

Wakulla County

Emergency Medical Systems Impact Fee Study

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Executive Summary

INTRODUCTION

Wakulla County (County) has engaged Government Services Group, Inc. (GSG) to assist the County in the development of an impact fee program for Emergency Medical Services (EMS Impact Fee Project). GSG has retained Nabors, Giblin, & Nickerson, P.A. (NG&N) to provide legal guidance on the study.

GSG specializes in government finance and taxation issues by working with cities, counties, special districts and state agencies to develop unique funding and service delivery solutions for critical infrastructure and service needs. NG&N is a law firm dedicated to the representation of local governments on issues of finance and taxation. Both firms have developed extensive experience in structuring and implementing alternative revenue sources in Florida.

The objective of this study was to develop a legally defensible methodology to support the calculations and imposition of an emergency medical services impact fee to pay for the costs of emergency medical service apparatus and buildings attributable to new development.

Local governments charge impact fees for various reasons:

- To obtain revenue to pay for some of the cost of new public facilities that would not be needed if new development did not occur;
- To implement a public policy of growth regulations that requires new development to pay a portion of the cost of facilities that it requires and that existing development should not pay all of the cost of facilities required to accommodate growth; and,
- To assure that public facilities will be constructed in a timely manner to serve new development.

This document describes the results of the study of impact fees for emergency medical service facilities for Wakulla County (Report), which is one of the project deliverables specified in the scope of services that is incorporated in the professional services agreement between the County and GSG/NG&N. The Report describes the methodology that is used to develop the fees, presents the formulas, variables and data that are the basis for the fees, and documents the calculation of the fees.

The objectives of this initial effort were to:

- Provide an inventory of the emergency medical services the County provides.
- Determine the annual emergency medical services incident rate per unit of development.
- Recommend the apportionment of costs among each category of property use.
- Calculate impact fee rates.
- Ensure that the recommended property use categories and impact fee rates conform to the legal tests required in Florida for a valid impact fee.

STUDY METHODOLOGY

The calculation of impact fee rates depends on two interconnected pieces of data. The first data element is the identification of the capital cost per emergency medical service incident by calculating the total apparatus cost per emergency medical services incident and the building cost per emergency medical services incident. The second data element is the analysis of the annual cost of emergency medical services incidents by property use category by determining the annual emergency medical services incident rate per unit of development and associated costs.

The recommended emergency medical services impact fee methodology allocates costs on the basis of the anticipated impact on the capital needs of the County's emergency medical services system by categories of real property use as identified on the real property assessment roll prepared for the levy of ad valorem taxes. The impact is identified by examining the emergency medical services incident data as reported by the County Emergency Medical Services Department.

NG&N has had substantial involvement in the development, review and analysis of the proposed impact fee methodology and deliverables relative to the legal tests required in Florida for a valid impact fee.

PRELIMINARY IMPACT FEE RATES AND CATEGORIES

Table 1 in this section of the Executive Summary includes the recommended property categories and preliminary impact fees as calculated within this Report. This table is a result of the analysis conducted in this Report.

Table 1
Total Emergency Medical Services Impact fee by Property Use Category

Property Category	Total EMS Cost Per Unit of Development	Credit Adjustment @ 0.00%	Total EMS Impact Fee Per Unit of Development	Type of Unit of Development
Residential	\$174.55	0	\$174.55	Dwelling Unit
Non-Residential	\$0.34	0	\$0.34	Square foot

Background

SERVICE DESCRIPTION

Wakulla County operates two emergency medical services stations;

- Wakulla County EMS, 318 Trice Lane, Crawfordville, Fl. 32327
- Medart Ambulance Station, 50 Medart VFD Lane, Crawfordville, Fl. 32326

The Wakulla County EMS Department has a mission to provide pre-hospital care and transportation of sick and injured persons, preventing unnecessary disability and loss of life, Countywide.

Wakulla County provides coverage supplements this coverage with 3 ALS units located at fire stations throughout the service area, manned by on-call personnel.

OBJECTIVES

In order to achieve the study goals, a number of objectives were accomplished. They are as follows:

- Developed an inventory of the County's existing and proposed emergency medical services ambulance stations.
- Determined the capital costs of providing emergency medical services within the County.
- Determined the relative impact by categories of property use within the County.
- Recommended the apportionment of capital costs within each property use category.
- Developed property use categories and calculated preliminary impact fee rates.

STUDY METHODOLOGY

GSG performed the following tasks to accomplish the project objectives:

- Undertook extensive data collection and a research process to identify the capital funding of emergency medical services within the County;
- Identified the capital costs in the County Emergency Medical Services Department;
- Analyzed one year (Oct.2004 thru Sept. 30, 2005) of emergency medical services call data to allocate the emergency medical services capital costs to property use categories within the County; and
- Distributed the emergency medical services capital costs among identified property use categories to determine preliminary impact fee rates for emergency medical services in the County.

NG&N responsibility included scrutiny of the proposed impact fee methodology and deliverables and an analysis relative to the legal tests required in Florida for a valid impact fee.

THE NEED FOR FACILITIES FOR NEW DEVELOPMENT

The need for emergency medical services facilities for new development in Wakulla County is required because of the projected growth in the County and the need for additional capital to serve the growth. According to building permit records for new construction, the number of new construction building permits is up 35% in 2005 over 2004.

DATA SOURCES

The data in this report was the most recent and localized data available as provided by Wakulla County unless a different source is specifically identified. Population estimates obtained through the Bureau of Economic and Business Research, University of Florida.

Impact Fee Development

There are several steps to develop impact fees for emergency medical services as outlined:

- Capital Cost Per Emergency Medical Services Incident

Apparatus Costs

- Annual Net Cost Per Apparatus
- Cost Per Apparatus Per Incident
- Total Apparatus Cost Per Incident

Buildings Costs

- Annual Building Cost
- Building Square Feet Per Incident
- Building Cost Per Incident
- Annual Emergency Medical Services Incidents by Property Use
- Annual emergency medical services incident rate per unit of development
- Annual emergency medical services incident per unit of development

This section of the Report describes these steps.

CAPITAL COST PER EMERGENCY MEDICAL SERVICES INCIDENT

ANNUAL NET COST PER APPARATUS

The first step in calculating the apparatus cost per emergency medical services incident is to identify the cost per apparatus. The capital cost per apparatus is based on the cost of primary, first response apparatus and major support equipment.

The annual capital cost per apparatus is determined by dividing the capital cost of each apparatus by its useful life:

EMS Apparatus Cost	÷	Useful Life	=	Annual Cost Per EMS Apparatus
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The Wakulla County Emergency Medical Service Department's facility inventory includes the following primary emergency medical services apparatus that respond to emergency medical services incidents:

**Table 2
Inventory of Primary Apparatus**

Year	Apparatus	Cost
1998	1993 Ford Ambulance R1	\$70,000.00
2001	1995 Ford Ambulance R2	\$73,000.00
2000	1997 Ford Ambulance R3	\$40,139.00
1993	2000 Ford Ambulance R4	\$68,783.81
1993	2000 Ford Ambulance R5	\$63,772.31
1991	1991 Chevrolet Blazer	\$8,000.00
2006	2006 Suburban	\$35,000.00
2006	2006 Ford Ambulance	\$183,000.00
004	2004 Ford Ambulance	\$97,059.65

Source: Wakulla Co. EMS

AMBULANCE

Table 3 calculates the annualized cost for one ambulance. Due to the fact that all calls were not identified by unit responding, the cost per call was generated by costing two units responding to 100% of the calls. This also assumes the minimum call protocol as one ambulance and one supervisory vehicle.

Table 3 also shows the number of years of useful life of an ambulance (Column 3). In Column 4 the annualized cost is calculated by dividing the ambulance cost (Column 2) by the useful life of the ambulance (Column 3).

**Table 3
Annualized Cost-Ambulance**

Year	Type	Total Cost	Useful Life	Annual Cost
2006	2006 Ford Ambulance	\$183,000.00	5	\$36,600.00
2006	2006 Suburban	\$35,000.00	5	\$7,000.00

Source: Wakulla Co. EMS

COST PER APPARATUS PER EMERGENCY MEDICAL SERVICES INCIDENT

The capital cost per emergency medical services incidents are calculated for each apparatus by dividing the annual cost per apparatus by the total annual emergency medical services incidents each apparatus responds to.

Annual Cost Per Apparatus	÷	Annual Incidents Per Apparatus	=	Annual Cost Per Apparatus Per Incident
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The emergency medical services incident database identifies each incident by fixed property category and was manually created by individual review of every call responded to in the twelve months analyzed, October 1, 2004 through September 30, 2005. After thorough review of all calls, they were then matched, by address, to a property use category with the property appraiser's data. Following that review, the fixed property categories were identified as residential and non-residential.

During the analysis period, Wakulla County responded to 2,254 emergency medical services incidents. In all of the emergency medical services calls, one primary ambulance is dispatched to an emergency incident. All ambulances in Wakulla County's fleet are licensed ALS. There are 7 primary ambulances. The location of the call dictates the unit to respond.

In Table 4, the response cost per apparatus per emergency medical services incident is calculated. Column 3 of Table 4 shows the annualized cost of the primary vehicle (from Tables 2, 3 and 4). The total annual responses of the vehicle (from Table 4) are shown in Column 4. In Column 5 each vehicle cost per response is calculated by dividing the annualized vehicle cost from Column 3 by the total number of annual responses for each vehicle in Column 4.

**Table 4
Total Vehicle Cost Per EMS Incident**

Year	Type	Annual Cost	# Calls Responded	Apparatus Cost Per Response
2006	2006 Ford Ambulance	\$36,600.00	2254	\$16.24
2006	2006 Suburban	\$7,000.00	2254	\$3.11
Total				\$19.34

Source: Wakulla Co. EMS Call Data

ANNUAL BUILDING COST

The annual building cost is determined by dividing the building capital cost by its useful life, as illustrated below:

Building Cost Per Square Foot	÷	Useful Life	=	Annual Building Cost Per Square Foot
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Building Square Feet Per Emergency Medical Services Incident

The building square foot per emergency medical services incident is calculated by dividing the square feet of emergency medical services buildings by the total emergency medical services incidents.

Building Inventory (Square Feet)	÷	Annual EMS Incidents	=	Building Square Feet Per Incident
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The County's emergency medical services are provided by two emergency medical services stations located strategically, to cover the entire county most efficiently.

- Wakulla County EMS, 318 Trice Lane, Crawfordville, Fl. 32327
- Medart Ambulance Station, 50 Medart VFD Lane, Medart, Fl. 32326

The square footage by station, which is utilized by EMS only, is listed in Table 5.

**Table 5
Emergency Medical Services Building Inventory**

Station	Square footage
318 Trice Lane, Crawfordville, Fl.	2,871
50 Medart VFD Lane, Medart, Fl.	5,080
Total	7,951

Wakulla County - Property Schedule

Building

Table 6 calculates the annualized building cost per the average square footage. Each component of the building cost is listed in Column 1. The building cost per square foot in Column 2 is based on a March 2006 quote, from Architect's Design Group, to build a emergency medical services facility designed to house apparatus, special equipment associated with emergency medical service operations, adequate storage for controlled medical supplies and specially designed to sustain hurricane wind force and be air-borne debris resistant. Emergency medical services impact fee revenue would be the primary source for the construction of additional buildings required to serve new development.

Table 6 also shows the number of years of useful life of an emergency medical services building based on IRS guidelines (Column 3). In Column 4 the annualized cost is calculated by dividing the estimated cost by its useful life.

Table 6
Annualized Building Cost Per Square Foot

Location	Cost Per Square Foot	Useful Life	Annual Building Cost Per Square Foot
	\$215.00	39	\$5.51

Source: Architects Design Group, Winter Park, Fl.

In Table 7, the building square feet per emergency medical services incident is calculated by dividing the building square feet inventory in Column 2 (from Table 9) by the emergency medical services incidents shown in Column 3.

Table 7
Building Square Feet Per EMS Incident

Type of Incident	EMS Department Building Inventory (Square Feet)	2005 EMS Incidents	Square Feet Per Incident
Ambulance Services	7,951	2254	3.53

This study assumes that any new Emergency Medical Services building will be based on the same ratio of square feet per emergency medical services incident as is currently provided by Wakulla County.

Building Cost Per Emergency Medical Services Incident

The building cost per emergency medical services incident is calculated by multiplying the annual building cost per square foot by the building square feet per incident.

Annual Building Cost Per Square Foot	X	Building Square Feet Per Incident	=	Building Cost Per EMS Incident
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Table 8 shows the building cost per emergency medical services incident. In Column 3 the building cost per incident is calculated by multiplying the building cost per square foot in Column 1 (from Table 5) by the building square feet per emergency medical services incident in Column 2 (from Table 7).

Table 8
Building Cost Per Emergency Medical Services Incident

Annual Building Cost Per Square Foot	Square Feet Per Incident	Annualized Building Cost Per Incident
\$5.51	3.53	\$19.45

TOTAL CAPITAL COST PER EMERGENCY MEDICAL SERVICES INCIDENT

The total capital cost per emergency medical services incident is calculated by adding the total apparatus cost per emergency medical services incident to the building cost per emergency medical services incident, as illustrated below:

Apparatus Cost Per EMS Incident	+	Building Cost Per EMS Incident	=	Total Capital Cost Per EMS Incident
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Table 9 shows the total capital cost of an emergency medical services incident. Column 1 lists the capital components included in the calculation (vehicle and building). Column 2 adds the vehicle and building cost per emergency medical services incident (from Tables 4 and 8) to determine the total capital cost for an emergency medical services incident.

Table 9
Total Capital Cost Per EMS Incident

Type of Capital Cost	Capital Cost Per EMS Incident
Apparatus	\$19.34
Building	\$19.45
Total Capital Cost	\$38.79

ANNUAL COST OF EMERGENCY MEDICAL SERVICES INCIDENTS BY PROPERTY USE

This section identifies the number and cost of responses to emergency medical services incidents for each different category of property use.

ANNUAL EMERGENCY MEDICAL SERVICES INCIDENT RATE PER UNIT OF DEVELOPMENT

The annual emergency medical services incident rate per unit of development (i.e., dwelling unit or square foot of non-residential development) is calculated by dividing the annual emergency medical services incidents to each type of property use by the number of dwelling units or square feet of non-residential development of each type of property use in the County.

Annual EMS Incidents To Each Type of Property Use	÷	Dwelling Units Or Square Feet of Each Type of Property Use	=	Annual EMS Incidents Per Unit of Development
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EMERGENCY MEDICAL SERVICES INCIDENTS

During the period analyzed, the County emergency medical services department responded to 2,254 emergency medical services incidents.

2,254 emergency medical services incidents are analyzed to determine an average emergency medical services incident rate per unit of development. The emergency medical services incidents were identified to be direct to property uses. Of the 2,254 emergency medical services incidents analyzed, 1,734 (76.93%) occurred at residential properties and 520 (23.07%) were attributed to non-residential properties.

Column 2 of Table 13 shows the distribution of the 2,254 emergency medical services incidents that were direct to a property use.

Table 10
2005 Emergency Medical Services Incidents Direct to Property Use

Property Category	Number of EMS Incidents
Residential	1,734
Non-Residential	520
Total	2,254

The final step in determining the annual emergency medical services incident rate per unit of development is shown in Table 11. The total annual emergency medical services incidents for each type of property use (from Table 10) are divided by the number of dwelling units or square feet of structures to calculate the annual incident rate per dwelling unit or square foot.

Table 11
Annual Emergency Medical Services Incidents Per Unit of Development

Property Category	Total Annual EMS Calls By Property Category	Units of Development	Annual EMS Incidents Per Unit of Development	Type of Unit of Development
Residential	1,734	10,597	0.1636	Dwelling Unit
Non-Residential	520	2,320,949	0.0002	Per Square Feet
Total	2,254			

Source for units of development obtained from the Wakulla County Property Appraiser

ANNUAL EMS PROTECTION INCIDENT COST PER UNIT OF DEVELOPMENT

The annual cost of emergency medical services incidents per unit of development is determined by multiplying the annual emergency medical services incidents per unit of development (from Table 11) by the capital cost per emergency medical services incident (from Table 9), as illustrated below:

Annual EMS Incidents Per Unit of Development	x	Total Capital Cost Per EMS Incident	=	Annual EMS Incident Cost Per Unit of Development
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In Table 12, each emergency medical services incident rate in Column 2 is multiplied by \$38.79 (the capital cost per emergency medical services incident from Table 9) resulting in the annual capital cost per unit of development, which is shown in Column 3.

Table 12
Annual Cost of Emergency Medical Services Incidents By Property Use Category

Property Category	Annual EMS Incidents Per Unit of Development	Annual Capital Cost Per Unit Of Development	Type of Unit of Development
Residential	0.1636	\$6.35	Dwelling Unit
Non-Residential	0.0002	\$0.01	Per Square Feet
Total	0.1639		

EMERGENCY MEDICAL SERVICES IMPACT FEE PER UNIT OF DEVELOPMENT

In this section, the annual emergency medical services incident cost per unit of development that was discussed in a previous section is used to calculate the total emergency medical services facilities cost over the economic life of new structures. The results are the emergency medical services impact fee rates for Wakulla County.

EMERGENCY MEDICAL SERVICES COST PER UNIT OF DEVELOPMENT

Emergency medical services emergency medical services impact fees are determined by charging the annual cost for the expected economic life of new development, as illustrated below:

Annual EMS Cost Per Unit of Development	X	Economic Life Of Development	=	Total EMS Cost Per Unit Of Development
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Impact fees should pay for the cost of providing capital facilities for the life of the building paying the impact fee. The building needs to pay for the demands it places on emergency medical services facilities for as long as the expected life of the newly constructed development. The economic life time frame used in the impact fee calculation is 27.5 years for residential structures and 39 years for all non-residential structures. These time frames are based on I.R.S. guidelines for the economic life of these two classes of structures.

In Table 13, the total emergency medical services cost per unit of development is calculated by multiplying the annual cost (from Table 12) by the number of years of economic life. The result is shown in Column 4 of Table 18.

Table 13
Total Emergency Medical Services Cost
By Property Use Category

Property Category	Annual Capital Cost Per Unit Of Development	Economic Life of Development	Cost Per Unit of Development	Type of Unit of Development
Residential	\$6.35	27.5	\$174.55	Dwelling Unit
Non-Residential	\$0.01	39.0	\$0.34	Per square feet

The final step in determining the impact fee for emergency medical services facilities is to reduce the cost per unit by subtracting any credits for other revenues from existing and new development that the County will use to pay for part of the cost of new facilities that serve new development.

Cost Per Dwelling Unit	X	Credit for Other Revenue	=	Impact Fee Per Dwelling Unit
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New development will be given credit for future payments of other revenues that are used to pay for the same facilities that are required to serve the new development. Credits are not given for revenues that are used for repair, maintenance or operating costs because impact fees are not used for such expenses.

The only revenue sources to be credited are those, which have historically been used for facilities' capacity expansion according to law and local policy or practice. Based on an analysis of historical expenditures, the present practice of the County has been to use grants, when available and ems ambulance fees, depending on the rate of collection over write-off to pay for the capital cost of new facilities. Ad-valorem has been used to fund the shortfall for operating expenditures only. The last grant used was in 2002 and was used to replace an ambulance. It was not used to facilitate new growth.

The amount of the credit for impact fees is determined by comparing the historical annual capital costs to the funding of that capital costs to facilitate growth. Any funding from the General Fund or from any tax specifically intended to fund emergency medical services would be credited if it were used to fund capital costs. However, the capital expenditures over the past 5 fiscal years have been funded by ambulance fees and are not used to calculate the credit because they are user fees and are not considered a tax that would be imposed on everyone.

Table 14 shows the cost per unit, the amount of the 0.00 percent credit for other revenue, and calculation of the resulting impact fee for emergency medical services facilities after the credit amount is subtracted from the full costs.

Table 14
Total EMS Impact Fees by Property Use Category

Property Category	Total EMS Cost Per Unit of Development	Credit Adjustment @ 0.00%	Total EMS Impact Fee Per Unit of Development	Type of Unit of Development
Residential	\$174.55	0	\$174.55	Dwelling Unit
Non-Residential	\$0.34	0	\$0.34	Square foot

Appendix A

SUMMARY OF CALL DATA
OCTOBER 2004 THROUGH SEPTEMBER 2005

Wakulla County Emergency Medical Service Call Data FY2005

Unit	Total Calls	Residential	Commercial	Ind/Warehouse	Institutional	Nursing Home	Non-Specific	Bay Co.
Med2	640	272	30	4	86	82	98	68
Med3	78	40	1	0	8	0	15	14
Med4	292	121	20	2	40	35	36	38
Med5	359	150	20	1	46	42	59	41
EMS3	96	61	3	1	18	0	13	
EMS4	539	298	45	3	70	0	123	
EMS5	630	305	44	6	97	0	177	1
Totals	2634	1247	163	17	365	159	521	162

Appendix B

ANALYSIS OF WEIGHTED AVERAGE TRIPS PER PROPERTY USE CATEGORY

Category	Description	Dwelling Units	Total Square Feet	Square Feet For Trip Generation	Trip Generation	Trip Generation @ 50%	Total Trips Per Unit	Average Trip Per Unit
Residential	Residential Dwelling Units	8022			9.57	4.785	38,385.27	4.79
Total		8,022					38,385.27	
Commercial	Commercial	0	1,087,656	1,087,656	40.67	0.020335	22,117.48	0.0196
Total			1,142,443	1,142,443			22,342	0.0196
Industrial/Warehouse	Industrial/Warehouse	0			6.97	0.003485		
Total			465,350	465,350			1,154	0.0025
Institutional	Institutional	0	523,394	523,394	36.63	0.018315	9,585.96	
Total			786,969	786,969			12,881	0.0164