	\$766	\$582	\$559	\$368	\$820	\$398	\$237	\$146	\$84
Lehigh Acres	\$663	\$504	\$484	\$318	\$709	\$345	\$206	\$126	\$73
Matlacha-Pine Is.	\$766	\$582	\$559	\$368	\$820	\$398	\$237	\$146	\$84
North Fort Myers	\$276	\$210	\$201	\$132	\$295	\$144	\$86	\$52	\$30
San Carlos Park	\$766	\$582	\$559	\$368	\$820	\$398	\$237	\$146	\$84
Sanibel	\$766	\$582	\$559	\$368	\$820	\$398	\$237	\$146	\$84
South Trail	\$534	\$406	\$390	\$256	\$571	\$278	\$166	\$101	\$59
Tice	\$766	\$582	\$559	\$368	\$820	\$398	\$237	\$146	\$84
Upper Captiva	\$766	\$582	\$559	\$368	\$820	\$398	\$237	\$146	\$84
Percent Change									
Alva	62%	63%	71%	27%	47%	52%	39%	10%	35%
Bayshore	62%	63%	71%	27%	47%	52%	39%	10%	35%
Bonita Springs	62%	63%	71%	27%	47%	52%	39%	10%	35%
Captiva	62%	63%	71%	27%	47%	52%	39%	10%	35%
Esterio	78%	80%	88%	40%	62%	68%	53%	22%	50%
Fort Myers	5%	7%	12%	-17%	-4%	-1%	-9%	-29%	-12%
Ft Myers Beach	62%	63%	71%	27%	47%	52%	39%	10%	35%
Ft Myers Shores	62%	63%	71%	27%	47%	52%	39%	10%	35%
Iona-McGregor	66%	68%	76%	30%	51%	57%	43%	12%	41%
Lee Co Airports	62%	63%	71%	27%	47%	52%	39%	10%	35%
Lehigh Acres	46%	48%	55%	15%	32%	38%	26%	-1%	24%
Matlacha-Pine Is.	62%	63%	71%	27%	47%	52%	39%	10%	35%
North Fort Myers	19%	21%	26%	-6%	8%	13%	4%	-20%	0%
San Carlos Park	62%	63%	71%	27%	47%	52%	39%	10%	35%
Sanibel	62%	63%	71%	27%	47%	52%	39%	10%	35%
South Trail	41%	43%	49%	11%	28%	34%	22%	-5%	20%
Tice	62%	63%	71%	27%	47%	52%	39%	10%	35%
Upper Captiva	62%	63%	71%	27%	47%	52%	39%	10%	35%

Source: EDUs per unit from Table 42 in Appendix B; single-family maximum fees from Table 8; updated fees for other land uses is single-family fee for the district multiplied by the EDUs per unit; percent change is change from current fees listed in Sec. 2-385, Lee County Land Development Code.

EMERGENCY MEDICAL SERVICES

This section calculates the updated maximum impact fees that can be charged by the County to recover the cost of EMS facilities necessary to serve new development at the existing level of service.

Lee County provides emergency medical service (EMS), including advanced life support and patient transportation, throughout most of the county. Capital facilities supporting these services include County-owned EMS stations, County-paid-for portions of several district fire stations, a fleet of ambulances and other vehicles, and communications and medical equipment. The County has charged an impact fee for EMS facilities and capital equipment since 1989. The EMS impact fees were last updated in 2012.

Benefit District

Lee County provides primary EMS service to all of the incorporated and unincorporated areas of the county, with the exception of the Fort Myers Beach Fire Control District and the Lehigh Acres Fire Protection and Rescue Service District. The shaded area of the county for which County EMS provides primary service is shown in Figure 4.

Figure 4. EMS Service Area and Station Locations



While each EMS unit has a designated primary response area, it will respond to calls in neighboring response areas if required. Specialized equipment that supports all units, such as communications equipment and administrative offices, are centralized. Consequently, the entire service area is appropriately designated as a single benefit district for the purpose of EMS impact fees.

Methodology

As with the previous studies, the updated EMS impact fees will be based on the current level of service. The methodology divides the replacement cost of the County's existing EMS capital facilities and equipment by the number of existing EMS service units, and then deducts a revenue credit for outstanding debt. A credit has also been provided for grant funding, even though this source of funding is not assured in the future. Service units, or "equivalent dwelling units" (EDUs), represent the demand for EMS service generated by a single-family dwelling. The recommended formula for calculating the EMS impact fees is shown in Figure 5.

Figure 5. EMS Impact Fee Formula

IMPACT FEE	=	PROJECT EDUs x NET COST/EDU
NET COST/EDU	=	COST/EDU – CREDIT/EDU
COST/EDU	=	COST ÷ TOTAL EDUs
COST	=	Replacement cost of County's existing EMS capital facilities
CREDIT/EDU	=	Outstanding debt ÷ TOTAL EDUS + grant credit per EDU
EDU	=	Equivalent Dwelling Unit (demand generated by a single-family unit)
UNITS	=	Development units (dwelling units, hotel/motel rooms, or 1,000s of sq. feet)
EDUs/UNIT	=	The number of EDUs associated with a unit of a particular land use category
PROJECT EDUs	=	Total EDUs for a development project
TOTAL EDUs	=	Total EDUs for EMS service area (sum of UNITS x EDUs/UNIT by land use)

Service Unit

Different types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for EMS service. This unit of measurement is called a "service unit." A common service unit used in impact fee analysis is the "equivalent dwelling unit" or EDU, which represents the impact of a typical single-family dwelling.

As with fire rescue, the updated EDU multipliers will continue to be based on functional population. The concept of functional population and the EDU multipliers based on functional population are described in Appendix B.

As noted above, the area served by Lee County EMS is the entire county, less the area served by the Fort Myers Beach and Lehigh Acres fire districts. The existing land use data are summarized in Table 10.

Table 10. Existing Land Use, County EMS Service Area

Land Use	Unit of Measure	County-Wide	Ft. Myers Beach	Lehigh Acres	Area Served
Single-Family Detached	Dwelling	208,834	-2,754	-30,554	175,526
Multi-Family	Dwelling	137,827	-7,343	-7,700	122,784
Mobile Home/RV Park	Pad	39,636	-1,791	0	37,845
Hotel/Motel	Room	15,350	-1,407	-75	13,868
Commercial	1,000 sq. ft.	47,529	-599	-1,590	45,340
Office	1,000 sq. ft.	23,207	-63	-816	22,328
Institutional	1,000 sq. ft.	43,185	-263	-2,227	40,695
Industrial	1,000 sq. ft.	10,247	-99	-345	9,803
Warehouse	1,000 sq. ft.	20,642	-187	-824	19,631

Source: County-wide land uses from Lee County Community Development Department, October 25, 2017; area served is county-wide less Fort Myers Beach and Lehigh Acres fire districts.

The combination of existing land use and EDU multipliers yields the total number of EMS equivalent dwelling units in the EMS service area. As shown in Table 11, there are 379,888 EMS service units.

Table 11. Total EMS Service Units

Land Use	Unit of Measure	Existing Units	EDUs/ Unit	Total EDUs
Single-Family Detached	Dwelling	175,526	1.00	175,526
Multi-Family	Dwelling	122,784	0.76	93,316
Mobile Home/RV Park	Pad	37,845	0.73	27,627
Hotel/Motel	Room	13,868	0.48	6,657
Commercial	1,000 sq. ft.	45,340	1.07	48,514
Office	1,000 sq. ft.	22,328	0.52	11,611
Institutional	1,000 sq. ft.	40,695	0.31	12,615
Industrial	1,000 sq. ft.	9,803	0.19	1,863
Warehouse	1,000 sq. ft.	19,631	0.11	2,159
Total EDUs				379,888

Source: Existing units in the County's EMS service area from Table 10; EDUs per unit from Table 42.

Capital Costs

Capital facilities used to support County EMS services include EMS stations and portions of fire stations used by EMS and paid for by the County, ambulances and support vehicles, communications equipment, breathing systems and specialized extrication equipment.

Lee County EMS services are provided out of 37 stations. Many stations are leased space in facilities owned by fire districts. The County owns seven EMS stations and has paid the construction costs for the portion of three of the fire stations that it partially occupies (these square footages have been deducted from the total fire station square footages used in the fire rescue fee calculations to avoid double-counting). At current replacement costs, the buildings owned (or paid for) by the County

and housing EMS personnel and equipment represent an investment of about \$7.6 million, summarized in Table 12.

Table 12. EMS Building Cost

Station	EMS Sq. Ft.	Cost/ Sq. Ft.	EMS Bldg. Cost
Cape Coral EMS Station 12	1,460	\$196	\$286,160
Estero Fire Station # 3*	662	\$196	\$129,752
Forestry/EMS Station 11	2,911	\$196	\$570,556
Garden Street	1,546	\$196	\$303,016
LeeFlight/EMS 32/EMS 40**	7,916	n/a	\$3,338,500
North Ft. Myers EMS Station 7	1,568	\$196	\$307,328
North Ft. Myers EMS Station 31	2,865	\$196	\$561,540
Pine Island Fire Station 1*	600	\$196	\$117,600
Pine Ridge Complex**	2,777	n/a	\$1,860,000
South Trail Fire Station*	700	\$196	\$137,200
Total EMS Buildings Owned or Paid For	23,005		\$7,611,652

* EMS portion of fire station construction cost paid for by Lee County

** cost is insured value

Source: Station square footage from Lee County Public Safety Division, October 12, 2017;
cost per square foot based on average fire station construction cost from Table 4.

The County operates a fleet of EMS vehicles, including ambulances and support vehicles. The County no longer has EMS helicopters. Based on current replacement costs, the existing fleet of EMS vehicles has a total cost of about \$9.7 million, summarized in Table 13.

Table 13. EMS Vehicle Cost

Vehicle Type	Number	Unit Cost	Total Cost
Ambulance, Freightliner, Light Duty	16	\$168,452	\$2,695,232
Ambulance, Freightliner, Medium Duty	22	\$174,975	\$3,849,450
Ambulance, Freightliner Sprinter	16	\$162,500	\$2,600,000
Truck, Sport Utility, 1/2 Ton	8	\$38,000	\$304,000
Truck, Sport Utility, 1/4 Ton	3	\$29,000	\$87,000
Truck, Pickup, 1 Ton	1	\$35,133	\$35,133
Auto, Full Size, 4-Door	2	\$25,980	\$51,960
Auto, Intermediate, 4-Door	2	\$21,258	\$42,516
Total Vehicle Cost			\$9,665,291

Source: Lee County Public Safety Division, fleet management report, October 12, 2017
(unit costs based on most recent acquisition).

In addition to buildings and vehicles, a significant amount of capital equipment is required to support EMS service, including communications equipment, computers, medical and rescue equipment, and office equipment. The cost of existing EMS equipment was estimated from original acquisition costs from the County's fixed asset listings for EMS functions. The total cost of EMS equipment is about \$5.5 million, summarized in Table 14.

Table 14. EMS Equipment Cost

	Total
Ambulance Equipment	\$864,544
Computer Equipment	\$1,272,850
Medical Equipment	\$2,172,482
Other Equipments	\$244,727
Radios and Communications Equipment	\$920,868
Total	\$5,475,471

Source: Lee County Public Safety Division, original costs from fixed asset listings for EMS, October 12, 2017.

The total cost of EMS facilities, including buildings, vehicles and equipment, is approximately \$22.8 million. Dividing this total capital cost by total existing service units yields a cost of \$60 per EDU, as summarized in Table 15.

Table 15. EMS Cost per Service Unit

Station Replacement Cost	\$7,611,652
Vehicle Replacement Cost	\$9,665,291
Equipment Cost	\$5,475,471
Total Facility and Equipment Cost	\$22,752,414
÷ Total Existing Equivalent Dwelling Units (EDUs)	379,888
Cost per EDU	\$60

Source: Station cost from Table 12; vehicle cost from Table 13; equipment cost from Table 14; total EDUs from Table 11.

Net Cost per Service Unit

The County has no outstanding debt for EMS facilities. It has received grant funding in recent years. The grant funding for EMS equipment received by the County over the last six years is summarized in Table 16.

Table 16. EMS Grant Funding, 2011-2016

TRCC funding	\$173,845
2011 County Awards Grant	\$47,276
2012 County Awards Grant	\$77,718
2013 County Awards Grant	\$90,533
2014 County Awards Grant	\$98,142
2015 County Awards Grant	\$98,399
2016 County Awards Grant	\$94,628
Total Grant Funding, 2011-2016	\$680,541
÷ 5 Years	6
Average Annual Grant Funding	\$113,424

Source: Lee County Public Safety Division, October 12, 2017.

While this source of funding is uncertain, a credit for grant funding is given in this study. Assuming that the County continues to receive EMS grants proportional to the amount of development served, over the typical 20-year financing period for capital facilities the County will receive the equivalent of a current lump-sum contribution of \$5 per service unit.

Table 17. EMS Grant Funding Credit

Annual EMS Grant Funding	\$113,424
÷ Total Existing Equivalent Dwelling Units (EDUs)	379,888
Annual EMS Grant Funding per EDU	\$0.30
x Present Value Factor	15.59
EMS Grant Funding Credit per EDU	\$5

Source: Annual grant funding from Table 16; existing EDUs from Table 11; present value factor based on national average interest rate on 20-year, AAA-rated municipal bonds from fmsbonds.com on October 24, 2017.

Reducing the cost per service unit by the anticipated grant funding per service unit over the next 20 years yields a net cost per service unit of \$55 per equivalent dwelling unit, shown in Table 18.

Table 18. EMS Net Cost per Service Unit

EMS Cost per EDU	\$60
– EMS Grant Funding Credit per EDU	-\$5
EMS Net Cost per EDU	\$55

Source: Cost per EDU from Table 15; credit per EDU from Table 17.

Net Cost Schedule

The EMS net cost schedule is calculated by multiplying the number of equivalent dwelling units (EDUs) per unit associated with various land uses by the net cost per EDU of maintaining the existing level of service. The EMS impact fee calculations are presented in Table 19.

Table 19. Updated EMS Impact Fees

Land Use	Unit	EDUs/ Unit	Net Cost/ EDU	Net Cost/ Unit
Single-Family Detached	Dwelling	1.00	\$55	\$55
Multi-Family	Dwelling	0.76	\$55	\$42
Mobile Home/RV Park	Space	0.73	\$55	\$40
Hotel/Motel	Room	0.48	\$55	\$26
Retail	1,000 sq. ft.	1.07	\$55	\$59
Office	1,000 sq. ft.	0.52	\$55	\$29
Public/Institutional	1,000 sq. ft.	0.31	\$55	\$17
Industrial	1,000 sq. ft.	0.19	\$55	\$10
Warehouse	1,000 sq. ft.	0.11	\$55	\$6

Source: EDUs per unit from Table 11; net cost per EDU from Table 18.

The updated EMS fees calculated above are compared with the County's current EMS fees in Table 20. The updated fees are higher than the current adopted fees for most land use categories.

Table 20. Comparative EMS Impact Fees

Land Use	Unit	2012 Study	Adopted Fee	Updated Fee	Change From:	
					Study	Adopted
Single-Family Detached	Dwelling	\$85	\$50	\$55	-35%	10%
Multi-Family	Dwelling	\$64	\$37	\$42	-34%	14%
Mobile Home/RV Park	Space	\$59	\$34	\$40	-32%	18%
Hotel/Motel	Room	\$52	\$30	\$26	-50%	-13%
Retail	1,000 sq. ft.	\$100	\$58	\$59	-41%	2%
Office	1,000 sq. ft.	\$47	\$27	\$29	-38%	7%
Public/Institutional	1,000 sq. ft.	\$31	\$18	\$17	-45%	-6%
Industrial	1,000 sq. ft.	\$24	\$14	\$10	-58%	-29%
Warehouse	1,000 sq. ft.	\$11	\$6	\$6	-45%	0%

Source: 2012 study fees from Duncan Associates, Fire/EMS Impact Fee Study, January 2012; adopted fees from Section 2-385 of Lee County Land Development Code; updated fees from Table 19.

APPENDIX A: NET CAPITAL COST BY FIRE DISTRICT

Table 21. Fire Rescue Net Capital Cost, Alva

Capital Facilities/ Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	1	na	na
Fire Station Building Sq. Feet	6,560	\$221	\$1,449,760
Fire Station Acres	4.70	\$130,680	\$614,196
Mini-Pumper	1	\$270,919	\$270,919
Pumper	1	\$665,000	\$665,000
Tanker	2	\$273,801	\$547,602
Wildland Brush Truck, Small	0	\$197,000	\$0
Wildland Brush Truck, Large	2	\$297,793	\$394,000
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	0	\$1,025,000	\$0
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	0	\$1,006,326	\$0
100' Aerial Platform Truck	0	\$1,240,000	\$0
Command Vehicle	2	\$130,293	\$260,586
Staff/Support Vehicle	1	\$61,000	\$61,000
Rescue Squad	0	\$150,000	\$0
Fire Rescue Boat	1	\$281,000	\$281,000
Total Capital Cost			\$4,544,063
– Outstanding Debt			\$0
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$4,544,063

Source: Inventory units, building square feet, land, outstanding debt and grants from Alva Fire Control and Rescue Service District, October 12, 2017; unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 22. Fire Rescue Net Capital Cost, Bayshore

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	1	na	na
Fire Station Building Sq. Feet	18,898	\$221	\$4,176,458
Fire Station Acres	5.00	\$174,240	\$871,200
Mini-Pumper	0	\$270,919	\$0
Pumper	2	\$665,000	\$1,330,000
Tanker	1	\$273,801	\$273,801
Wildland Brush Truck, Small	1	\$197,000	\$197,000
Wildland Brush Truck, Large	2	\$297,793	\$595,586
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	0	\$1,025,000	\$0
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	0	\$1,006,326	\$0
100' Aerial Platform Truck	0	\$1,240,000	\$0
Command Vehicle	0	\$130,293	\$0
Staff/Support Vehicle	2	\$61,000	\$122,000
Rescue Squad	0	\$150,000	\$0
Fire Rescue Boat	0	\$281,000	\$0
Total Capital Cost			\$7,566,045
– Outstanding Debt			-\$333,914
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$7,232,131

Source: Inventory units, building square feet, land, outstanding debt and grants from Bayshore Fire Protection and Rescue Service District, September 26, 2017; unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 23. Fire Rescue Net Capital Cost, Bonita Springs

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	7	na	na
Fire Station Building Sq. Feet	75,078	\$221	\$16,592,238
Fire Station Acres	23.40	\$435,600	\$10,193,040
Mini-Pumper	2	\$270,919	\$541,838
Pumper	6	\$665,000	\$3,990,000
Tanker	0	\$273,801	\$0
Wildland Brush Truck, Small	0	\$197,000	\$0
Wildland Brush Truck, Large	2	\$297,793	\$595,586
Hazardous Materials Truck	1	\$524,107	\$524,107
75' Aerial Ladder Truck	0	\$1,025,000	\$0
105' Aerial Ladder Truck	1	\$1,125,000	\$1,125,000
75' Aerial Platform Truck	1	\$1,006,326	\$1,006,326
100' Aerial Platform Truck	0	\$1,240,000	\$0
Command Vehicle	8	\$130,293	\$1,042,344
Staff/Support Vehicle	12	\$61,000	\$732,000
Rescue Squad	1	\$150,000	\$150,000
Fire Rescue Boat	2	\$281,000	\$562,000
Total Capital Cost			\$37,054,479
– Outstanding Debt			-\$2,310,676
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$34,743,803

Source: Inventory units, building square feet, land, outstanding debt and grants from Bonita Springs Fire Control and Rescue District, September 26, 2017; unit cost

per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 24. Fire Rescue Net Capital Cost, Captiva

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	1	na	\$3,500,000
Fire Station Building Sq. Feet	9,155	na	na
Fire Station Acres	0.41	\$350,155	na
Mini-Pumper	0	\$270,919	\$0
Pumper	2	\$665,000	\$1,330,000
Tanker	0	\$273,801	\$0
Wildland Brush Truck, Small	0	\$197,000	\$0
Wildland Brush Truck, Large	0	\$297,793	\$0
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	0	\$1,025,000	\$0
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	0	\$1,006,326	\$0
100' Aerial Platform Truck	0	\$1,240,000	\$0
Command Vehicle	0	\$130,293	\$0
Staff/Support Vehicle	2	\$61,000	\$122,000
Rescue Squad	0	\$150,000	\$0
Fire Rescue Boat	0	\$281,000	\$0
Total Capital Cost			\$4,952,000
– Outstanding Debt			-\$3,535,768
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$1,416,232

Source: Inventory units, building square feet, land, outstanding debt and grants from Captiva Island Fire Control District, October 16, 2017; unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 25. Fire Rescue Net Capital Cost, Estero

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	4	na	na
Fire Station Building Sq. Feet*	56,834	\$221	\$12,560,314
Fire Station Acres	14.65	\$435,600	\$6,381,540
Mini-Pumper	0	\$270,919	\$0
Dash Pumps	3	\$665,000	\$1,995,000
Tankers	1	\$273,801	\$273,801
Wildland Brush Truck, Small	2	\$197,000	\$394,000
Wildland Brush Truck, Large	1	\$297,793	\$297,793
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	3	\$1,025,000	\$3,075,000
105' Aerial Ladder Truck	0	\$1,125,000	\$0
100' Aerial Platform Truck	1	\$1,240,000	\$1,240,000
Command Vehicles	0	\$130,293	\$0
Staff/Support Vehicles	15	\$61,000	\$915,000
Rescue Squad	1	\$150,000	\$150,000
Transport Capable Rescue	2	\$270,000	\$540,000
Technical Rescue Trailer	5	\$105,000	\$525,000
Fire Rescue Boat	1	\$281,000	\$281,000
Total Capital Cost			\$28,628,448
– Outstanding Debt			-\$1,523,201
– Capital Grants, 2012-2017			-\$13,253
Net Capital Cost			\$27,091,994

* total less square feet occupied by EMS (see Table 12)

Source: Inventory units, building square feet, land, outstanding debt and grants from Estero Fire Protection and Rescue Service District, October 11 and 30, 2017; unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 26. Fire Rescue Net Capital Cost, Fort Myers

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	6	na	na
Fire Station Building Sq. Feet	57,334	\$221	\$12,670,814
Fire Station Acres	12.50	\$348,480	\$4,356,000
Mini-Pumper	0	\$270,919	\$0
Pumper	8	\$665,000	\$5,320,000
Tanker	0	\$273,801	\$0
Wildland Brush Truck, Small	0	\$197,000	\$0
Wildland Brush Truck, Large	0	\$297,793	\$0
Hazardous Materials Truck	1	\$524,107	\$524,107
75' Aerial Ladder Truck	0	\$1,025,000	\$0
105' Aerial Ladder Truck	1	\$1,125,000	\$1,125,000
65' Aerial Platform Truck	0	\$1,006,326	\$0
100' Aerial Platform Truck	1	\$1,240,000	\$1,240,000
Command Vehicle	2	\$130,293	\$260,586
Staff/Support Vehicle	18	\$61,000	\$1,098,000
Rescue Squad	2	\$150,000	\$300,000
Fire Rescue Boat	1	\$281,000	\$281,000
Total Capital Cost			\$27,175,507
– Outstanding Debt			-\$11,505,497
– Capital Grants, 2012-2017			-\$28,896
Net Capital Cost			\$15,641,114

Source: Inventory units, building square feet, land, outstanding debt and grants from City of Fort Myers Fire Department, November 20, 21 and 22, 2017; unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 27. Fire Rescue Net Capital Cost, Fort Myers Beach

Appendix A: Net Capital Cost by Fire District

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	3	na	na
Fire Station Building Sq. Feet	26,008	\$221	\$5,747,768
Fire Station Acres	1.73	na	na
Mini-Pumper	0	\$270,919	\$0
Pumper	3	\$665,000	\$1,995,000
Tanker	0	\$273,801	\$0
Wildland Brush Truck, Small	0	\$197,000	\$0
Wildland Brush Truck, Large	0	\$297,793	\$0
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	1	\$1,025,000	\$1,025,000
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	0	\$1,006,326	\$0
100' Aerial Platform Truck	0	\$1,240,000	\$0
Command Vehicle	1	\$130,293	\$130,293
Staff/Support Vehicle	12	\$61,000	\$732,000
Rescue Squad	3	\$150,000	\$450,000
Fire Rescue Boat	0	\$281,000	\$0
Total Capital Cost			\$10,080,061
– Outstanding Debt			-\$905,078
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$9,174,983

Source: Inventory units, building square feet, land, outstanding debt and grants from Fort Myers Beach Fire Control District, September 26, 2017; unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 28. Fire Rescue Net Capital Cost, Fort Myers Shores

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	1	na	na
Fire Station Building Sq. Feet	7,330	\$221	\$1,619,930
Fire Station Acres	2.76	\$261,360	\$721,354
Mini-Pumper	0	\$270,919	\$0
Pumper	3	\$665,000	\$1,995,000
Tanker	0	\$273,801	\$0
Wildland Brush Truck, Small	0	\$197,000	\$0
Wildland Brush Truck, Large	0	\$297,793	\$0
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	0	\$1,025,000	\$0
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	0	\$1,006,326	\$0
100' Aerial Platform Truck	0	\$1,240,000	\$0
Command Vehicle	1	\$130,293	\$130,293
Staff/Support Vehicle	2	\$61,000	\$122,000
Rescue Squad	0	\$150,000	\$0
Fire Rescue Boat	1	\$281,000	\$281,000
Total Capital Cost			\$4,869,577
– Outstanding Debt			\$0
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$4,869,577

Source: Inventory units, building square feet, land, outstanding debt and grants from Fort Myers Shores Fire Protection and Rescue District, October 11 and 30, 2017; unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 29. Fire Rescue Net Capital Cost, Iona-McGregor

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	5	na	na
Fire Station Building Sq. Feet	55,601	\$221	\$12,287,821
Fire Station Acres	14.08	\$348,480	\$4,906,598
Mini-Pumper	0	\$270,919	\$0
Pumper	7	\$665,000	\$4,655,000
Tanker	0	\$273,801	\$0
Wildland Brush Truck, Small	0	\$197,000	\$0
Wildland Brush Truck, Large	0	\$297,793	\$0
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	1	\$1,025,000	\$1,025,000
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	1	\$1,006,326	\$1,006,326
100' Aerial Platform Truck	1	\$1,240,000	\$1,240,000
Command Vehicle	1	\$130,293	\$130,293
Staff/Support Vehicle	8	\$61,000	\$488,000
Rescue Squad	3	\$150,000	\$450,000
Fire Rescue Boat	1	\$281,000	\$281,000
Total Capital Cost			\$26,470,038
– Outstanding Debt			-\$508,695
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$25,961,343

Source: Inventory units, building square feet, land, outstanding debt and grants from Iona-McGregor Fire Protection and Rescue Service District, October 13, 2017;

unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 30. Fire Rescue Net Capital Cost, Lehigh Acres

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	5	na	na
Fire Station Building Sq. Feet	50,667	\$221	\$11,197,407
Fire Station Acres	21.43	\$326,700	\$6,999,548
Mini-Pumper	0	\$270,919	\$0
Pumper	6	\$665,000	\$3,990,000
Tanker	3	\$273,801	\$821,403
Wildland Brush Truck, Small	0	\$197,000	\$0
Wildland Brush Truck, Large	6	\$297,793	\$1,786,758
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	0	\$1,025,000	\$0
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	1	\$1,006,326	\$1,006,326
100' Aerial Platform Truck	1	\$1,240,000	\$1,240,000
Command Vehicle	6	\$130,293	\$781,758
Staff/Support Vehicle	7	\$61,000	\$427,000
Rescue Squad	0	\$150,000	\$0
Fire Rescue Boat	0	\$281,000	\$0
Total Capital Cost			\$28,250,200
– Outstanding Debt			-\$2,293,293
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$25,956,907

Source: Inventory units, building square feet, land, outstanding debt and grants from Lehigh Acres Fire Control and Rescue Service District, October 17, 2017; unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 31. Fire Rescue Net Capital Cost, Lee County Airports

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	2	na	na
Fire Station Building Sq. Feet	21,000	\$221	\$4,641,000
Fire Station Acres	2.32	na	na
Mini-Pumper	0	\$270,919	\$0
Pumper	1	\$665,000	\$665,000
Tanker	0	\$273,801	\$0
Wildland Brush Truck, Small	0	\$197,000	\$0
Wildland Brush Truck, Large	1	\$297,793	\$297,793
Command Vehicle	3	\$130,293	\$390,879
Staff/Support Vehicle	3	\$61,000	\$183,000
Rescue Squad	0	\$150,000	\$0
Fire Rescue Boat	0	\$281,000	\$0
1500 gal ARFF Truck (Crash Truck)	2	\$724,000	\$1,448,000
3000 gal ARFF Truck (Crash Truck)	2	\$899,000	\$1,798,000
Multi-purpose ARFF Truck (750gal)	2	\$378,622	\$757,244
Total Capital Cost			\$10,180,916
– Outstanding Debt			\$0
– Capital Grants, 2012-2017			-\$481,938
Net Capital Cost			\$9,698,978

Source: Inventory units, building square feet, land, outstanding debt and grants from Lee County Airports Fire Department, September 26, 2017; unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 32. Fire Rescue Net Capital Cost, Matlacha-Pine Island

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	3	na	na
Fire Station Building Sq. Feet*	25,874	\$221	\$5,718,154
Fire Station Acres	7.50	na	na
Mini-Pumper	1	\$270,919	\$270,919
Pumper	3	\$665,000	\$1,995,000
Tanker	1	\$273,801	\$273,801
Wildland Brush Truck, Small	1	\$197,000	\$197,000
Wildland Brush Truck, Large	3	\$297,793	\$893,379
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	0	\$1,025,000	\$0
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	0	\$1,006,326	\$0
100' Aerial Platform Truck	0	\$1,240,000	\$0
Command Vehicle	2	\$130,293	\$260,586
Staff/Support Vehicle	3	\$61,000	\$183,000
Rescue Squad	1	\$150,000	\$150,000
Fire Rescue Boat	1	\$281,000	\$281,000
Total Capital Cost			\$10,222,839
– Outstanding Debt			-\$661,967
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$9,560,872

Source: Inventory units, building square feet, land, outstanding debt and grants from Matlacha-Pine Island Fire Control District, September 26, 2017; unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 33. Fire Rescue Net Capital Cost, North Fort Myers

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	3	na	na
Fire Station Building Sq. Feet	15,100	\$221	\$3,337,100
Fire Station Acres	4.04	\$217,800	\$879,912
Mini-Pumper	3	\$270,919	\$812,757
Pumper	4	\$665,000	\$2,660,000
Tanker	0	\$273,801	\$0
Wildland Brush Truck, Small	1	\$197,000	\$197,000
Wildland Brush Truck, Large	1	\$297,793	\$297,793
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	0	\$1,025,000	\$0
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	0	\$1,006,326	\$0
100' Aerial Platform Truck	0	\$1,240,000	\$0
Command Vehicle	2	\$130,293	\$260,586
Staff/Support Vehicle	4	\$61,000	\$244,000
Rescue Squad	0	\$150,000	\$0
Fire Rescue Boat	0	\$281,000	\$0
Total Capital Cost			\$8,689,148
– Outstanding Debt			-\$205,504
– Capital Grants, 2012-2017			-\$47,048
Net Capital Cost			\$8,436,596

Source: Inventory units, building square feet, land, outstanding debt and grants from North Fort Myers Fire Control and Rescue Service District, September 26, 2017;

unit cost per building square foot from Table 4; land costs per acre from Table 5;
unit prices for vehicles from Table 6.

Table 34. Fire Rescue Net Capital Cost, San Carlos Park

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	3	na	na
Fire Station Building Sq. Feet	38,958	\$221	\$8,609,718
Fire Station Acres	14.50	\$348,480	\$5,052,960
Mini-Pumper	1	\$270,919	\$270,919
Pumper	5	\$665,000	\$3,325,000
Tanker	0	\$273,801	\$0
Wildland Brush Truck, Small	3	\$197,000	\$591,000
Wildland Brush Truck, Large	1	\$297,793	\$297,793
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	1	\$1,025,000	\$1,025,000
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	0	\$1,006,326	\$0
100' Aerial Platform Truck	1	\$1,240,000	\$1,240,000
Command Vehicle	5	\$130,293	\$651,465
Staff/Support Vehicle	6	\$61,000	\$366,000
Rescue Squad	2	\$150,000	\$300,000
Fire Rescue Boat	0	\$281,000	\$0
Total Capital Cost			\$21,729,855
– Outstanding Debt			-\$1,284,387
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$20,445,468

Source: Inventory units, building square feet, land, outstanding debt and grants from San Carlos Park Fire Control and Rescue Service District, September 26, 2017; unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 35. Fire Rescue Net Capital Cost, Sanibel

Capital Facilities/Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	2	na	na
Fire Station Building Sq. Feet	18,000	\$221	\$3,978,000
Fire Station Acres	6.84	\$871,200	\$5,959,008
Mini-Pumper	0	\$270,919	\$0
Pumper	2	\$665,000	\$1,330,000
Tanker	0	\$273,801	\$0
Wildland Brush Truck, Small	1	\$197,000	\$197,000
Wildland Brush Truck, Large	0	\$297,793	\$0
Hazardous Materials Truck	1	\$524,107	\$524,107
75' Aerial Ladder Truck	1	\$1,025,000	\$1,025,000
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	0	\$1,006,326	\$0
100' Aerial Platform Truck	0	\$1,240,000	\$0
Command Vehicle	2	\$130,293	\$260,586
Staff/Support Vehicle	3	\$61,000	\$183,000
Rescue Squad	0	\$150,000	\$0
Fire Rescue Boat	1	\$281,000	\$281,000
Total Capital Cost			\$13,737,701
– Outstanding Debt			-\$2,450,000
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$11,287,701

Source: Inventory units, building square feet, land, outstanding debt and grants from Sanibel Fire Control District, September 26, 2017; unit cost per building square

foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 36. Fire Rescue Net Capital Cost, South Trail

Capital Facilities/ Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	4	na	na
Fire Station Building Sq. Feet*	49,415	\$221	\$10,920,715
Fire Station Acres	6.38	\$348,480	\$2,223,302
Mini-Pumper	0	\$270,919	\$0
Pumper	5	\$665,000	\$3,325,000
Tanker	0	\$273,801	\$0
Wildland Brush Truck, Small	2	\$197,000	\$394,000
Wildland Brush Truck, Large	0	\$297,793	\$0
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	2	\$1,025,000	\$2,050,000
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	0	\$1,006,326	\$0
100' Aerial Platform Truck	0	\$1,240,000	\$0
Command Vehicle	2	\$130,293	\$260,586
Staff/Support Vehicle	14	\$61,000	\$854,000
Rescue Squad	2	\$150,000	\$300,000
Fire Rescue Boat	1	\$281,000	\$281,000
Total Capital Cost			\$20,608,603
– Outstanding Debt			\$0
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$20,608,603

* total less square feet occupied by EMS (see Table 12)

Source: Inventory units, building square feet, land, outstanding debt and grants from South Trail Fire Protection and Rescue Service District, October 11, 2017; unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 37. Fire Rescue Net Capital Cost, Tice

Capital Facilities/ Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	2	na	na
Fire Station Building Sq. Feet	19,313	\$221	\$4,268,173
Fire Station Acres	2.50	\$304,920	\$762,300
Mini-Pumper	0	\$270,919	\$0
Pumper	4	\$665,000	\$2,660,000
Tanker	0	\$273,801	\$0
Wildland Brush Truck, Small	1	\$197,000	\$197,000
Wildland Brush Truck, Large	2	\$297,793	\$595,586
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	1	\$1,025,000	\$1,025,000
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	0	\$1,006,326	\$0
100' Aerial Platform Truck	0	\$1,240,000	\$0
Command Vehicle	0	\$130,293	\$0
Staff/Support Vehicle	3	\$61,000	\$183,000
Rescue Squad	1	\$150,000	\$150,000
Fire Rescue Boat	1	\$281,000	\$281,000
Total Capital Cost			\$10,122,059
– Outstanding Debt			-\$350,000
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$9,772,059

Source: Inventory units, building square feet, land, outstanding debt and grants from Tice Fire Protection and Rescue Service District, September 26, 2017; unit cost

per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

Table 38. Fire Rescue Net Capital Cost, Upper Captiva

Capital Facilities/ Equipment	Units	Unit Cost	Total Cost
Number of Fire Stations	1	na	na
Fire Station Building Sq. Feet	3,700	\$221	\$817,700
Fire Station Acres	0.96	\$350,155	\$336,149
Mini-Pumper	0	\$270,919	\$0
Pumper	1	\$665,000	\$665,000
Tanker	1	\$273,801	\$273,801
Wildland Brush Truck, Small	1	\$197,000	\$197,000
Wildland Brush Truck, Large	1	\$297,793	\$297,793
Hazardous Materials Truck	0	\$524,107	\$0
75' Aerial Ladder Truck	0	\$1,025,000	\$0
105' Aerial Ladder Truck	0	\$1,125,000	\$0
65' Aerial Platform Truck	0	\$1,006,326	\$0
100' Aerial Platform Truck	0	\$1,240,000	\$0
Command Vehicle	0	\$130,293	\$0
Staff/Support Vehicle	1	\$61,000	\$61,000
Rescue Squad	1	\$150,000	\$150,000
Fire Rescue Boat	1	\$281,000	\$281,000
Total Capital Cost			\$3,079,443
– Outstanding Debt			\$0
– Capital Grants, 2012-2017			\$0
Net Capital Cost			\$3,079,443

Source: Inventory units, building square feet, land, outstanding debt and grants from Upper Captiva Fire Protection and Rescue Service District, October 26, 2017; unit cost per building square foot from Table 4; land costs per acre from Table 5; unit prices for vehicles from Table 6.

APPENDIX B: FUNCTIONAL POPULATION

The two most common methodologies used in calculating public safety service units and impact fees are the “calls-for-service” approach and the “functional population” approach. For the reasons discussed in the “service unit” section of the fire rescue portion of this report, this update utilizes the “functional population” approach to calculate and assess the fire rescue and EMS impact fees. This approach is a generally-accepted methodology for these impact fee types and is based on the observation that demand for public safety facilities tends to be proportional to the presence of people at a site. Analysis presented in the 2012 fire/EMS study demonstrates that functional population multipliers are similar to the calls-for-service approach, while also being more stable over time.

Functional population is analogous to the concept of “full-time equivalent” employees. It represents the number of “full-time equivalent” people present at the site of a land use, and it is used for the purpose of determining the impact of a particular development on the need for facilities. For residential development, functional population is simply average household size times the percent of time people spend at home. For nonresidential development, functional population is based on a formula that factors trip generation rates, average vehicle occupancy and average number of hours spent by visitors at a land use.

Residential Functional Population

For residential land uses, the impact of a dwelling unit on the need for capital facilities is generally proportional to the number of persons residing in the dwelling unit. This can be measured for different housing types in terms of either average household size (average number of persons per occupied dwelling unit) or persons per unit (average number of persons per dwelling unit, including vacant as well as occupied units). In this analysis, average household size is used to develop the functional population multipliers, as it avoids the need to make assumptions about occupancy rates.

The most recent and reliable data on average household size in Lee County is the 5% sample set consisting of 1% samples for the five-year period 2011-2015 collected by the U.S. Census Bureau. The average household sizes associated with different housing types are shown in Table 39.

Table 39. Average Household Size by Housing Type

Housing Type	Sample Units	Household Population	Occupied Units	Avg. HH Size
Single-Family Detached	9,209	388,429	155,039	2.51
Multi-Family	4,316	144,036	75,810	1.90
Mobile Home	1,298	39,405	21,438	1.84

Source: Household population and units in Lee County from 2011-2015 5% sample American Community Survey data from the U.S. Census.

Determining residential functional population multipliers is considerably simpler than the nonresidential component. It is estimated that people, on average, spend 16 hours, or 67 percent, of each 24-hour day at their place of residence and the other 33 percent away from home. A similar approach is used for the hotel/motel category. The functional population per unit for these uses is shown in Table 40.

Table 40. Functional Population per Unit for Residential Uses

Housing Type	Unit	Average HH Size	Occupancy	Func. Pop./Unit
Single-Family Detached	Dwelling	2.51	0.67	1.68
Multi-Family	Dwelling	1.90	0.67	1.27
Mobile Home	Dwelling	1.84	0.67	1.23
Hotel/Motel	Room	1.20	0.67	0.80

Source: Average household size from Table 39; residential occupancy factor assumed; hotel/motel room occupancy based on average room occupancy from information provided by property managers from Research Data Services, February 28, 2005.

Nonresidential Functional Population

The functional population methodology for nonresidential land uses is based on trip generation data utilized in developing the transportation demand schedule prepared for the updated transportation impact fee update. Functional population per 1,000 square feet is derived by dividing the total number of hours spent by employees and visitors during a week day by 24 hours. Employees are estimated to spend 8 hours per day at their place of employment, and visitors are estimated to spend one hour per visit. The formula used to derive the nonresidential functional population estimates is summarized in Figure 6.

Figure 6. Nonresidential Functional Population Formula

FUNCPOP/UNIT	=	(Employee Hours/1000 sf + Visitor Hours/1000 sf) ÷ 24 hours/day
<u>Where:</u>		
Employee Hours/1000 sf	=	employees/1000 sf x 8 hours/day
Visitor Hours/1000 sf	=	Visitors/1000 sf x 1 hour/visit
Visitors/1000 sf	=	Weekday ADT/1000 sf x avg. vehicle occupancy – employees/1000 sf
Weekday ADT/1000 sf	=	one-way avg. daily trips (total trip ends ÷ 2)

Using this formula and information on trip generation rates, vehicle occupancy rates from the *National Household Travel Survey* and other sources and assumptions, nonresidential functional population estimates per 1,000 square feet of gross floor area are calculated in Table 41.

Table 41. Functional Population per Unit for Nonresidential Uses

Land Use	Unit	Trip Rate	Persons/Trip	Employee/Unit	Visitors/Unit	Functional Pop./Unit
Retail	1,000 sq. ft.	18.87	1.96	0.84	36.15	1.79
Office	1,000 sq. ft.	4.87	1.24	2.12	3.92	0.87
Institutional	1,000 sq. ft.	3.32	1.86	0.91	5.27	0.52
Industrial	1,000 sq. ft.	1.68	1.24	0.80	1.28	0.32
Warehouse	1,000 sq. ft.	0.87	1.24	0.49	0.59	0.19

Source: Trip rates based on one-half of average daily trip rate from ITE, *Trip Generation*, 9th ed., 2012 (retail/commercial based on shopping center, institutional based on nursing home, industrial based on manufacturing); persons/trip is average vehicle occupancy from Federal Highway Administration, *Nationwide Household Travel Survey*, 2009; employees/unit from U.S. Department of Energy, *Commercial Buildings Energy Consumption Survey*, 2012; visitors/unit is trips times persons/trip minus employees/unit; functional population/unit calculated based on formula from Figure 6.

Functional Population Summary

The functional population multipliers for the recommended residential and nonresidential land use categories are summarized in Table 42. They are converted to equivalent dwelling units (EDUs) per unit, based on the ratio to the functional population for a single-family detached unit.

Table 42. Functional Population Multipliers

Land Use	Unit	Functional Pop./Unit	EDUs/Unit
Single-Family, Detached	Dwelling	1.68	1.00
Multi-Family	Dwelling	1.27	0.76
Mobile Home/RV Park	Pad	1.23	0.73
Hotel/Motel	Room	0.80	0.48
Shopping Center/Commercial	1,000 sq. ft.	1.79	1.07
Office	1,000 sq. ft.	0.87	0.52
Institutional/Public	1,000 sq. ft.	0.52	0.31
Industrial	1,000 sq. ft.	0.32	0.19
Warehouse	1,000 sq. ft.	0.19	0.11

Source: Residential dwelling unit functional population per unit from Table 40; nonresidential functional population per unit from Table 41.