



Flemington



Impact Fee Methodology Report

City of Flemington Impact Fee Program

Including the following public
facility categories:

- Fire Protection
- Law Enforcement
- Road Improvements

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ROSS+associates

urban planning & plan implementation

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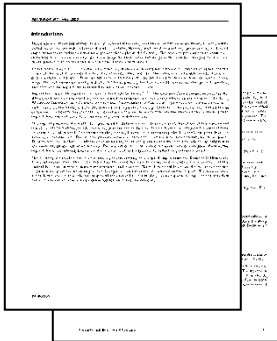
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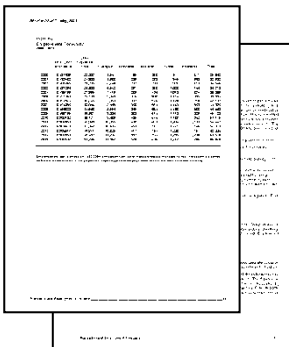
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Organization of the Report

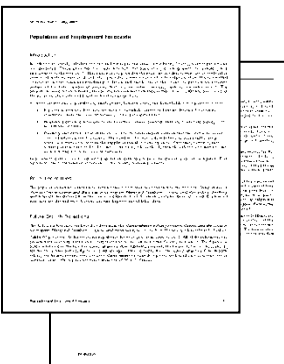
The following describes the sections that make up the *Impact Fee Methodology Report*.



Introduction and Creating the Impact Fee Program - these first two chapters introduce and summarize the calculation of impact fees, as well as the requirements for adoption and maintenance of the impact fee program. They include the legal basis and an overview of Impact Fees, and presents the schedule of Maximum Impact Fees allowable for each of a wide range of land uses.

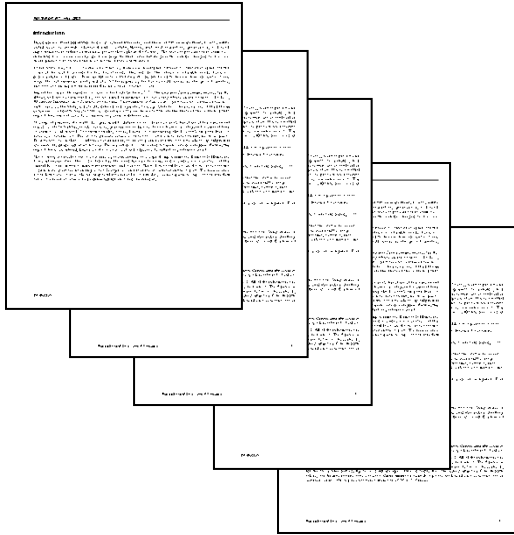


Forecasts - this section presents the population, housing unit, and employment forecasts for the city as a whole, and population and employment forecasts for Hinesville (since the Fire Department's service area covers both cities).



Cost Adjustments - considering inflation in future project costs is critical in setting impact fees that will produce adequate funds at the anticipated future date when the funds will be needed.

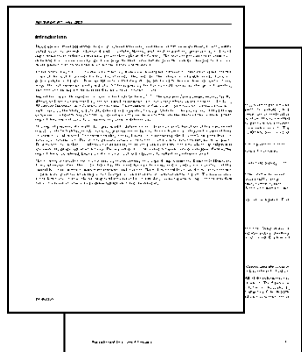
This chapter considers three relevant rates of inflation: the Construction Cost Index (CCI), the Building Cost Index (BCI) and the Consumer Price Index (CPI).



Public Facility Category Chapters - these chapters walk through the calculation of Level of Service, future demand, capital improvements to meet the future demand, and determination of project costs for each public facility category.

The public facility categories covered are **Fire Protection, Law Enforcement and Road Improvements**.

Each public facility chapter presents the calculation of the maximum impact fee that could be adopted. A schedule of maximum fees by type of land use concludes each chapter.



Glossary - this section presents definitions of many key terms used in the report related to impact fees.

Introduction

An impact fee is a fee, not a tax. With taxes—such as property taxes and sales taxes—there is no direct relationship between the taxes one pays and the return—the services—that the taxpayer receives. Everyone pays school taxes based on the value of their property, regardless of whether they have one kid in school, six kids in school or no kids at all. A fee, on the other hand, must be related to the service being made available. For instance, one’s water bill is a fee because the amount is based on how much water they used. In the case of impact fees, the amount of each fee is directly related to the City’s cost of making particular services available—the fee for the cost of road improvements, for instance, is based on the traffic that the particular use will generate on the road system.

■ Impact Fees Authorized

Impact fees are authorized in Georgia pursuant to O.C.G.A. §36-71-1 et seq., the *Georgia Development Impact Fee Act* (DIFA), and are administered by the Georgia Department of Community Affairs under Chapter 110-12-2, *Development Impact Fee Compliance Requirements*, of the Georgia Administrative Code. Under DIFA, the City can collect money from new development based on that development’s proportionate share—the ‘fair share’—of the cost to provide the facilities needed specifically to serve new development. Revenue for such facilities can be produced from new development in two ways: through future taxes or other revenue paid by the homes and businesses that growth creates, and through an impact fee assessed as new development occurs.

■ Investment Recovery

The Georgia Development Impact Fee Act permits recovery by a local government of the cost of providing an improvement that serves new growth and development, even though that cost may have been incurred prior to the adoption of an impact fee ordinance. As with all impact fees, the cost of the portion of any facility meeting current needs must be borne by the locality (i.e., existing property owners), with future development being assessed only for the additional capacity that has been made available to serve that future growth in accordance with the adopted Level of Service standards. Those Level of Service standards must apply equally to both existing and future development.

Because the amount of dollars eligible to be recovered through an impact fee is based on the capacity available to support future growth and development within the whole system, the capacity of the existing system must be determined if excess capacity exists.

■ Categories for Assessment of Impact Fees

To assist in paying for the high costs of expanding public facilities and services to meet the needs of projected growth and to ensure that new development pays a reasonable share of the costs of public facilities, Flemington is considering impact fees for public safety facilities (fire protection and law enforcement) and road improvements. The chapters in this Methodology Report provide population and employment forecasts and detailed information regarding the inventory of current facilities, the applicable Level of Service standards, and detailed calculations of the impact cost for the specific public facilities.

The following table shows the facility categories that are eligible for impact fee funding under Georgia law and that are considered in this report. The service area for each public facility category—that is, the geographical area served by the facility category—is also given, along with what the Level of Service standard, to be established for each facility category, is based.

Overview of Impact Fee Program - Facilities

	Fire Protection	Law Enforcement	Road Improvements
Eligible Facilities	Fire stations and fire apparatus (vehicles)	Occupied Facility space	Road projects that increase capacity
Service Area	Citywide	Citywide	Citywide
Level of Service Standard Based on ...	Square footage and number of vehicles per day-night population	Square footage of facilities per day-night population	Percent of future traffic generated by new growth
Historic Funding Source(s)	General Fund	General Fund	State and County Funding, SPLOST

Terms used in the Overview Table:

Eligible Facilities under the State Act are limited to capital items having a life expectancy of at least ten years, such as land, buildings and certain vehicles. Impact fees cannot be used for the maintenance, supplies, personnel salaries, or other operational costs, or for short-term capital items such as computers, furniture or most automobiles. None of these costs are included in the impact fee program.

Service Areas are the geographic areas that the facilities serve, and the areas within which the impact fee can be collected. Monies collected in a service area for a

particular category may only be spent for that purpose, and only for projects that serve that service area.

Level of Service Standards are critical to determining new development's fair share of the costs. The same standards must be applied to existing development as well as new to assure that each is paying only for the facilities that serve it. New development cannot be required to pay for facilities at a higher standard than that available to existing residents and businesses, nor to subsidize existing facility deficiencies.

■ Focus of This Report

This report focuses on the public facilities that will be needed to meet the service demands of future growth and development while maintaining the City's adopted Levels of Service enjoyed by residents and businesses in the city today and in the future. The key is that the capital improvement, whether it's land, buildings or long-lived vehicles, must create new capacity within the system to keep pace with the number of future residents and businesses as the city grows. Maintenance and personnel are not eligible for impact fee funding, nor would replacement of deteriorated floor space or full replacement of a run-down vehicle because, although the replacement is maintaining the Level of Service, no new capacity is created to serve the needs of new growth.

In this report capital costs have been examined for several public facility categories: fire protection, law enforcement, and road improvements.

■ Editorial Conventions

This report observes the following conventions:

The capitalized word 'City' applies to the government of Flemington, the City Council or any of its departments or officials, as appropriate to the context. An example is "the City has adopted an impact fee ordinance".

The lower-case word 'city' refers to the geographical area of Flemington, as in "the population of the city has grown".

The same conventions are applied to the words 'County' and 'county', 'State' and 'state'.

Single quote marks (' and ') are used to highlight a word or phrase that has a particular meaning or refers to a heading in a table.

Double quote marks (" and ") are used to set off a word or phrase that is a direct quote taken from another source, such as a passage or requirement copied directly from a law or report.

Numbers shown on tables are often rounded from the actual calculation of the figures for clarity, but the actual calculated number of decimal points is retained within the table for accuracy and further calculations.

Creating the Impact Fee Program

This Methodology Report presents the methodologies used to determine new development's fair share of the City's investment in public facilities, including fire, law enforcement and road improvements, out to the year 2040. This report establishes clear public policies regarding infrastructure development and ensures sound fiscal planning for capital improvements. The report identifies the need for new facilities and includes a compilation of the capital facilities on which impact fee revenue can be spent.

An important and related document required for the collection of impact fees is called the Capital Improvements Element (CIE), and is adopted as a chapter, or 'element', of the City's Comprehensive Plan. As defined by the State's Department of Community Affairs, the CIE must include certain calculations and information, and those are also included in this Methodology Report. The calculations and information, repeated (as applicable) for each category of public facility for which an impact fee will be charged, are:

- a projection of needs for at least a twenty-year planning period;
- the designation of service areas—the geographic area in which a defined set of public facilities provide service to development within the area;
- the designation of Levels of Service (LOS)—the service level that is being and/or will be provided;
- a schedule of improvements listing impact fee related projects and costs to address the needs projected for the minimum twenty-year planning period;
- a description of funding sources for the minimum twenty-year planning period;
- The calculation of the cost impact of new development, credits (if any), and impact fees; and
- A schedule of maximum impact fees that could be adopted, by land use category.

■ Impact Fee Methodology

Overview

The bottom line on impact fees is that a **rational nexus**—a clear and fair relationship between the fee charged and the services provided—must exist for each public facility category. It is perhaps wise to keep in mind the basic tenet of impact fees:

New development pays no more than its fair share of the costs to provide facilities that meet the service needs of new development.

The calculations carried out in this report are intended to meet two inter-related goals: calculating the ‘fair share’ of project costs applicable to new development and meeting the requirements of the *Development Impact Fee Act*. The DIFA provides a series of protections for development. In addition to providing the methodological basis for impact fee calculations, it protects new development against the possibility of double-taxation, and against being required to provide for a different Level of Service than that adopted for existing development.

Data Requirements

In order to calculate impact fees, certain data is required. All of this data can be seen in the applicable chapters of this report. The following are required for calculations:

- Current population, housing unit, and employment figures (appear in the Forecasts chapter).
- Forecasts of population, housing units, and employment (appears in the Forecasts chapter).
- Current inventories of capital facilities in the categories of Fire Protection, Law Enforcement, and Road Improvements (appears in each public facility category chapter).
- Level of Service (LOS) standards used to project the needs of future development (appears in each public facility category chapter)
- Proposed capital improvement projects to meet future demand (appears in each public facility category chapter).

Given this data, calculations can be made to produce the total impact cost in each public facility category. The actual calculations are presented in each public facility category chapter. Lastly, the addition of an administrative fee and a CIE Preparation fee results in the Maximum Allowable Impact Fees shown on the fee schedule at the end of each public facility chapter and are summarized on the Maximum Impact Fee Schedule below.

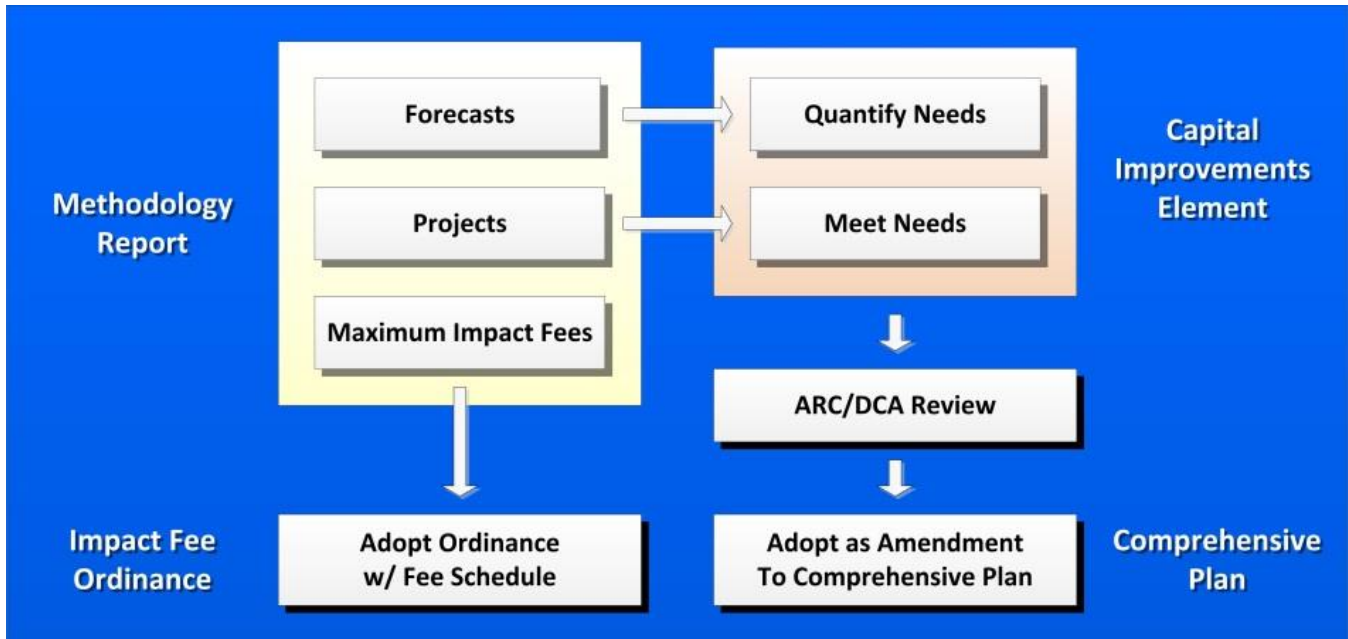
■ Components of the Impact Fee Program

The Flemington Impact Fee Program consists of several components, which are:

- This **Methodology Report**, which includes:
 - forecasts of population, housing units and employment for the city and Hinesville;
 - capital improvement projects to serve new growth, based on appropriate Level of Service standards, for each public facility category; and,
 - the impact cost of new growth and development (and thus the maximum impact fees that can be assessed).
- A **Capital Improvements Element (CIE)** to implement the City's proposed improvements, including an updated Five-Year Community Work Program.
- An **Impact Fee Ordinance**, including a schedule of impact fees by land use category.

- The City’s **Comprehensive Plan**, which will be amended by the adoption of the CIE. (The City is included as a part of the *2040 Joint Comprehensive Plan* along with Liberty County and all of the other cities in the county.)

The relationships between these components are illustrated on the following diagram:



Forecasts

Forecasting future growth and development is intrinsic to calculating impact fees, since the need for additional capital improvements is tied directly to serving new growth, and thus determining their ‘fair proportionate share’ of the cost of providing those improvements.

Over the coming twenty plus years, the city is expected to dramatically increase its number of residents, increasing by almost 4,200 people over its 2018 population of 723. Housing construction to meet the demands of these new families and individuals is forecast to add almost 1,700 new units, including potentially 602 units already zoned, of which 241 are currently under development.

Hinesville is forecast to continue its steady pace of growth, adding almost 6,100 people and over 2,000 private sector employees. Together with Flemington, the Hinesville Fire Department’s service area is expected to grow by about 12,300 residents and more than 2,300 business employees by 2040.

The Forecasts chapter of this report details the forecasting methodologies used for the city and Hinesville.

Cost Adjustments

Calculations related to impact fees are required by law to be made in terms of the ‘present value’ of past and future costs in 2018 dollars. For future expenditures, the current cost estimate is inflated to the year when the expenditure will be made, and then is ‘discounted’ back to 2018 to account for the current value of future money.

Three different cost inflators are used in the calculations, based on the type of project being considered. For infrastructure projects, such as road improvements, a ‘construction cost inflator’ is used. For projects that require construction of a structure (such as a fire station), a ‘building cost inflator’ is used as the appropriate inflation rate. For all non-construction types of projects (such as a fire truck), an inflation rate is used that is based on the Consumer Price Index. Ten-year average rates for these three indices are shown on the table to the right, along with the current discount rate. (See the Cost Adjustments chapter for detailed calculations.)

Inflation Rates

Index	10-Year Average Rate
Consumer Price Index (CPI)	1.65%
Construction Cost Index (CCI)*	2.74%
Building Cost Index (BCI)*	1.60%
Discount Rate**	0.225%

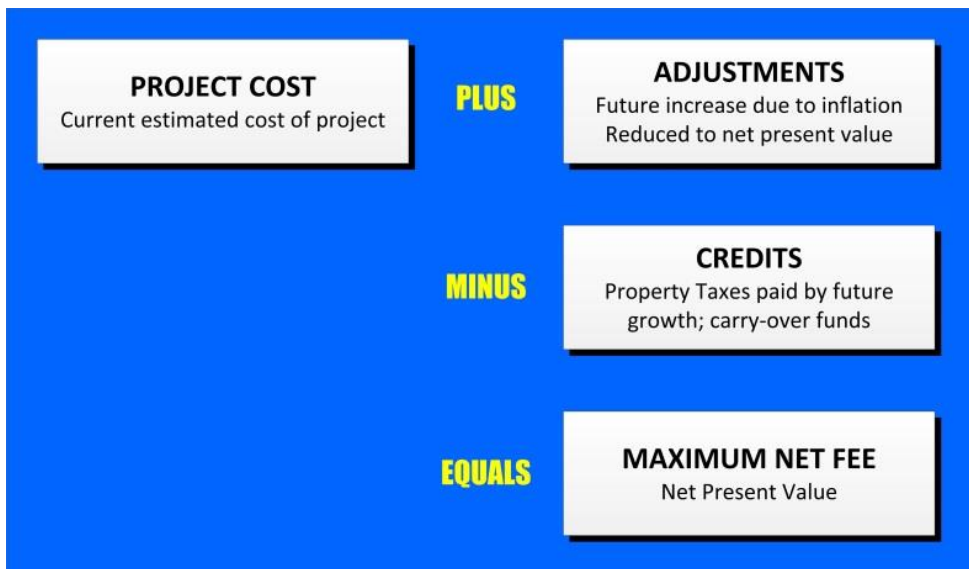
* Source: Engineering News

**Avg annual return at Prevailing interest rate.

In all cases of future expenditures, the average annual return that the City could reasonably receive on its fund balances at its prevailing interest rate is used as the ‘discount rate’ for Net Present Value calculations.

Fee Calculations

Calculating an impact fee involves several operations. These include determining the current cost estimate of each capital expenditure, the determination of that future cost in ‘present value’ (2018) dollars



using appropriate inflation factors, and the subtraction of credits (if any) to avoid double taxation. In this report, the maximum allowable impact fee has been calculated for each public facility category to establish the ‘ceiling’ allowed under Georgia law.

■ Maximum Impact Fee Schedules

The fee schedules beginning on the next page show the maximum impact fees that could be charged in Flemington for each of the land use categories shown, based on the calculations carried out in this report. The first table includes the maximum fees calculated for the ‘Fair Share’ alternate presented in the Fire Protection chapter, and the second shows the maximum impact fees that could be charged in under the ‘Flemington Station’ alternate.

The land use categories include many common uses identified in the latest *Trip Generation Manual*, Ninth Edition, 2012, published by the Institute of Transportation Engineers (ITE); the ITE designation is shown in the left-hand column for each land use.

The net impact fee shown for each public facility category is drawn from that public facility category’s chapter. All fees shown include a 3% fee for administration of the Impact Fee Program, which is explained in the next section after the fee schedules.

To read each Impact Fee Schedule:

- First find the land use you want to investigate.
Land uses are listed on the left side of the table and are grouped under general headings. For example, institutional uses are grouped together, as are all retail uses.
- Next, find the Total Impact Fee figure on the right of the row.
This is the total impact fee per unit of measure.
- Finally, find the unit of measure—it is the last column of the land use category.

The information can be read as follows: *this land use has an impact fee of \$X per unit of measure.*

Table 1: Maximum Impact Fee Schedule - 'Fair Share' Fire Alternate

Land Use	Fire Protection	Law Enforcement	Road Projects	Total Maximum Fee	Unit of Measure
Residential (200-299)					
Single-Family Detached Housing	\$ 597.05	\$ 172.24	\$ 85.26	\$ 854.55	per dwelling
Apartment	\$ 597.05	\$ 172.24	\$ 59.56	\$ 828.85	per dwelling
Residential Condominium/Townhouse	\$ 597.05	\$ 172.24	\$ 52.03	\$ 821.32	per dwelling
Port and Terminal (000-099)					
Intermodal Truck Terminal	\$ 0.34	\$ 0.09	\$ 0.08	\$ 0.52	per square foot
Industrial/Agricultural (100-199)					
General Light Industrial	\$ 0.56	\$ 0.15	\$ 0.06	\$ 0.77	per square foot
General Heavy Industrial	\$ 0.44	\$ 0.12	\$ 0.01	\$ 0.58	per square foot
Manufacturing	\$ 0.43	\$ 0.12	\$ 0.03	\$ 0.58	per square foot
Warehousing	\$ 0.22	\$ 0.06	\$ 0.03	\$ 0.31	per square foot
Mini-Warehouse	\$ 0.02	\$ 0.01	\$ 0.02	\$ 0.04	per square foot
High-Cube Warehouse	\$ 0.02	\$ 0.01	\$ 0.01	\$ 0.04	per square foot
Lodging (300-399)					
Hotel or Conference Motel	\$ 138.15	\$ 37.64	\$ 73.17	\$ 248.96	per room
All Suites Hotel	\$ 121.24	\$ 33.03	\$ 43.88	\$ 198.15	per room
Motel	\$ 106.57	\$ 29.04	\$ 50.42	\$ 186.03	per room
Recreational (400-499)					
Golf Course	\$ 59.56	\$ 16.23	\$ 38.37	\$ 114.15	per acre
Bowling Alley	\$ 0.24	\$ 0.07	\$ 0.25	\$ 0.56	per square foot
Movie Theater	\$ 0.36	\$ 0.10	\$ 0.59	\$ 1.05	per square foot
Arena	\$ 808.17	\$ 220.20	\$ 253.72	\$ 1,282.09	per acre
Amusement Park	\$ 2,205.28	\$ 600.87	\$ 576.71	\$ 3,382.86	per acre
Tennis Courts	\$ 59.14	\$ 16.11	\$ 123.78	\$ 199.03	per acre
Racquet/Tennis Club	\$ 0.07	\$ 0.02	\$ 0.11	\$ 0.20	per square foot
Health/Fitness Center	\$ 0.17	\$ 0.05	\$ 0.25	\$ 0.47	per square foot
Recreational Community Center	\$ 0.30	\$ 0.08	\$ 0.26	\$ 0.64	per square foot
Institutional (500-599)					
Private Elementary School	\$ 0.24	\$ 0.06	\$ 0.11	\$ 0.41	per square foot
Private High School	\$ 0.16	\$ 0.04	\$ 0.10	\$ 0.30	per square foot
Church/Place of Worship	\$ 0.08	\$ 0.02	\$ 0.07	\$ 0.18	per square foot
Day Care Center	\$ 0.68	\$ 0.19	\$ 0.07	\$ 0.94	per square foot
Cemetery	\$ 19.74	\$ 5.38	\$ 38.12	\$ 63.25	per acre
Medical (600-699)					
Hospital	\$ 0.71	\$ 0.19	\$ 0.09	\$ 1.00	per square foot
Nursing Home	\$ 0.57	\$ 0.15	\$ 0.05	\$ 0.77	per square foot
Clinic	\$ 0.95	\$ 0.26	\$ 0.22	\$ 1.43	per square foot
Office (700-799)					
General Office Building	\$ 0.81	\$ 0.22	\$ 0.09	\$ 1.12	per square foot
Corporate Headquarters Building	\$ 0.83	\$ 0.23	\$ 0.07	\$ 1.12	per square foot
Single-Tenant Office Building	\$ 0.76	\$ 0.21	\$ 0.10	\$ 1.07	per square foot
Medical-Dental Office Building	\$ 0.98	\$ 0.27	\$ 0.30	\$ 1.55	per square foot
Research and Development Center	\$ 0.71	\$ 0.19	\$ 0.07	\$ 0.97	per square foot
Business Park	\$ 0.75	\$ 0.20	\$ 0.10	\$ 1.05	per square foot

Maximum Impact Fee Schedule - 'Fair Share' Fire Alternate (continued)

Land Use	Fire Protection	Law Enforcement	Road Projects	Total Maximum Fee	Unit of Measure
Retail (800-899)					
Building Materials and Lumber Store	\$ 0.34	\$ 0.09	\$ 0.33	\$ 0.76	per square foot
Free-Standing Discount Superstore	\$ 0.23	\$ 0.06	\$ 0.34	\$ 0.64	per square foot
Variety Store	\$ 0.23	\$ 0.06	\$ 0.28	\$ 0.58	per square foot
Free-Standing Discount Store	\$ 0.48	\$ 0.13	\$ 0.31	\$ 0.93	per square foot
Hardware/Paint Store	\$ 0.23	\$ 0.06	\$ 0.18	\$ 0.48	per square foot
Nursery (Garden Center)	\$ 0.76	\$ 0.21	\$ 0.49	\$ 1.46	per square foot
Nursery (Wholesale)	\$ 0.40	\$ 0.11	\$ 0.28	\$ 0.80	per square foot
Shopping Center	\$ 0.40	\$ 0.11	\$ 0.29	\$ 0.80	per square foot
Factory Outlet Center	\$ 0.40	\$ 0.11	\$ 0.19	\$ 0.71	per square foot
Specialty Retail Center	\$ 0.48	\$ 0.13	\$ 0.32	\$ 0.93	per square foot
Automobile Sales	\$ 0.37	\$ 0.10	\$ 0.23	\$ 0.70	per square foot
Auto Parts Store	\$ 0.23	\$ 0.06	\$ 0.24	\$ 0.54	per square foot
Tire Store	\$ 0.31	\$ 0.08	\$ 0.15	\$ 0.54	per square foot
Tire Superstore	\$ 0.31	\$ 0.08	\$ 0.15	\$ 0.55	per square foot
Supermarket	\$ 0.28	\$ 0.08	\$ 0.39	\$ 0.75	per square foot
Convenience Market (Open 24 Hrs)	\$ 0.44	\$ 0.12	\$ 1.32	\$ 1.88	per square foot
Convenience Market w/Gasoline Pumps	\$ 0.44	\$ 0.12	\$ 1.21	\$ 1.77	per square foot
Discount Supermarket	\$ 0.55	\$ 0.15	\$ 0.42	\$ 1.12	per square foot
Wholesale Market	\$ 0.20	\$ 0.05	\$ 0.04	\$ 0.29	per square foot
Discount Club	\$ 0.31	\$ 0.09	\$ 0.23	\$ 0.63	per square foot
Home Improvement Superstore	\$ 0.23	\$ 0.06	\$ 0.09	\$ 0.38	per square foot
Electronics Superstore	\$ 0.23	\$ 0.06	\$ 0.11	\$ 0.41	per square foot
Apparel Store	\$ 0.40	\$ 0.11	\$ 0.29	\$ 0.81	per square foot
Department Store	\$ 0.48	\$ 0.13	\$ 0.10	\$ 0.71	per square foot
Pharmacy/Drugstore	\$ 0.40	\$ 0.11	\$ 0.32	\$ 0.84	per square foot
Furniture Store	\$ 0.10	\$ 0.03	\$ 0.01	\$ 0.14	per square foot
Services (900-999)					
Drive-in Bank	\$ 1.16	\$ 0.32	\$ 0.29	\$ 1.77	per square foot
Quality Restaurant	\$ 1.81	\$ 0.49	\$ 0.31	\$ 2.61	per square foot
High-Turnover (Sit-Down) Restaurant	\$ 1.81	\$ 0.49	\$ 0.43	\$ 2.73	per square foot
Fast-Food Restaurant	\$ 2.64	\$ 0.72	\$ 1.20	\$ 4.56	per square foot
Quick Lubrication Vehicle Shop	\$ 509.20	\$ 138.74	\$ 297.33	\$ 945.27	per service bay
Gasoline/Service Station	\$ 38.80	\$ 10.57	\$ 301.91	\$ 351.28	per pump
Gasoline Station w/Convenience Market	\$ 0.05	\$ 0.01	\$ 204.09	\$ 204.16	per pump
Self-Service Car Wash	\$ 48.50	\$ 13.21	\$ 386.88	\$ 448.59	per stall

"Square foot" means square foot of gross building floor area.

All figures shown rounded to whole cents for readability; actual fees generally run to multiple decimal places.

Table 2: Maximum Impact Fee Schedule - 'Flemington Station' Alternate

Land Use	Fire Protection	Law Enforcement	Road Projects	Total Maximum Fee	Unit of Measure
Residential (200-299)					
Single-Family Detached Housing	\$ 1,754.22	\$ 172.24	\$ 85.26	\$ 2,011.72	per dwelling
Apartment	\$ 1,754.22	\$ 172.24	\$ 59.56	\$ 1,986.02	per dwelling
Residential Condominium/Townhouse	\$ 1,754.22	\$ 172.24	\$ 52.03	\$ 1,978.49	per dwelling
Port and Terminal (000-099)					
Intermodal Truck Terminal	\$ 0.95	\$ 0.09	\$ 0.08	\$ 1.13	per square foot
Industrial/Agricultural (100-199)					
General Light Industrial	\$ 1.55	\$ 0.15	\$ 0.06	\$ 1.76	per square foot
General Heavy Industrial	\$ 1.23	\$ 0.12	\$ 0.01	\$ 1.36	per square foot
Manufacturing	\$ 1.21	\$ 0.12	\$ 0.03	\$ 1.36	per square foot
Warehousing	\$ 0.62	\$ 0.06	\$ 0.03	\$ 0.71	per square foot
Mini-Warehouse	\$ 0.05	\$ 0.01	\$ 0.02	\$ 0.08	per square foot
High-Cube Warehouse	\$ 0.05	\$ 0.01	\$ 0.01	\$ 0.07	per square foot
Lodging (300-399)					
Hotel or Conference Motel	\$ 383.36	\$ 37.64	\$ 73.17	\$ 494.17	per room
All Suites Hotel	\$ 336.44	\$ 33.03	\$ 43.88	\$ 413.36	per room
Motel	\$ 295.73	\$ 29.04	\$ 50.42	\$ 375.19	per room
Recreational (400-499)					
Golf Course	\$ 165.27	\$ 16.23	\$ 38.37	\$ 219.86	per acre
Bowling Alley	\$ 0.67	\$ 0.07	\$ 0.25	\$ 0.99	per square foot
Movie Theater	\$ 0.99	\$ 0.10	\$ 0.59	\$ 1.68	per square foot
Arena	\$ 2,242.72	\$ 220.20	\$ 253.72	\$ 2,716.64	per acre
Amusement Park	\$ 6,119.75	\$ 600.87	\$ 576.71	\$ 7,297.33	per acre
Tennis Courts	\$ 164.11	\$ 16.11	\$ 123.78	\$ 304.00	per acre
Racquet/Tennis Club	\$ 0.21	\$ 0.02	\$ 0.11	\$ 0.33	per square foot
Health/Fitness Center	\$ 0.47	\$ 0.05	\$ 0.25	\$ 0.77	per square foot
Recreational Community Center	\$ 0.84	\$ 0.08	\$ 0.26	\$ 1.17	per square foot
Institutional (500-599)					
Private Elementary School	\$ 0.66	\$ 0.06	\$ 0.11	\$ 0.84	per square foot
Private High School	\$ 0.44	\$ 0.04	\$ 0.10	\$ 0.58	per square foot
Church/Place of Worship	\$ 0.23	\$ 0.02	\$ 0.07	\$ 0.33	per square foot
Day Care Center	\$ 1.90	\$ 0.19	\$ 0.07	\$ 2.15	per square foot
Cemetery	\$ 54.79	\$ 5.38	\$ 38.12	\$ 98.29	per acre
Medical (600-699)					
Hospital	\$ 1.98	\$ 0.19	\$ 0.09	\$ 2.26	per square foot
Nursing Home	\$ 1.57	\$ 0.15	\$ 0.05	\$ 1.77	per square foot
Clinic	\$ 2.64	\$ 0.26	\$ 0.22	\$ 3.12	per square foot
Office (700-799)					
General Office Building	\$ 2.24	\$ 0.22	\$ 0.09	\$ 2.55	per square foot
Corporate Headquarters Building	\$ 2.30	\$ 0.23	\$ 0.07	\$ 2.60	per square foot
Single-Tenant Office Building	\$ 2.12	\$ 0.21	\$ 0.10	\$ 2.42	per square foot
Medical-Dental Office Building	\$ 2.73	\$ 0.27	\$ 0.30	\$ 3.29	per square foot
Research and Development Center	\$ 1.97	\$ 0.19	\$ 0.07	\$ 2.23	per square foot
Business Park	\$ 2.07	\$ 0.20	\$ 0.10	\$ 2.38	per square foot

Maximum Impact Fee Schedule - 'Flemington Station' Alternate (continued)

Land Use	Fire Protection	Law Enforcement	Road Projects	Total Maximum Fee	Unit of Measure
Retail (800-899)					
Building Materials and Lumber Store	\$ 0.95	\$ 0.09	\$ 0.33	\$ 1.37	per square foot
Free-Standing Discount Superstore	\$ 0.65	\$ 0.06	\$ 0.34	\$ 1.05	per square foot
Variety Store	\$ 0.65	\$ 0.06	\$ 0.28	\$ 0.99	per square foot
Free-Standing Discount Store	\$ 1.34	\$ 0.13	\$ 0.31	\$ 1.78	per square foot
Hardware/Paint Store	\$ 0.65	\$ 0.06	\$ 0.18	\$ 0.90	per square foot
Nursery (Garden Center)	\$ 2.10	\$ 0.21	\$ 0.49	\$ 2.80	per square foot
Nursery (Wholesale)	\$ 1.12	\$ 0.11	\$ 0.28	\$ 1.51	per square foot
Shopping Center	\$ 1.12	\$ 0.11	\$ 0.29	\$ 1.52	per square foot
Factory Outlet Center	\$ 1.12	\$ 0.11	\$ 0.19	\$ 1.43	per square foot
Specialty Retail Center	\$ 1.33	\$ 0.13	\$ 0.32	\$ 1.79	per square foot
Automobile Sales	\$ 1.03	\$ 0.10	\$ 0.23	\$ 1.36	per square foot
Auto Parts Store	\$ 0.65	\$ 0.06	\$ 0.24	\$ 0.95	per square foot
Tire Store	\$ 0.86	\$ 0.08	\$ 0.15	\$ 1.10	per square foot
Tire Superstore	\$ 0.86	\$ 0.08	\$ 0.15	\$ 1.10	per square foot
Supermarket	\$ 0.78	\$ 0.08	\$ 0.39	\$ 1.25	per square foot
Convenience Market (Open 24 Hrs)	\$ 1.21	\$ 0.12	\$ 1.32	\$ 2.65	per square foot
Convenience Market w/Gasoline Pumps	\$ 1.21	\$ 0.12	\$ 1.21	\$ 2.54	per square foot
Discount Supermarket	\$ 1.51	\$ 0.15	\$ 0.42	\$ 2.09	per square foot
Wholesale Market	\$ 0.55	\$ 0.05	\$ 0.04	\$ 0.64	per square foot
Discount Club	\$ 0.87	\$ 0.09	\$ 0.23	\$ 1.19	per square foot
Home Improvement Superstore	\$ 0.65	\$ 0.06	\$ 0.09	\$ 0.79	per square foot
Electronics Superstore	\$ 0.65	\$ 0.06	\$ 0.11	\$ 0.82	per square foot
Apparel Store	\$ 1.12	\$ 0.11	\$ 0.29	\$ 1.53	per square foot
Department Store	\$ 1.33	\$ 0.13	\$ 0.10	\$ 1.56	per square foot
Pharmacy/Drugstore	\$ 1.12	\$ 0.11	\$ 0.32	\$ 1.56	per square foot
Furniture Store	\$ 0.28	\$ 0.03	\$ 0.01	\$ 0.32	per square foot
Services (900-999)					
Drive-in Bank	\$ 3.22	\$ 0.32	\$ 0.29	\$ 3.83	per square foot
Quality Restaurant	\$ 5.02	\$ 0.49	\$ 0.31	\$ 5.82	per square foot
High-Turnover (Sit-Down) Restaurant	\$ 5.02	\$ 0.49	\$ 0.43	\$ 5.95	per square foot
Fast-Food Restaurant	\$ 7.33	\$ 0.72	\$ 1.20	\$ 9.25	per square foot
Quick Lubrication Vehicle Shop	\$ 1,413.05	\$ 138.74	\$ 297.33	\$ 1,849.12	per service bay
Gasoline/Service Station	\$ 107.66	\$ 10.57	\$ 301.91	\$ 420.15	per pump
Gasoline Station w/Convenience Market	\$ 0.15	\$ 0.01	\$ 204.09	\$ 204.25	per pump
Self-Service Car Wash	\$ 134.58	\$ 13.21	\$ 386.88	\$ 534.67	per stall

"Square foot" means square foot of gross building floor area.

All figures shown rounded to whole cents for readability; actual fees generally run to multiple decimal places.

■ Program Administration

As noted above, a surcharge of 3% for administration has been added to the subtotal of the impact fee for each land use category, in accordance with the state’s impact fee law. The fees collected in this category can only be used for the administration of the impact fee program and are reported annually to the State just like the other service categories. Like any fee, this must have some rational and reasonable connection to the service rendered. Commonly, the administrative fee collected is used to offset some or all of the cost to handle impact fee calculations by the City staff and to process, record and distribute impact fees; and some or all of the cost for the management and oversight of the program in accordance with the provisions of the Impact Fee Ordinance and the State’s Development Impact Fee Act (DIFA).

■ Reductions in Impact Fee Assessments

There are several ways in which the impact fees can be reduced, both as an across-the-board reduction upon adoption, or for individual circumstances or special cases of particular proposed developments.

Adoption of Reduced Impact Fees

As noted, the fee schedule above shows the **maximum** impact fee that could be adopted under State law. The City may adopt the maximum fee for any given public facility category, or could adopt a lower fee, as part of the Impact Fee Ordinance. In order to fulfill DIFA’s requirement that new growth pay its fair, proportionate share, all fees in a particular public facility category could be reduced proportionally (that is, by the same percentage), but individual land use categories within the particular public facility category cannot be individually reduced or deleted (except under an adopted exemption—see below).

Individual Fee Assessments

A landowner or developer may request an individual assessment when the average figures used in this methodology do not apply to the specific project being proposed. This individual assessment determination will be made preferentially on alternate data available regarding the number of housing units, employment characteristics or traffic generation characteristics of the specific project, as applicable. Under the appeal procedures of the Development Impact Fee Ordinance, special circumstances can be considered and approved in modifying the fee for a particular project demonstrably differing from the average values used in this methodology.

Individual Appeals

The City’s Impact Fee Ordinance must provide for the appeal by anyone assessed an impact fee, first to the Impact Fee Administrator and then, if not resolved, to the City Council. This

allows for special circumstances or unanticipated situations to be addressed. Since this is essentially a ‘waiver’ of the required fee, in whole or in part, the resulting shortfall in the relevant impact fee fund would have to be reimbursed by the City from non-impact fee sources.

Exemptions

Exemptions from the established impact fee amounts on the adopted Impact Fee Schedule can be adopted by the City Council, in its discretion, for development that represents ‘extraordinary economic or employment growth’ or ‘affordable housing’. The authority to grant exemptions must be spelled out as part of the Impact Fee Ordinance, and the City must adopt exemption criteria that would apply to all similar land uses or developments. Any impact fees foregone through an exemption must be restored to the Impact Fee Funds by the City from sources other than impact fees.

Developer Agreements

The Georgia Development Impact Fee Act allows the City to enter into ‘private agreements’ with individual developers or property owners to spell out specific impact fees for a particular development. The fees agreed to in the Private Agreement take precedence over the fees adopted as part of the City’s Impact Fee Ordinance. Examples of items that might be addressed in such an Agreement may include the construction of particular impact fee eligible improvements and how credits for the construction may accrue to the developer or builders, a reduction in some or all applicable impact fees for extenuating public purposes, a reimbursement for construction of capital facilities in the past, cost-sharing among two or more development projects, etc.

■ Limitations on Impact Fees

There are several requirements placed on impact fees by the Georgia Development Impact Fee Act and the rules and regulations of the Georgia Department of Community Affairs. These include:

- Impact fees must be spent in the same public facility category for which they were collected.
- Impact fees must be deposited into and maintained in an interest-bearing account.
- Impact fees not spent or encumbered within 6 years must be refunded to the fee payer, with interest.
- The same Level of Service must be applied to both the existing population and to new growth.
- All calculations must be made in Net Present Value.
- Financial Reporting and a Community Work Program Update is required on an annual basis.

■ Monitoring Change

A number of the factors that form the base-line assumptions in this report's impact cost calculations may change over time. The impact fee methodologies for the service areas should be reviewed periodically and should reflect changes in the growth and development of the city. Also, the fiscal elements of the impact fee system should be brought up to 'current' dollars to account for inflation.

- The 'planning horizon' of this methodology report is 2040, covering a 22-year time span. When the City's *Comprehensive Plan* is again updated, the methodology report (and impact fee methodologies) should be considered for updating if needed. The State's minimum standards for comprehensive plans require that, for communities with impact fees, the Capital Improvements Element must be included, either as one of the chapters or by reference to a separate document.
- Costs should be maintained in net present value terms. Land costs and construction costs should be updated periodically as inflation pushes them upward.
- Any changes in funding strategy for the facilities included in the impact fee program should be reflected in the impact fee calculation.
- New revenue sources should be reviewed for potential tax credits against impact fees if capital improvements being funded by impact fees will also receive funding from the new revenue.

Changes in the pace of development will affect the timing of service delivery but not, *per se*, the methodology used to calculate the impact costs. If more residential and business development is built than was projected, facilities will be needed sooner to meet the Level of Service standard. Impact fee revenues will increase faster than projected as growth accelerates and more impact fees will be collected. In this way, more funds are produced to provide the services demanded. If growth slows, the opposite occurs: reduced revenue and lowered demand for services would push the need for new facilities forward to a later date.

Forecasts

In order to accurately calculate the demand for future services for Flemington, new growth and development must be quantified in future projections. These projections include forecasts for population, housing units and employment to the year 2040. These projections provide the base-line conditions from which the current (2018) Level of Service calculations are produced. Also, projections are combined to produce what is known as the ‘day-night population’. This is a method that combines resident population and employees in the city to produce an accurate picture of the total number of persons that rely on certain 24-hour services, such as fire protection. The projections used for each public facility category are specified in each public facility chapter.

Accurate projections of population and employment are important in that:

- Population data and forecasts are used to establish current and future demand for services standards where the Level of Service (LOS) is per capita based.
- Household data and forecasts are used to forecast future growth in the number of housing units.
- Housing unit data and forecasts relate to service demands that are household based, such as the residential portion of current and future traffic generated on the city’s streets and roads, and are used in combination with nonresidential traffic to calculate impact costs for road improvement projects. The number of households—defined as *occupied* housing units—is always smaller than the supply of available housing units. Over time, however, each housing unit is expected to become occupied by a household, even though the unit may become vacant during future re-sales or turnovers.
- Employment forecasts are refined to reflect ‘value added’ employment figures. This reflects an exclusion of jobs considered to be transitory or non-site specific in nature, and thus not subject to the issuance of building permits and impact fee collections.
- ‘Value added’ employment data is combined with population data to produce ‘day-night population’ figures. These figures represent the total number of persons receiving services, both in their homes and in their businesses, particularly from 24-hour operations such as fire protection and law enforcement.

■ Population Forecasts

Two sets of population forecasts are made—one for the cities of Flemington and Hinesville combined (since they are served jointly by the Hinesville Fire Department) and one for Flemington alone because law enforcement services are provided by the city independently.

Flemington Population

The following table shows the annual estimates of population for the county and each of its cities, as published by the US Bureau of the Census, since 2000. The Census Bureau prepares

population estimates for each year between the 10-year (decennial) censuses, and when a new 10-year census is taken, the bureau revises all of the preceding annual estimates to match the latest count. Annual estimates are published in the subsequent year, so the latest Census estimates are for 2017.

Table 3: Annual Census Population Estimates - Liberty County and its Cities

Name	Population Estimate (as of July 1)									
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Liberty County Total	61,811	61,388	62,505	60,403	63,254	64,718	63,047	63,708	62,635	67,061
Allenhurst	764	758	752	700	732	701	714	711	698	725
Flemington	510	535	560	548	603	605	647	674	693	750
Gumbranch	252	254	255	241	256	248	257	260	259	272
Hinesville	30,335	30,733	31,081	29,500	31,503	30,875	31,985	32,485	32,509	34,519
Midway	1,143	1,219	1,354	1,426	1,579	1,766	1,764	1,882	1,934	2,191
Riceboro	815	817	817	766	809	780	804	807	800	838
Walthourville	4,044	4,063	4,072	3,826	4,053	3,917	4,046	4,074	4,050	4,249
Balance of County	23,948	23,009	23,614	23,396	23,719	25,826	22,830	22,815	21,692	23,517

Name	Population Estimate (as of July 1)							
	2010*	2011	2012	2013	2014	2015	2016	2017
Liberty County Total	62,660	65,089	64,333	62,282	64,016	61,524	61,390	61,386
Allenhurst	756	787	788	767	778	743	739	738
Flemington	733	763	764	745	758	725	721	723
Gumbranch	260	272	271	263	268	255	254	254
Hinesville	33,046	34,383	34,586	33,904	34,482	33,056	33,159	33,140
Midway	2,087	2,141	2,146	2,092	2,127	2,035	2,031	2,033
Riceboro	788	818	820	798	809	773	770	770
Walthourville	3,981	4,145	4,152	4,046	4,108	3,922	3,909	3,912
Balance of County	21,009	21,780	20,806	19,667	20,686	20,015	19,807	19,816

* Revised by Census Bureau in 2017

Note: All data as of July 1 of each year. 2000 and 2010 differ from Decennial Census counts, which were as of April 1.

Sources: For 2010 to 2017: Census Annual Estimates Program, US Bureau of the Census. For 2000 to 2009: Intercensal Estimates 2000-2010, US Bureau of the Census.

Over the past 17 years, the population of Flemington has hardly budged, increasing from 510 in 2000 to 723 last year, an overall increase of 213. Though a very small number, it represents an increase of almost 30%. Of all of the cities in the county, only Midway showed a greater 2000-2017 growth increase (44%). Except for Hinesville, all other cities in the county either lost population or showed an imperceptible gain.

Things in Flemington, however, are about to change dramatically. Two major mixed-use developments have recently been granted zoning approval by the city, and one is currently under development. This pending increase in housing units and population is seen as only the beginning of a major increase as other new developments are attracted to the city's 'zero' property

tax rate; proximity to Ft. Stewart, county schools and the cultural center; and easy access via busy US 84 to major shopping facilities to the west in Hinesville, to I-95 and the coast to the south, and the easy drive to Richmond Hill and Savannah via SR 196. Of particular relevance, employment at Fort Stewart is expected to increase by as many as 4,000 if the anticipated new brigade is realized.

The two mixed-use PUDs that have been approved by the city establish benchmarks that will guide additional development projects in the future, particularly with regard to acceptable housing densities. Including office and commercial areas, the two PUDs contain 296 acres, of which 236 acres could potentially contain up to 602 new single-family and multi-family housing units. Benchmark gross densities approved for the PUDs are 1.71 to 1.8 units of single-family houses per acre, and 5.98 multi-family units per acre.

Considering future, additional development, about 582 acres have been identified as being particularly attractive for zoning and development approval in the coming 22 years. Some properties may be PUD mixed-use projects, others will most likely develop strictly as single-family subdivisions. Together, these properties are expected to generate an additional 1,093 housing units in the coming 22 years, which, in addition to the 602 units already approved, would result in a total of 1,695 new units by 2040.

Applying the countywide average family size to these new units (as reported by the Census Bureau for 2017 at 2.45 persons per household), results in a future population increase of 4,153. Together with the current population, it is forecast that Flemington will be home to 4,876 people by 2040.

Hinesville Population

Because Hinesville provides emergency fire protection services to Flemington, the population of Hinesville must also be forecast to 2040. Unlike Flemington, however, there is more data available for Hinesville to use a statistical approach to the forecast instead of estimating future development capacity.

The forecasts are based on two projection approaches applied to the city's annual population estimates from Table 3. As noted, other than Flemington and Midway, Hinesville was the only other city in the county that showed a notable population increase over the past 17 years. Although the number of new residents increased by 2,805 between 2000 and 2017, the increase itself was only 8.5% of the city's 2017 estimated population of 33,140.

The results of the two projections are shown on Table 4. In both cases, the 'raw' projection results are shown in the 'projected' column. To the extent that the projected figure differs from the 2017 Census estimate, the projected figures are adjusted to coincide with the 2017 figure.

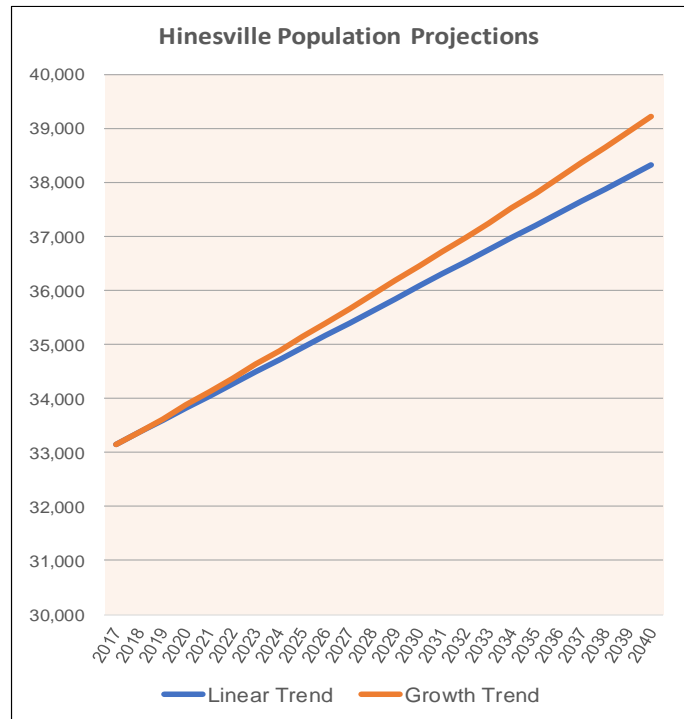
The first projection is called the Linear Trend. This algorithm examines each of the population estimates from 2000 to 2017 and applies a straight line that best fits the historical data, projected forward to 2040. The other method—the Growth Trend approach—assumes that there

is some amount of curve to the projection line, which is then assumed to continue and thus is extended into the future at the same change in the rate of growth.

In fact, the Growth Trend did identify an increasing rate of change as the city has grown over the years, and this approach is used for the calculations in this study.

Table 4: Hinesville Population Forecasts

Year	Linear Trend		Growth Trend	
	Projected	Adjusted	Projected	Adjusted
2017	34,514	33,140	34,563	33,140
2018	34,749	33,366	34,817	33,383
2019	34,984	33,591	35,073	33,628
2020	35,219	33,817	35,330	33,875
2021	35,454	34,043	35,589	34,124
2022	35,690	34,269	35,851	34,375
2023	35,925	34,494	36,114	34,627
2024	36,160	34,720	36,379	34,881
2025	36,395	34,946	36,646	35,137
2026	36,630	35,172	36,915	35,395
2027	36,865	35,397	37,186	35,655
2028	37,100	35,623	37,459	35,917
2029	37,335	35,849	37,735	36,181
2030	37,570	36,075	38,012	36,446
2031	37,806	36,300	38,291	36,714
2032	38,041	36,526	38,572	36,984
2033	38,276	36,752	38,855	37,255
2034	38,511	36,978	39,140	37,529
2035	38,746	37,203	39,428	37,804
2036	38,981	37,429	39,717	38,082
2037	39,216	37,655	40,009	38,362
2038	39,451	37,881	40,303	38,643
2039	39,686	38,106	40,599	38,927
2040	39,922	38,332	40,897	39,213
Increase 2018-2040		5,192		6,073



Taken together, by 2040 the cities of Flemington and Hinesville are forecast to grow by a total of 10,949 people, with 55.5% of them moving into Hinesville and 45.5% coming to Flemington. Total populations at that time would be 39,213 in Hinesville and 4,876 in Flemington.

■ Housing Unit Forecasts

Housing unit forecasts are needed only for Flemington and are used only as part of the methodology to estimate existing and future traffic that is expected to be generated on the city’s streets and roads.

As discussed above in the Flemington Population section, it is anticipated that 1,695 new housing units will be added to the city by 2040. According to the Census Bureau, there were 286 housing units in existence in 2010. More recently, the Census Bureau’s American Community Survey (ACS) estimated the number of housing units in the city in 2016 at 297 (276 of which were occupied). Since little has changed in the city since 2016, the ACS estimate is

accepted as the current (2018) number of units. Together, then, a total of 1,992 housing units are forecast for the city in 2040.

■ Employment Forecasts

Like population, existing and future employment are used in establishing the ‘day-night’ population for emergency fire and law enforcement services. Due to differences in data availability, however, different approaches are used in forecasting employment in the two cities that comprise the fire service area that encompasses Flemington. In both cases, however, county-wide employment forecasts are used as the basis for each city.

Table 5: Countywide Employment - 2010-2040

Year	Total Jobs	Non-Contributing*	Value-Added Jobs
2010	40,866	26,937	13,929
2011	42,566	27,710	14,856
2012	41,725	26,884	14,841
2013	41,361	26,448	14,913
2014	40,146	24,716	15,430
2015	39,906	24,263	15,643
2016	40,264	24,332	15,932
2017	40,625	24,395	16,230
2018	40,989	24,456	16,533
2019	41,355	24,516	16,839
2020	41,731	24,577	17,154
2021	42,108	24,634	17,474
2022	42,488	24,689	17,799
2023	42,872	24,742	18,130
2024	43,257	24,794	18,463
2025	43,651	24,842	18,809
2026	44,040	24,889	19,151
2027	44,438	24,932	19,506
2028	44,832	24,974	19,858
2029	45,226	25,013	20,213
2030	45,628	25,052	20,576
2031	46,025	25,086	20,939
2032	46,425	25,120	21,305
2033	46,828	25,153	21,675
2034	47,224	25,182	22,042
2035	47,625	25,210	22,415
2036	48,027	25,236	22,791
2037	48,427	25,260	23,167
2038	48,831	25,285	23,546
2039	49,240	25,309	23,931
2040	49,642	25,330	24,312

* Employees not subject to impact fees, including transitory and non-site specific jobs such as farm, forestry and construction workers, and federal and public employees.

Source: Woods & Poole Economics, 2017 Georgia State Profile.

Countywide Employment

The only reasonably reliable data on employment is at the county level and prepared by Woods & Poole Economics (W&P). Their data—both historical and projected forward—is based on data from the US Dept. of Commerce and its own national economic model, disaggregated to the county level throughout the country. The data is accepted by the GA Dept. of Community Affairs without question.

Table 5 shows the W&P employment data for the county projected to 2040 from 2010. It is important to note that W&P counts jobs, not employed people. As a result, people holding more than one job are counted by the Census Bureau as ‘one employed person’, while W&P captures all of the jobs, both part-time and full-time, and includes sole proprietors.

The total employment figures are refined to produce what is referred to as ‘value-added’ jobs. The ‘value-added’ jobs category is a refinement that excludes any employment that is considered to be transitory in nature, such as agricultural and

construction employment, and excludes employers that are not subject to impact fees, such as local government and the military. This is done to better measure the services being provided by the City, which in this report will be measured and, ultimately, assessed based on structures. Transitory employment does not require a structure to be built to house the employment, and so does not come under the assessment of impact fees.

Flemington Employment

Employment figures *per se* are not directly available for Flemington from any source. Instead, occupational tax statements (i.e., ‘business license’ data) are used in estimating how many people work in the city.

Table 6: Baseline Employment - Flemington

Year	Business Licenses by Employment Range				
	1 to 5	6 to 15	16 to 30	31 to 50	51 or more
2016	29	5	8	3	2
2017	28	7	5	3	2
2018	26	5	7	3	3
Mid-Point	3.0	10.5	23.0	40.5	75.0

Estimated Employees by Range						Total
2016	87	53	184	122	150	596
2017	84	74	115	122	150	545
2018	78	53	161	122	225	639
Three-Year Average =						593
% of Total Value-Added County Jobs - 2018 =						3.59%

Business license applications do not indicate the actual number of employees of the business. Instead, ranges of the number of employees are indicated. These ranges are shown on Table 6, along with the number of business licenses issued in each range category in the last three years. For estimating purposes, the mid-point of each range was multiplied by the number of licenses issued to estimate how many employees were represented by the licenses; for the ‘51 or more’ category, the average of 75 employees per business is used.

Since no trend is evident, the total employment figures for each year were then averaged to represent an ‘average year’. This figure divided by the total ‘value-added’ employment in the county results in an estimate that 3.59% of all such employees work in Flemington.

Hinesville Employment

Better historical employment data is available for Hinesville, which supports a different approach.

The following Table 7 compares employment figures from the Census Bureau to the W&P total jobs figures for 2010. That was the first and only year that the Census Bureau published its employment figures at the city level (and then only for the largest cities).

Table 7: Baseline Employment -- Hinesville

Total Jobs in County -- 2010	
Woods & Poole*	40,866
Census Bureau**	43,789
Multiplier:	0.93
Hinesville	
Census Bureau***	11,465
x Multiplier = Estimated Jobs	10,700
Hinesville % of County	26.18%

* Total Jobs -- all occupations

** Based on commuting patterns of employed persons.(including Fort Stewart)

*** Total employees working in Hinesville.

Countywide, the 2010 W&P employment figure is slightly over 0.93 times the number reported by the Census Bureau. This multiplier is applied to the Hinesville Census number of commuters (11,465) to arrive at an allocation of the W&P countywide figure for total employment (10,700). As a result, it is estimated that 26.18% of the jobs in the county are located within the City of Hinesville.

Service Area Projections

The following Table 8 presents the employment forecasts for Hinesville and Flemington, and combines them for a total employment forecast for the Hinesville Fire Department’s service area.

For each city, the percentage of countywide employment calculated in the preceding sections is multiplied times the countywide number of ‘value-added’ jobs to calculate the number of such jobs that are forecast for each city, annually to 2040. These forecasts are than totaled for the Fire Department’s service area coverage.

Table 8: Value-Added Employment - 2018-2040

Year	Countywide Value-Added Jobs	Hinesville Value-Added Jobs*	Flemington Value-Added Jobs**	Total Fire Service Area Jobs
2018	16,533	4,329	593	4,922
2019	16,839	4,409	604	5,013
2020	17,154	4,491	615	5,106
2021	17,474	4,575	627	5,202
2022	17,799	4,660	638	5,298
2023	18,130	4,747	650	5,397
2024	18,463	4,834	662	5,496
2025	18,809	4,925	675	5,600
2026	19,151	5,014	687	5,701
2027	19,506	5,107	700	5,807
2028	19,858	5,199	712	5,911
2029	20,213	5,292	725	6,017
2030	20,576	5,387	738	6,125
2031	20,939	5,482	751	6,233
2032	21,305	5,578	764	6,342
2033	21,675	5,675	777	6,452
2034	22,042	5,771	791	6,562
2035	22,415	5,869	804	6,673
2036	22,791	5,967	817	6,784
2037	23,167	6,066	831	6,897
2038	23,546	6,165	845	7,010
2039	23,931	6,266	858	7,124
2040	24,312	6,366	872	7,238
2018-2040 Increase	7,779	2,037	279	2,316

* Hinesville Percentage at: 26.18%

** Flemington Percentage at: 3.59%

Population and employment forecasts are totaled for the ‘day-night’ population figures that are used for both the combined Fire Protection service area for Hinesville and Flemington, and shown separately for the City of Flemington for use in the Law Enforcement service area.

The day-night population calculation is a combination of the population projections and future employment information. The use of day-night population in impact cost and impact fee calculations is based upon the clear rational nexus between persons and services demanded.

The day-night population is used to determine Level of Service standards for facilities that serve both the resident population and business employment. The fire department, for instance, protects one’s house from fire whether or not they are at home, and protects stores and offices whether or not they are open for business. Thus, this ‘day-night’ population is a measure of the total services demanded of a 24-hour service provider facility and a fair way to allocate the costs of such a facility among all of the beneficiaries.

The figures on Table 9 are the figures that will be used in subsequent public facility category chapters to calculate impact costs and fees.

Table 9: Day-Night Population by Service Area

Year	Hinesville-Flemington Fire Service Area			City of Flemington		
	Residents	Value-Added Jobs	Day-Night Population	Residents	Value-Added Jobs	Day-Night Population
2018	34,106	4,922	39,028	723	593	1,316
2019	34,532	5,013	39,545	904	604	1,508
2020	34,960	5,106	40,066	1,085	615	1,700
2021	35,390	5,202	40,592	1,266	627	1,893
2022	35,822	5,298	41,120	1,447	638	2,085
2023	36,255	5,397	41,652	1,628	650	2,278
2024	36,690	5,496	42,186	1,809	662	2,471
2025	37,127	5,600	42,727	1,990	675	2,665
2026	37,566	5,701	43,267	2,171	687	2,858
2027	38,007	5,807	43,814	2,352	700	3,052
2028	38,450	5,911	44,361	2,533	712	3,245
2029	38,895	6,017	44,912	2,714	725	3,439
2030	39,341	6,125	45,466	2,895	738	3,633
2031	39,790	6,233	46,023	3,076	751	3,827
2032	40,241	6,342	46,583	3,257	764	4,021
2033	40,693	6,452	47,145	3,438	777	4,215
2034	41,148	6,562	47,710	3,619	791	4,410
2035	41,604	6,673	48,277	3,800	804	4,604
2036	42,063	6,784	48,847	3,981	817	4,798
2037	42,524	6,897	49,421	4,162	831	4,993
2038	42,986	7,010	49,996	4,343	845	5,188
2039	43,451	7,124	50,575	4,524	858	5,382
2040	44,089	7,238	51,327	4,876	872	5,748
2018-2040 Increase	9,983	2,316	12,299	4,153	279	4,432

■ Trip Generation

In order to calculate new growth and development’s fair share of the cost of road improvements, it is necessary to establish how much of the future traffic on Flemington’s roads will be generated by new growth, over and above the traffic generated by the city’s residents and businesses today. This Section describes the methodology through which this determination is made.

Summary

A Level of Service must be established for road improvements in order to assure that, ultimately, existing development and new growth are served equally. This section also presents

the process through which new growth and development’s ‘fair share’ of road improvement costs is calculated, and tables summarizing the technical portions of this section are included.

Approach


This Methodology proceeds along the following lines:

- Total traffic currently generated by Flemington residents and businesses on the road system within the city is calculated from trip generation data for 2018.
- Future Flemington-generated traffic from new growth in the city is calculated from housing unit and employment forecasts to 2040.
- The portion of total 2040 traffic that is generated by new housing units and employment in the city establishes the percentage of Flemington’s cost of the future road improvements that can be included in an impact fee.

Summary Table

The table below shows how the portion of 2040 traffic generated by new growth is calculated. The existing traffic is calculated for the average daily trip ends on a normal week day. This is subtracted from the traffic that is projected to be experienced in 2040, leaving the amount generated by new growth and development. As shown on Table 10, traffic generated by city residents and businesses is projected to more than double by 2040, such that 2040 traffic will consist of almost 57% of the trips generated by new growth.


Table 10: Average Daily Trip Ends Generated by New Growth

	2018	2040	Increase	% New Growth Trip Ends
Residential Trips	2,723	17,691	14,968	 56.6%
Nonresidential Trips	13,710	20,167	6,457	
Total	16,433	37,858	21,425	

The next table, below, calculates the Primary Trip Ends generated by existing and future traffic by deleting pass-by and diverted trips (which are discussed below).

New primary trips add vehicles to the road network. Pass-by and diverted trips involve the same vehicles stopping off between their original beginnings and their final destinations, and therefore do not add new vehicles to the road network—the vehicles were already there on their way to their destinations. The use of primary trip ends are therefore considered more relevant when assigning cost responsibility to particular land uses with regard to impact fees.

Table 11: Primary Daily Trip Ends Generated by New Growth

	% Primary Trip Ends*	Primary Trip Ends			% New Growth Primary Trip Ends
		2018	2040	Increase	
Residential Trips	79.0%	2,151	13,974	11,823	 61.7%
Commercial	50.9%	6,529	9,607	3,078	
Industrial+Utility	92.0%	808	1,183	375	
Total		9,488	24,765	15,277	

* Derived from 'Trip Generation Handbook' chapter, *Trip Generation*, 9th Edition, Institute of Transportation Engineers.

Overall, new residents and businesses located within Flemington will generate almost 62% of all Flemington-based primary trips on the city’s roads. Thus, new growth’s ‘fair share’ of the cost to the City to provide road improvements to serve current and future traffic cannot exceed 61.7%.

Pass-by and Diverted Trips

The impact of new growth and development on Flemington’s road network is the increased number of vehicles added to the system, expressed by transportation engineers as ‘trips’. Every ‘trip’ has two ends—a beginning at its origin and an end at its destination (known as ‘trip ends’). There are three types of trips, defined as:

A Primary Trip (and its trip ends) – a vehicle travelling from its original beginning to its intended final destination. Driving from one’s home directly to one’s place of work is an example of a primary trip.

A Pass-by Trip – a vehicle travelling along its usual route from its origin to its final destination that stops off at an intermediate location for any reason. A trip from home to work that stops along the way for gas, dropping off a child at daycare, picking up coffee or dinner, or for any other reason, represents a ‘pass-by’ trip at the intermediate location.

A Diverted Trip (previously called a diverted ‘link’ trip) – a vehicle that diverts from its normal primary trip route between its origin to its final destination, and takes a different route to stop off at an intermediate location for any reason. While a pass-by trip remains on its normal route, a diverted trip changes its route to other streets to arrive at the intermediate stop.

These different types of trips result in different types of ‘trip ends’. On a home-to-daycare-to-work trip, for instance, there are two primary trip ends (home and work) and two pass-by or diverted trip ends: arriving at the daycare center and leaving from there to drive to work.

The net impact on the road network, however, is created by the one vehicle and its two primary trip ends, as far as financial responsibility is concerned.

Impact fee calculations take note of these pass-by and diverted trip ends as not adding to the overall traffic on the road network, and deletes them from the total trip ends reported in ITE’s *Trip Generation* manual.

While Table 11 above uses overall average percentages of primary trip ends derived from ITE for broad land use categories, the actual percentage for each land use listed on the impact fee schedule for roads is applied to the total trip ends to determine the primary trip ends attributed to that particular land use.

The following sections break down trip generation by general land use category, which were summarized in the tables above.

Residential Trip Generation

Average trip generation rates published by the Institute of Transportation Engineers (ITE) differentiate between ‘single-family detached housing’ and ‘apartments’. The closest correlations with the US Census definitions are ‘single-family units’ and ‘multi-family units’, which are shown on the following table.

The 2018 breakdown of housing units by type on Table 12 are taken from the most recent Census data, discussed above under the Housing Unit section of this chapter.

Table 12: Residential Units by Type: 2018 and 2040

	2018	Increase 2018-2040	Total in 2040
Single-Family Units	286	1,288	1,574
Multi-Family Units	0	407	407
Total Residential	286	1,695	1,981


The numbers for 2040 are derived from the housing unit forecast described in that section, combining the number of potential multi-family units already approved in one of the city’s mixed-use PUDs with development anticipated on another, similarly located property.

Subtracting the anticipated increase in multi-family units from the 2040 total yields the number of projected single-family houses.

Table 13, below, calculates the amount of traffic that is generated by the city’s housing stock today, and the amount that will be generated in 2040. The calculations are made on the basis of ‘average daily traffic’ on a normal weekday, using average trip generation rates derived through multiple traffic studies (350 for single-family and 86 for apartments) published by ITE. The rates are expressed for ‘trip ends’—that is, traffic both leaving and coming to a housing unit.

Comparing traffic in 2018 to 2040, the future increase in trip ends can be calculated, which will represent 84.6% of all residential trip ends generated in the city.

Table 13: Residential Trip Generation - 2018-2040

	ADT* Trip Ends	2018 Units	2018 ADT Trip Ends	2040 Units	2040 ADT Trip Ends	Increase 2018-2040	% New Growth Trip Ends
Single-Family Units	9.52	286	2,723	1,574	14,984	12,261	 84.6%
Multi-Family Units	6.65	0	0	407	2,707	2,707	
Total Residential		286	2,723	1,981	17,691	14,968	

* Average Daily Traffic on a weekday; Institute of Transportation Engineers *Trip Generation*, 9th Edition.

Nonresidential Trip Generation

Calculating traffic generated by businesses located in Flemington is more problematical than residential trips because there is no breakdown of types of businesses in the city that is readily available. In addition, while employment forecasts have been made in terms of the number of jobs, there is no data available for floor areas, much less by detailed type of use.

The alternate is to view nonresidential traffic generation on a broad ‘average’ basis. For this, there is data available from ITE for a number of individual uses relating to the total number of trips generated per employee. These trips, of course, include not only trips taken by the employees (to/from work, lunch, etc.) but also customers and others that are attracted to the use, make delivery calls or otherwise serve it in some way.

Table 14 on the following page shows the ‘trips per employee’ for those uses for which impact fees are commonly collected and for which the data is available.

The table shows average rates by category (truck terminals are included with ‘industrial’ and drive-in banks are included with ‘retail’ uses). The last column shows the average rate for all ‘commercial’ uses listed, as opposed to the ‘industrial’ uses shown in the column on its left.

Table 14: ITE Trips-per-Employee Data

ITE Category	ITE Code	Land Use	ADT	Average	Average
			Trip Ends per Employee	by Category	All Commercial
<i>Port and Terminal</i>	30	Intermodal Truck Terminal	6.99	10.21	25.31
<i>Industrial</i>	110	General Light Industrial	3.02		
	120	General Heavy Industrial	0.82		
	140	Manufacturing	2.13		
	150	Warehousing	3.89		
	151	Mini-Warehouse	32.47		
	152	High-Cube Warehouse	22.13		
<i>Lodging</i>	310	Hotel or Conference Motel	14.34	13.58	
	320	Motel	12.81		
<i>Recreational</i>	430	Golf Course	20.52	34.79	
	443	Movie Theater	53.12		
	460	Arena	10.00		
	480	Amusement Park	8.33		
	490	Tennis Courts	66.67		
	491	Racquet/Tennis Club	45.71		
	492	Health/Fitness Center	46.71		
<i>Institutional</i>	495	Recreational Community Center	27.25	29.58	
	520	Private Elementary School	15.71		
	530	Private High School	19.74		
	560	Church/Place of Worship	26.24		
	565	Day Care Center	28.13		
<i>Medical</i>	566	Cemetery	58.09	5.26	
	610	Hospital	4.50		
	620	Nursing Home	3.26		
<i>Office</i>	630	Clinic	8.01	4.18	
	710	General Office Building	3.32		
	714	Corporate Headquarters Building	2.33		
	715	Single-Tenant Office Building	3.70		
	720	Medical-Dental Office Building	8.91		
	760	Research and Development Center	2.77		
<i>Retail</i>	770	Business Park	4.04	32.86	
	812	Building Materials & Lumber Store	32.12		
	814	Variety Store	66.70		
	815	Free-Standing Discount Store	28.84		
	816	Hardware/Paint Store	53.21		
	817	Nursery (Garden Center)	21.83		
	818	Nursery (Wholesale)	23.40		
	826	Specialty Retail Center	22.36		
	841	Automobile Sales	21.14		
	850	Supermarket	87.82		
	854	Discount Supermarket	40.36		
	860	Wholesale Market	8.21		
	861	Discount Club	32.21		
<i>Services</i>	875	Department Store	11.56		
	890	Furniture Store	12.19		
	912	Drive-in Bank	30.94		

Source: *Trip Generation*, 9th Edition, Institute of Transportation Engineers, where survey results given for key land uses.

The number of people that currently work in Flemington was calculated in a previous section of this chapter. The next table, below, provides a breakdown between commercial and industrial and utility employment in the city and calculates trip ends generated by each.

Tax base valuations give us some clue as to the breakdown (the latest published by the Georgia Department of Revenue being for calendar year 2017). When the City’s ‘industrial’ and ‘utility’ tax valuations are combined, the figures suggest that almost 86% of all uses are ‘commercial’ in nature, while about 14% are ‘industrial’ and ‘utility’ uses. These percentages, applied to total employment in Flemington, give us an estimate of the number of employees in 2018 in each category.


Using the number of employees in each land use category, the total number of trips using the average daily traffic rates for commercial and industrial from the previous table produce the number of trip ends generated by the businesses in the city. As noted above, these trips include the employees, customers and others that normally access the sites.

Table 15: Nonresidential Trip Generation - 2018

	2017 Tax Base	Percent of Total	2018 Employees	Average ADT	Total Nonres Trip Ends
Commercial	\$ 13,794,548	85.6%	507	25.31	12,832
Industrial+Utility	\$ 2,328,967	14.4%	86	10.21	878
Total Nonresidential	\$ 16,123,515		593		13,710

Lastly, the following Table 16 calculates the total number of trip ends that will be generated by new nonresidential growth in future traffic on Flemington’s roads.

Table 16: Nonresidential Trip Generation - 2018-2040

	2018 Employees	2018 Trip Ends	2040 Employees	2040 Trip Ends	2018-2040 Increase	% New Growth Trip Ends
Commercial	507	12,832	746	18,881	6,049	 32.0%
Industrial+Utility	86	878	126	1,286	408	
Total Nonresidential	593	13,710	872	20,167	6,457	

This table shows the number of trip ends generated by Flemington businesses based on 2018 employment. The trip ends by use are distributed using the same percentages calculated on the previous table. The same calculations are made for the year 2040 based on projected

employment in the city, and the difference between 2018 and 2040 represents trip ends generated by future growth and development. This totals 32% of all nonresidential 2040 trip ends.

The results of the residential and nonresidential trip generation analyses are combined on Table 10 at the beginning of this Section for an overall calculation of new growth's share of future traffic generated by Flemington residents and businesses. From these figures, pass-by and diverted trip ends are deleted on Table 11 to determine primary trip ends, which more closely relates to vehicles on the road and thus contribute to traffic congestion.

Terminology

This Trip Generation Section uses the term 'average daily traffic' (ADT) for a weekday, which is defined by ITE as:

the "average weekday vehicle trip ends", which are "the average 24-hour total of all vehicle trips counted from a study site from Monday through Friday."

Additionally, ITE defines a "trip or trip end" as:

"a single or one-direction vehicle movement with either the origin or the destination (exiting or entering) inside a study site. For trip generation purposes, the total trip ends for a land use over a given period of time are the total of all trips entering plus all trips exiting a site during a designated time period".

Lastly, ITE defines "average trip rate" as:

"the weighted average of the number of vehicle trips or trip ends per unit of independent variable (for example, trip ends per occupied dwelling unit or employee) using a site's driveway(s). The weighted average rate is calculated by dividing the sum of all independent variable units where paired data is available. The weighted average rate is used rather than the average of the individual rates because of the variance within each data set or generating unit. Data sets with a large variance will over-influence the average rate if they are not weighted".

Cost Adjustments

Calculations related to impact fees are made in terms of the ‘present value’ of past and future amounts of money, including project cost expenditures and credits for future revenue.

The Georgia Development Impact Fee Act defines ‘present value’ as “the current value of past, present, or future payments, contributions or dedications of goods, services, materials, construction, or money”. This chapter describes the methodologies used to make appropriate adjustments to project cost figures, both past and future as appropriate to the project expenditure being examined, to convert these costs into current dollars when such an adjustment is appropriate.

Calculations for present value (PV) differ when considering past expenditures versus future costs. In both cases, however, the concept is the same—the ‘actual’ expenditure made or to be made is adjusted to the current year using appropriate rates (an inflation rate for past expenditures and an inflation rate minus a deflator for future costs). In essence, the present value is considered in light of the value of money as it changes over time as the result of past or future inflation, as applicable.

■ Past Expenditures

Past expenditures are considered in impact fee calculations only for previous expenditures for projects that created excess capacity for new development and are being recouped. An expenditure that was made in the past is converted to PV using the inflation rate of money—in this case the Consumer Price Index (CPI). Although this approach ignores the value of technological innovation (i.e., better computers are available today for the same or lower historic prices) and evolving land prices (often accelerated beyond inflation by market pressures), the approach best captures the value of the money actually spent. For instance, it is not important that you can buy a better computer today for the same price that was paid 5 years ago; what is important is the money was spent 5 years ago and what that money would be worth today had it been saved instead of spent.

■ Future Project Costs

In order to determine the present value of a project expenditure that will be made in the future, the Net Present Value (NPV) of the expenditure is determined. To calculate the NPV of any project cost, two figures are needed—the future cost of the project anticipated in the year the expenditure will be made, and the Net Discount Rate. Given the current cost of a project, that cost is first inflated into the future to the target expenditure year to establish the estimated future cost. The future cost is then deflated to the present using the Net Discount Rate, which establishes the NPV for the project in current dollars. These two formulas are:

$$\text{Future Cost} = \text{Current Cost} \times (1 + \text{Inflation Rate})^{\text{Year of Expenditure} - \text{Current Year}}$$

$$\text{Net Present Value} = \text{Future Cost} \times (1 + \text{Net Discount Rate})^{\text{Current Year} - \text{Year of Expenditure}}$$

In this chapter, two important adjustments are discussed that are required to convert current costs into future cost figures, and then back into current dollars. First, an appropriate cost inflator is identified. This adjustment factor is important in determining the future cost of a project, based on current cost estimates. The cost inflator may be based on anticipated inflation in construction or building costs, or on anticipated inflation in the value of money (for capital projects that do not include a construction component). In essence, costs increase over time. By identifying the appropriate inflation rate that is related to the type of project (building construction, project construction or non-construction), current 2018 estimates can be used to predict future costs in the year they are expected to occur.

The second cost adjustment is a deflator—the Net Discount Rate. In essence, the Net Discount Rate is the interest rate that accrues to monies being held in escrow. That is, as impact fees are collected and ‘saved up’ over the years for the future expenditure, they increase at the rate that the account is accruing interest. Having determined the inflated cost of a project at some future date, the cost in today’s dollars can be reduced to the extent that interest will increase the funds on hand. In essence, the calculation determines how much money needs to be added to the account so that, with interest, it will grow to the amount needed for that future expenditure at that time. This is the Net Present Value of that future expenditure.

As will be seen below, the cost of project construction and building construction has been increasing faster than the CPI inflation rate over the past 10 years.

■ Cost Inflatoms

Three different cost inflators are used in the impact fee calculations, based on the type of project being considered. For infrastructure projects, such as roads, a ‘construction cost inflator’ is used. For projects that require construction of a structure (such as a fire station), a ‘building cost inflator’ is used as the appropriate inflation rate. For all non-construction types of projects (such as a fire truck), an inflation rate is used that is based on the Consumer Price Index. These different types of inflators are discussed below.

Engineering News Record’s Cost Indexes

ENR publishes both a Construction Cost Index (CCI) and a Building Cost Index (BCI) that are widely used in the construction industry. The indexes are based on annual cost increases of various construction materials and applicable labor rates and calibrated regionally. For calculation of the CCI and the BCI, costs in 1913 are set at 100.

Construction Cost Inflator

Table 17 uses the example of a calculation of the annual average rate of increase reflected in construction costs. For this analysis, the 2007-2017 ten-year period is used as a base time period for an estimate of future construction cost increases due to inflation in labor and materials costs.

Table 17: Construction Cost Inflator - CCI

Year	Amount	CCI*		Effect of Inflation	
		1913=100	2007=1.0	CCI	Avg. Rate =
				2.7414301%	
2007	\$ 100,000.00	5,136.09	1.000000	\$ 100,000.00	\$ 100,000.00
2008		5,488.43	1.068602	106,860.20	102,741.43
2009		5,737.82	1.117159	111,715.86	105,558.01
2010		5,742.83	1.118133	111,813.31	108,451.81
2011		5,829.65	1.135037	113,503.68	111,424.94
2012		5,892.64	1.147301	114,730.14	114,479.58
2013		5,983.23	1.164940	116,493.98	117,617.96
2014		6,147.52	1.196927	119,692.72	120,842.37
2015		6,245.74	1.216050	121,605.02	124,155.18
2016		6,277.14	1.222163	122,216.32	127,558.81
2017		6,433.18	1.252546	125,254.61	131,055.75
				\$ 1,263,885.84	\$ 1,263,885.84

* Construction Cost Index, Atlanta Region,
Source: *Engineering News Record*, Average Annual Indices.

Table 17 shows a construction project that cost \$100,000 in 2007, and how much the same project would cost in each subsequent year using the relevant Construction Cost Index published by Engineering News Record for. Setting the 2007 Construction Cost Index (CCI) at '1.0', the increase in the CCI as a multiple of 2007 is also shown on the table. The equivalent cost of the same project in each subsequent year is calculated by multiplying the CCI multiplier times \$100,000. When the total for all such projects is summed for the 2007-2017 period, the equivalent average annual rate of increase is calculated as the percentage that would produce the same total. This percentage is used in the text of this report as the applicable inflator for construction projects that will begin in future years.

Building Cost Inflator

The inflator for future construction costs for buildings is based on ENR's Building Cost Index for each year from 2007 through 2017 and is calculated in the same manner as described above for the Construction Cost Inflator. Table 18 shows the results.

Table 18: Building Cost Inflater – BCI

Year	Amount	BCI*		Effect of Inflation	
		1913=100	2007=1.0	BCI	Avg. Rate =
					1.6037765%
2007	\$ 100,000.00	3,623.91	1.000000	\$ 100,000.00	\$ 100,000.00
2008		3,721.86	1.027030	102,703.02	101,603.78
2009		3,715.58	1.025296	102,529.59	103,233.27
2010		3,736.56	1.031085	103,108.52	104,888.90
2011		3,837.47	1.058932	105,893.18	106,571.09
2012		3,970.93	1.095760	109,576.01	108,280.25
2013		4,022.11	1.109882	110,988.19	110,016.82
2014		4,076.81	1.124977	112,497.65	111,781.25
2015		4,108.05	1.133596	113,359.59	113,573.97
2016		4,126.72	1.138749	113,874.90	115,395.44
2017		4,278.39	1.180603	118,060.25	117,246.13
				\$ 1,192,590.90	\$ 1,192,590.90

* Building Cost Index, Atlanta Region,
Source: *Engineering News Record*, Average Annual Indices.

CPI Inflater

For projects that do not involve construction, only the future value of money needs to be considered (without regard to inflation in labor or materials costs). For this calculation, the Consumer Price Index (CPI) is used, assuming past experience will continue into the foreseeable future.

Table 19 shows the CPI figures for every year since 1982, with the 1982-84 index being 100. By 2017 the CPI had risen considerably over the 1982 CPI. The first column under the ‘CPI’ heading on the table shows the average annual CPI figures. Using 2017 as the base (2017=1.0), the second column under ‘CPI*’ on the table shows the multipliers that would convert an amount of money spent in each year into current present value dollars.

Table 19: Non-Construction Cost Inflator – CPI

Year	Amount	CPI*		Present Value: CPI	Long Term Inflator =	10-Year Inflator =
		1982-84=100	2017=1.0			
					2.444927%	
1982	\$ 10,000.00	96.50	2.54010	\$ 25,401.04	\$ 23,289.82	
1983	\$ 10,000.00	99.60	2.46104	\$ 24,610.44	\$ 22,733.99	
1984	\$ 10,000.00	103.90	2.35919	\$ 23,591.92	\$ 22,191.42	
1985	\$ 10,000.00	107.60	2.27807	\$ 22,780.67	\$ 21,661.81	
1986	\$ 10,000.00	109.60	2.23650	\$ 22,364.96	\$ 21,144.83	
1987	\$ 10,000.00	113.60	2.15775	\$ 21,577.46	\$ 20,640.19	
1988	\$ 10,000.00	118.30	2.07202	\$ 20,720.20	\$ 20,147.60	
1989	\$ 10,000.00	124.00	1.97677	\$ 19,767.74	\$ 19,666.76	
1990	\$ 10,000.00	130.70	1.87544	\$ 18,754.40	\$ 19,197.40	
1991	\$ 10,000.00	136.20	1.79971	\$ 17,997.06	\$ 18,739.24	
1992	\$ 10,000.00	140.30	1.74711	\$ 17,471.13	\$ 18,292.01	
1993	\$ 10,000.00	144.50	1.69633	\$ 16,963.32	\$ 17,855.46	
1994	\$ 10,000.00	148.20	1.65398	\$ 16,539.81	\$ 17,429.32	
1995	\$ 10,000.00	152.40	1.60840	\$ 16,083.99	\$ 17,013.36	
1996	\$ 10,000.00	156.90	1.56227	\$ 15,622.69	\$ 16,607.32	
1997	\$ 10,000.00	160.50	1.52723	\$ 15,272.27	\$ 16,210.98	
1998	\$ 10,000.00	163.00	1.50380	\$ 15,038.04	\$ 15,824.09	
1999	\$ 10,000.00	166.60	1.47131	\$ 14,713.09	\$ 15,446.43	
2000	\$ 10,000.00	172.20	1.42346	\$ 14,234.61	\$ 15,077.79	
2001	\$ 10,000.00	177.10	1.38408	\$ 13,840.77	\$ 14,717.95	
2002	\$ 10,000.00	179.90	1.36253	\$ 13,625.35	\$ 14,366.70	
2003	\$ 10,000.00	184.00	1.33217	\$ 13,321.74	\$ 14,023.82	
2004	\$ 10,000.00	188.90	1.29762	\$ 12,976.18	\$ 13,689.13	1.540751%
2005	\$ 10,000.00	195.30	1.25509	\$ 12,550.95	\$ 13,362.43	
2006	\$ 10,000.00	201.60	1.21587	\$ 12,158.73	\$ 13,043.53	
2007	\$ 10,000.00	207.34	1.18220	\$ 11,822.01	\$ 12,732.23	\$ 11,652.09
2008	\$ 10,000.00	215.30	1.13849	\$ 11,384.89	\$ 12,428.37	\$ 11,475.28
2009	\$ 10,000.00	214.54	1.14255	\$ 11,425.53	\$ 12,131.76	\$ 11,301.16
2010	\$ 10,000.00	218.06	1.12411	\$ 11,241.15	\$ 11,842.22	\$ 11,129.68
2011	\$ 10,000.00	224.94	1.08972	\$ 10,897.18	\$ 11,559.60	\$ 10,960.80
2012	\$ 10,000.00	229.59	1.06762	\$ 10,676.24	\$ 11,283.72	\$ 10,794.48
2013	\$ 10,000.00	232.96	1.05221	\$ 10,522.11	\$ 11,014.43	\$ 10,630.69
2014	\$ 10,000.00	236.74	1.03541	\$ 10,354.15	\$ 10,751.56	\$ 10,469.38
2015	\$ 10,000.00	237.02	1.03419	\$ 10,341.87	\$ 10,494.96	\$ 10,310.52
2016	\$ 10,000.00	240.01	1.02130	\$ 10,213.03	\$ 10,244.49	\$ 10,154.08
2017	\$ 10,000.00	245.12	1.00000	\$ 10,000.00	\$ 10,000.00	\$ 10,000.00
1982-17	\$360,000.00			\$ 556,856.72	\$ 556,856.72	
2007-17	\$110,000.00			\$ 118,878.16	\$ 118,878.16	

*Average annual Consumer Price Index data is from the U. S. Department of Labor, Bureau of Labor Statistics.

Using an annual expenditure of \$10,000 as an example, the multipliers on Table 19 yield the figures shown for the CPI on the table under the ‘present value’ heading. Cumulatively, the \$360,000 spent over the 1982-2017 period would have a total present value of \$556,856.72 in today’s dollars. Considering the present value figures for the \$10,000 annual expenditures, an

average annual inflation rate of almost 2.445% yields the same total amount over the 1982-2017 period.

The 35-year average of annual CPI change (the period of 1982-2017) shown on Table 19 would be useful in estimating the present value (PV) of past expenditures but would not be the best indicator of future change because of the long timeframe covered. While the historic CPI multipliers reflect the swings in inflation in the past, these rates have moderated somewhat in recent years as inflation has become a primary target of federal monetary policy. Looking only at the change in CPI for the 10 years from 2007 to 2017, an average annual inflation rate of a little more than 1.54% best captures the change over that period. This lower inflation rate (compared to the 1982-2017 period) is assumed to be experienced ‘on average’ in future years and is used for inflator calculations for future non-construction expenditures. (This comports with recent pronouncements by the FED that an annual inflation rate of 2% would be considered normal and desirable for the national economy.)

Calculating Net Present Value

Determining the NPV of future project expenditures depends on the type of ‘project’ being funded.

For a building construction project (such as a fire station), the current cost estimate for the project is inflated into the future using the average Building Cost Inflator (from Table 18) applied to the number of years until the year planned for its construction. This future cost is then deflated back to the present using the Net Discount Rate (currently 0.225%¹) since this reflects the present value of a future amount of money.

For other construction projects (such as road improvements), the current cost estimate for the project is inflated into the future using the average Construction Cost Inflator (from Table 17) applied to the number of years until the year planned for its construction. Like building construction projects, this future cost is then deflated back to the present using the Net Discount Rate.

For non-construction capital projects (such as fire truck purchases), the 10-year average CPI inflator is used to estimate the project expenditure in future dollars while the Net Discount Rate is applied to deflate that future cost to present value.

¹ At the current annual rate of return (0.45%), a balance starting at ‘0’ would average 0.225% annually to achieve 0.45% at the end of the time period.

Fire Protection

■ Introduction

Fire protection is provided throughout the entire City of Flemington by the Hinesville Fire Department under a contractual service agreement between the two cities.

■ Service Area

The Hinesville Fire Department operates as a coordinated system, with each of its two stations backing up the other station. The backing up of one station by another station is not a rare event; it is the essence of good fire protection planning. It is the strategic placement of personnel and equipment that is the backbone of good fire protection. Any new station would relieve some of the demand on the other stations while also increasing service throughout the Fire Protection Service Area.

For these reasons the entire area within the cities of Hinesville and Flemington is considered a single service area for the provision of fire protection because all residents and employees within the fire service area have equal access to the benefits of the services.

■ Level of Service

The Level of Service for fire protection in the future is based on the capital improvements that currently exist.

Table 20: Fire Protection System Improvements

	Description	Number
Existing System Improvements		
<i>Fire Stations</i>		
Station - HQ	103 Liberty Street	1
Station		1
<i>Total Existing Stations</i>		2
<i>Fire Apparatus*</i>		
HazMat Unit		1
Fire Truck	Engine	3
Fire Truck	Ladder	1
Fire Truck	Tanker	1
Fire Truck	Service	1
Fire Truck	Rescue	3
<i>Total Existing Vehicles</i>		10

* Vehicles having a service life of 10 years or more.

Table 20 shows the Hinesville Fire Department’s current inventory of ‘system improvements’ (fire stations and fire apparatus having a useful life of 10 years or more).

Currently, fire protection is provided by two fire stations equipped with a total of 10 Fire Department vehicles. None of the stations or equipment is located within Flemington. One of the stations is

located in downtown Hinesville at 103 Liberty Street, and the other one is far to the west at 640 Airport Road.

The Level of Service for fire protection throughout the Hinesville/Flemington Fire Protection Service Area is measured in terms of the number of fire apparatus and fire stations per day-night population. Day-night population is used as a measure in that fire protection is a 24-hour service provided continuously to both residences and businesses throughout the fire service area, as discussed in the Forecasts chapter of this report.

Table 21: Level of Service Calculations

Facility	Service Population	Level of Service
Existing Stations	2018 Day-Night Population	Stations per 2018 Day-Night Pop
2	39,028	0.000051
Existing Vehicles	2018 Day-Night Population	Vehicles per 2018 Day-Night Pop
10	39,028	0.000256

Table 21 presents the calculation of the Level of Service (LOS) for the Hinesville Fire Department’s current inventory of stations and vehicles based on the 2018 population and employment figures for the Fire Protection Service Area (Hinesville and Flemington), taken from Table 9.

■ Forecasts for the Service Area

Future Demand

The Level of Service standards from Table 21 are multiplied by the forecasted day-night population increases to produce the expected future demand in Table 22. The ‘day-night population increase’ figures are taken from Table 9.

Following the format of Table 21, Table 22 calculates the demand for future facilities to serve new growth and development projecting forward the ‘current’ LOS into the future.

Table 22: Future Demand Calculation

Level of Service	Future Population	New Growth Demand
Stations per 2018 Day-Night Pop	Day-Night Population Increase (2018-40)	Net New Stations Demanded
0.000051	12,299	1.00
Vehicles per 2018 Day-Night Pop	Day-Night Population Increase (2018-40)	Net New Vehicles Demanded*
0.000256	12,299	3.1513

* Only 3 vehicles would be added to the inventory, all of which will be 100% eligible for impact fee funding.

One additional fire station is justified and proposed to provide full service in the Fire Protection Service Area in the future, as well as several more fire trucks. This would not only serve new growth but also be instrumental in maintaining and possibly improving the ISO rating for all the residents and businesses of the two cities, now and in the future.

Note that, because only ‘whole’ vehicles can be purchased, only 3 new vehicles would need to be added to the inventory (slightly fewer than are ‘technically’ demanded by new growth). Thus, since only 3 new vehicles need to be acquired to cover expansion of the fleet to meet the needs of future growth and development, all of the vehicles would be 100% impact fee eligible.

Future Costs

This section examines both the total cost of the increased number of fire stations and fire apparatus needed to provide the proposed fire protection system of the future, and the extent to which these costs are impact fee-eligible.

The facility and fire apparatus system improvements on Table 23, below, are based on the desire to increase fire protection services in a balanced way to continue to appropriately serve all residents and businesses in the Fire Protection Service Area in 2040. The proposed system improvements are listed on Table 23, and are ‘scheduled’ for construction or acquisition in the appropriate years (in order to enable Net Present Value calculations based on the 2018 cost estimates shown).

It is assumed that two fire trucks will be acquired in conjunction with construction of the new fire station (anticipated to occur in 2029) and a third engine will be needed in 2034 as growth in the Fire Protection Service Area continues to add residents and businesses.

Table 23: Future System Improvement Costs

Year	Fire Stations			Vehicles		
	Facility	Number	2018 Cost*	Type	Number	2018 Cost**
2018	-	-	-	-	-	-
2019	-	-	-	-	-	-
2020						
2020						
2020						
2021						
2022						
2023						
2024						
2025	-	-	-	-	-	-
2026	-	-	-	-	-	-
2027	-	-	-	-	-	-
2028	-	-	-	-	-	-
2029	New Station	1	\$ 1,401,200	-	-	-
2029	-	-	-	Engine	1	\$ 350,000
2029	-	-	-	Engine	1	\$ 350,000
2030	-	-	-	-	-	-
2031	-	-	-	-	-	-
2032	-	-	-	-	-	-
2033	-	-	-	-	-	-
2034	-	-	-	Engine	1	\$ 350,000
2035	-	-	-	-	-	-
2036	-	-	-			
2037	-	-	-	-	-	-
2038	-	-	-	-	-	-
2039	-	-	-	-	-	-
2040	-	-	-	-	-	-

* Facility cost is based on a 3,400 square foot 2-double bay building at \$412.11 per sf for site work, construction, design and furnishings, rounded. (Source: Average per square foot cost of 3 similar stations from *Green Building Square Foot Costbook*, 2017 and 2018 editions, BNI Publications, Inc.).

** Vehicle cost is estimated using current prevailing rates for similar vehicles.

Estimated improvement costs (in 2018 dollars) are based on the following:

- For new facility space: Recent construction costs averaging \$412.11 per square foot in other communities are used, which is all inclusive of a complete facility from site work to furnishings.
- For fire apparatus: Estimates are based on prevailing costs of similar vehicles.

The total cost figures from Table 23 are then converted to ‘impact fee eligible’ costs (in 2018 dollars) based on the percentage that each improvement is impact fee eligible. As noted above, all of the fire trucks are 100% eligible under the adopted LOS, as well as the new fire station. These calculations are shown on Table 24.

Table 24: Impact Fee Cost Calculations

Year	Costs in 2018 Dollars					Net Present Value**
	Fire Station Costs	% Impact Fee Eligible*	Vehicle Costs	% Impact Fee Eligible	Total Impact Fee Eligible	
2018	-	-	-	-	-	-
2019	-	-	-	-	-	-
2020	-	-	-	-	-	-
2020	-	-	-	-	-	-
2020	-	-	-	-	-	-
2021	-	-	-	-	-	-
2022	-	-	-	-	-	-
2023	-	-	-	-	-	-
2024	-	-	-	-	-	-
2025	-	-	-	-	-	-
2026	-	-	-	-	-	-
2027	-	-	-	-	-	-
2028	-	-	-	-	-	-
2029	\$ 1,401,200.00	100.0%	-	-	\$ 1,401,200.00	\$ 1,628,440.03
2029	-	-	\$ 350,000.00	100.0%	\$ 350,000.00	\$ 408,059.39
2029	-	-	\$ 350,000.00	100.0%	\$ 350,000.00	\$ 408,059.39
2030	-	-	-	-	-	-
2031	-	-	-	-	-	-
2032	-	-	-	-	-	-
2033	-	-	-	-	-	-
2034	-	-	\$ 350,000.00	100.0%	\$ 350,000.00	\$ 438,976.20
2035	-	-	-	-	-	-
2036	-	-	-	-	-	-
2037	-	-	-	-	-	-
2038	-	-	-	-	-	-
2039	-	-	-	-	-	-
2040	-	-	-	-	-	-
	\$ 1,401,200.00		\$ 1,050,000.00		\$ 2,451,200.00	\$ 2,883,535.01

* Eligibility percentage reflects the application of funding from alternate, non-impact fee sources.

** Net Present Value = 2018 cost estimate for fire stations inflated to target year using the ENR Building Cost Index (BCI), and the Consumer Price Index (CPI) for vehicles. Expenditures after 2018 reduced to 2018 NPV using the

The Net Present Value of the cost estimate for the new fire station is calculated by increasing the current (2018) estimated construction cost using the Engineering News Record’s 10-year average Building Cost Inflation (BCI) rate, and then discounting this future amount back using the Net Discount Rate. For non-construction improvements (fire vehicles), the currently estimated costs are inflated to their target years using the 10-year average CPI and then reduced using the Net Discount Rate to produce the Net Present Value. (The approaches to calculating NPV are explained in detail in the Cost Adjustments chapter of this report.)

■ Impact Cost Calculation

This section considers two alternate approaches: the ‘Fair Share’ approach which calculates Flemington’s share of the projected system improvements in conjunction with Hinesville’s participation in the total improvements, and the ‘Flemington Station’ approach in which Flemington assumes the full cost of the new station and its rolling stock in partnership with Hinesville to operate the station as part of the Hinesville Fire Department system. Both alternates assume the continued provision of fire protection services by the Hinesville Fire Department through the contractual agreement between the two cities.

As an addition to the system improvement costs for fire protection improvements shown under the two alternates, the City will recoup through impact fee collections the cost of preparing the Capital Improvements Element.² The total cost to prepare the CIE (\$35,450) has been divided equally among the three public facility categories being considered (fire protection, law enforcement, and road improvements) to produce an amount that is applied to each public facility category’s funding responsibility ($\$35,450.00 \div 3 = \$11,816.67$). The cost of the CIE preparation is wholly applicable to new growth since the demand for future services—the reason for the CIE preparation—is attributable to that same new growth.

The ‘Fair Share’ Alternate

Under this alternate, the entire Fire Protection Service Area is assumed to participate in funding the future capital improvements, since the improvements will provide service throughout the service area in combination with the existing stations and equipment.

Importantly, it is not assumed that the City of Hinesville will adopt impact fees to cover its fair share of the costs, though Hinesville will be responsible for its ‘fair share’ and the allocation of revenue from whatever source it identifies OTHER than the contractual agreement between it and Flemington for fire protection services.

Table 25 shows two calculations—the cost per future person to pay for the fire protection capital improvements needed to serve future growth, and a similar calculation of the cost per future housing unit.

On the ‘Net Cost’ portion of Table 25, the future capital cost from Table 24 and the share of the cost of the CIE preparation are added together to produce the ‘total net eligible fire project costs’ figure. By dividing this total by the number of future residents and employees projected for the entire service area (i.e., the increase in day-night population between 2018 and 2040 for both cities), the impact cost per person is calculated.

A final calculation is necessary in order to fairly distribute the portion of project costs that are attributable to residential growth. Impact fees for residential land uses are assessed not on the basis of population but when building permits are issued. The per-person cost therefore

² DIFA specifies that the City may collect fees for “expenses incurred for qualified staff or any qualified engineer, planner, architect, landscape architect, or financial consultant for preparing or updating the capital improvement element”.

does not apply. The ‘net housing unit cost’ portion of Table 25 shows this calculation, as follows:

The portion of project costs that is attributable to new residential growth is determined based on the percentage of the total day-night population increase that is comprised of new residents. This percentage is then applied to the ‘total net eligible fire project costs’ figure to produce the portion of the total cost attributable to new residential growth. Finally, this cost attributable to new residential growth is divided by the number of new housing units to produce a ‘net impact cost per housing unit’.

Table 25: Fair Share Alternate - Net Costs per Person and per Housing Unit

Net Cost to Serve New Growth

Description	Total
Eligible Cost of Fire Projects	\$ 2,883,535.01
plus CIE Preparation	\$ 11,816.67
= Total Net Eligible Fire Project Costs	\$ 2,895,351.67
÷ Day-Night Population Increase	12,299
= Net Impact Cost per Person	\$ 235.41

Calculation of Net Housing Unit Cost

Factor	Data
Residential Population Increase (2018-2040)	9,983
÷ Day-Night Population Increase (2018-2040)	12,299
= Residential Increase as % of Total Increase	81.169%
Total Net Eligible Fire Project Costs	\$ 2,895,351.67
× Residential % of Total Day-Night Increase =	\$ 2,350,133.81
÷ New Housing Units (2018-2040)	5,741
= Net Impact Cost per Housing Unit	\$ 409.36

Avg Sales Price = \$ 300,000.00
 Alt 1 Impact Fee = 0.136%

It can be noted that the full net impact fee for a new home offered for \$300,000 would amount to only 0.136% of its cost.

Fire Protection Impact Fee Schedule - ‘Fair Share’ Alternate

The fee schedule that follows presents the maximum impact fees that could be charged in Flemington for the ‘Fair Share’ alternate for the Fire Protection public facility category, based on the preceding calculations shown on Table 25.

The maximum net impact fees that could be charged in the city for the ‘Fair Share’ alternate are shown on Table 25. The ‘per person’ net fee is translated into a ‘per square foot’ fee based on the average number of employees per floor area reported by the Institute of Transportation Engineers in its *Trip Generation* manual, 9th Edition. A 3% administration fee is added to the net fees (in accordance with state law) to produce the total maximum impact fee for each land use category.

Table 26: Maximum Impact Fee Schedule - Fire Protection (Fair Share Alternate)

ITE Code	Land Use	Employees	Unit of Measure	Net Fee per Unit	Adminis-tration (3%)	Total Impact Fee
Net Fee per Day/Night Person (Employee):				\$ 235.4136		
Residential (200-299)						
210	Single-Family Detached Housing	n/a	per dwelling	\$ 409.36	\$ 12.28	\$ 421.64
220	Apartment	n/a	per dwelling	\$ 409.36	\$ 12.28	\$ 421.64
230	Residential Condominium/Townhouse	n/a	per dwelling	\$ 409.36	\$ 12.28	\$ 421.64
Port and Terminal (000-099)						
030	Intermodal Truck Terminal	0.001415	per square foot	\$ 0.3331	\$ 0.0100	\$ 0.34
Industrial/Agricultural (100-199)						
110	General Light Industrial	0.002308	per square foot	\$ 0.5433	\$ 0.0163	\$ 0.56
120	General Heavy Industrial	0.001829	per square foot	\$ 0.4306	\$ 0.0129	\$ 0.44
140	Manufacturing	0.001793	per square foot	\$ 0.4222	\$ 0.0127	\$ 0.43
150	Warehousing	0.000915	per square foot	\$ 0.2154	\$ 0.0065	\$ 0.22
151	Mini-Warehouse	0.000077	per square foot	\$ 0.0181	\$ 0.0005	\$ 0.02
152	High-Cube Warehouse	0.000076	per square foot	\$ 0.0179	\$ 0.0005	\$ 0.02
Lodging (300-399)						
310	Hotel or Conference Motel	0.569735	per room	\$ 134.1234	\$ 4.0237	\$ 138.15
311	All Suites Hotel	0.500000	per room	\$ 117.7068	\$ 3.5312	\$ 121.24
320	Motel	0.439500	per room	\$ 103.4644	\$ 3.1039	\$ 106.57
Recreational (400-499)						
430	Golf Course	0.245614	per acre	\$ 57.8209	\$ 1.7346	\$ 59.56
437	Bowling Alley	0.001000	per square foot	\$ 0.2354	\$ 0.0071	\$ 0.24
443	Movie Theater	0.001470	per square foot	\$ 0.3459	\$ 0.0104	\$ 0.36
460	Arena	3.333000	per acre	\$ 784.6335	\$ 23.5390	\$ 808.17
480	Amusement Park	9.094838	per acre	\$ 2,141.0484	\$ 64.2315	\$ 2,205.28
490	Tennis Courts	0.243888	per acre	\$ 57.4145	\$ 1.7224	\$ 59.14
491	Racquet/Tennis Club	0.000307	per square foot	\$ 0.0723	\$ 0.0022	\$ 0.07
492	Health/Fitness Center	0.000705	per square foot	\$ 0.1660	\$ 0.0050	\$ 0.17
495	Recreational Community Center	0.001241	per square foot	\$ 0.2922	\$ 0.0088	\$ 0.30
Institutional (500-599)						
520	Private Elementary School	0.000982	per square foot	\$ 0.2312	\$ 0.0069	\$ 0.24
530	Private High School	0.000653	per square foot	\$ 0.1537	\$ 0.0046	\$ 0.16
560	Church/Place of Worship	0.000347	per square foot	\$ 0.0817	\$ 0.0025	\$ 0.08
565	Day Care Center	0.002818	per square foot	\$ 0.6633	\$ 0.0199	\$ 0.68
566	Cemetery	0.081425	per acre	\$ 19.1686	\$ 0.5751	\$ 19.74
Medical (600-699)						
610	Hospital	0.002938	per square foot	\$ 0.6916	\$ 0.0207	\$ 0.71
620	Nursing Home	0.002331	per square foot	\$ 0.5488	\$ 0.0165	\$ 0.57
630	Clinic	0.003926	per square foot	\$ 0.9243	\$ 0.0277	\$ 0.95
Office (700-799)						
710	General Office Building	0.003322	per square foot	\$ 0.7821	\$ 0.0235	\$ 0.81
714	Corporate Headquarters Building	0.003425	per square foot	\$ 0.8063	\$ 0.0242	\$ 0.83
715	Single-Tenant Office Building	0.003149	per square foot	\$ 0.7412	\$ 0.0222	\$ 0.76
720	Medical-Dental Office Building	0.004055	per square foot	\$ 0.9546	\$ 0.0286	\$ 0.98
760	Research and Development Center	0.002928	per square foot	\$ 0.6892	\$ 0.0207	\$ 0.71
770	Business Park	0.003079	per square foot	\$ 0.7249	\$ 0.0217	\$ 0.75

Maximum Impact Fee Schedule - Fire Protection (Fair Share Alternate) Continued

ITE Code	Land Use	Employees	Unit of Measure	Net Fee per Unit	Adminis- tration (3%)	Total Impact Fee
Retail (800-899)						
812	Building Materials and Lumber Store	0.001406	per square foot	\$ 0.3310	\$ 0.0099	\$ 0.34
813	Free-Standing Discount Superstore	0.000960	per square foot	\$ 0.2260	\$ 0.0068	\$ 0.23
814	Variety Store	0.000960	per square foot	\$ 0.2260	\$ 0.0068	\$ 0.23
815	Free-Standing Discount Store	0.001985	per square foot	\$ 0.4672	\$ 0.0140	\$ 0.48
816	Hardware/Paint Store	0.000964	per square foot	\$ 0.2269	\$ 0.0068	\$ 0.23
817	Nursery (Garden Center)	0.003120	per square foot	\$ 0.7344	\$ 0.0220	\$ 0.76
818	Nursery (Wholesale)	0.001667	per square foot	\$ 0.3924	\$ 0.0118	\$ 0.40
820	Shopping Center	0.001670	per square foot	\$ 0.3931	\$ 0.0118	\$ 0.40
823	Factory Outlet Center	0.001670	per square foot	\$ 0.3931	\$ 0.0118	\$ 0.40
826	Specialty Retail Center	0.001982	per square foot	\$ 0.4666	\$ 0.0140	\$ 0.48
841	Automobile Sales	0.001528	per square foot	\$ 0.3597	\$ 0.0108	\$ 0.37
843	Auto Parts Store	0.000960	per square foot	\$ 0.2260	\$ 0.0068	\$ 0.23
848	Tire Store	0.001280	per square foot	\$ 0.3013	\$ 0.0090	\$ 0.31
849	Tire Superstore	0.001280	per square foot	\$ 0.3013	\$ 0.0090	\$ 0.31
850	Supermarket	0.001164	per square foot	\$ 0.2741	\$ 0.0082	\$ 0.28
851	Convenience Market (Open 24 Hours)	0.001800	per square foot	\$ 0.4237	\$ 0.0127	\$ 0.44
853	Convenience Market w/Gasoline Pumps	0.001800	per square foot	\$ 0.4237	\$ 0.0127	\$ 0.44
854	Discount Supermarket	0.002251	per square foot	\$ 0.5300	\$ 0.0159	\$ 0.55
860	Wholesale Market	0.000820	per square foot	\$ 0.1930	\$ 0.0058	\$ 0.20
857	Discount Club	0.001298	per square foot	\$ 0.3055	\$ 0.0092	\$ 0.31
862	Home Improvement Superstore	0.000960	per square foot	\$ 0.2260	\$ 0.0068	\$ 0.23
863	Electronics Superstore	0.000960	per square foot	\$ 0.2260	\$ 0.0068	\$ 0.23
876	Apparel Store	0.001670	per square foot	\$ 0.3931	\$ 0.0118	\$ 0.40
875	Department Store	0.001980	per square foot	\$ 0.4661	\$ 0.0140	\$ 0.48
880	Pharmacy/Drugstore	0.001670	per square foot	\$ 0.3931	\$ 0.0118	\$ 0.40
890	Furniture Store	0.000415	per square foot	\$ 0.0977	\$ 0.0029	\$ 0.10
Services (900-999)						
912	Drive-in Bank	0.004788	per square foot	\$ 1.1272	\$ 0.0338	\$ 1.16
931	Quality Restaurant	0.007460	per square foot	\$ 1.7562	\$ 0.0527	\$ 1.81
932	High-Turnover (Sit-Down) Restauant	0.007460	per square foot	\$ 1.7562	\$ 0.0527	\$ 1.81
934	Fast-Food Restaurant	0.010900	per square foot	\$ 2.5660	\$ 0.0770	\$ 2.64
941	Quick Lubrication Vehicle Shop	2.100000	per service bay	\$ 494.3685	\$ 14.8311	\$ 509.20
944	Gasoline/Service Station	0.160000	per pump	\$ 37.6662	\$ 1.1300	\$ 38.80
945	Gasoline Station w/Convenience Market	0.000216	per pump	\$ 0.0508	\$ 0.0015	\$ 0.05
947	Self-Service Car Wash	0.200000	per stall	\$ 47.0827	\$ 1.4125	\$ 48.50

Notes: ITE Code means the land use code assigned in the *Trip Generation* manual, by the Institute of Transportation Engineers, 9th Edition.

n/a - not applicable. Fee taken from the *Calculation of Housing Unit Fee* table.

The figures under the ‘total impact fee’ column are transferred to the Fire Protection column of the Maximum Impact Fee Schedule - Table 1, that begins on page 9 of this report.

'Flemington Station' Alternate

Under this alternate, the City of Flemington would take on the responsibility for funding the new fire station and its rolling stock, while continuing to contract with Hinesville for staffing and services.

As discussed for the 'Fair Share' alternate, Table 27 follows the same methodology for the 'Flemington Station' alternate in calculating the 'Net Cost' amount except that the 'net impact cost per person' is based on assigning the entire cost of the capital improvements to the future increase in the day-night population in Flemington alone.

Table 27: Flemington Station Alternate - Net Costs per Person and per Housing Unit

Net Cost to Serve New Growth

Description	Total
Eligible Cost of Fire Projects	\$ 2,883,535
plus CIE Preparation	\$ 11,816.67
= Total Net Eligible Fire Project Costs	\$ 2,895,351.67
÷ Day-Night Population Increase	4,432
= Net Impact Cost per Person	\$ 653.28

Calculation of Net Housing Unit Cost

Factor	Data
Residential Population Increase (2018-2040)	4,153
÷ Day-Night Population Increase (2018-2040)	4,432
= Residential Increase as % of Total Increase	93.705%
Total Net Eligible Fire Project Costs	\$ 2,895,351.67
× Residential % of Total Day-Night Increase =	\$ 2,713,085.63
÷ New Housing Units (2018-2040)	1,593
= Net Impact Cost per Housing Unit	\$ 1,703.13

Avg Sales Price = \$ 300,000.00
 Alt 2 Impact Fee = 0.568%

The methodology for calculating the 'net impact cost per housing unit' also follows the same methodology as for the previous alternate, but the cost is based only on the residential population increase forecast for Flemington, and the future increase in housing units anticipated only in Flemington.

Fire Protection Impact Fee Schedule - 'Flemington Station' Alternate

The Maximum Impact Fee Schedule shown on the following Table 28 presents the results of this alternate approach, reflected in the calculations presented in Table 27.

Again, the 'per person' net fee is translated into a 'per square foot' fee based on the average number of employees per floor area reported by the Institute of Transportation Engineers in its *Trip Generation* manual, 9th Edition, and the administration fee is added to the net cost figures for a total maximum fee.

Table 28: Maximum Impact Fee Schedule - Fire Protection (Flemington Station)

ITE Code	Land Use	Employees	Unit of Measure	Net Fee per Unit	Adminis-tration (3%)	Total Impact Fee
Net Fee per Day/Night Person (Employee):				\$ 653.2833		
Residential (200-299)						
210	Single-Family Detached Housing	n/a	per dwelling	\$ 1,703.13	\$ 51.09	\$ 1,754.22
220	Apartment	n/a	per dwelling	\$ 1,703.13	\$ 51.09	\$ 1,754.22
230	Residential Condominium/Townhouse	n/a	per dwelling	\$ 1,703.13	\$ 51.09	\$ 1,754.22
Port and Terminal (000-099)						
030	Intermodal Truck Terminal	0.001415	per square foot	\$ 0.9243	\$ 0.0277	\$ 0.95
Industrial/Agricultural (100-199)						
110	General Light Industrial	0.002308	per square foot	\$ 0.5433	\$ 0.0163	\$ 0.56
120	General Heavy Industrial	0.001829	per square foot	\$ 0.4306	\$ 0.0129	\$ 0.44
140	Manufacturing	0.001793	per square foot	\$ 0.4222	\$ 0.0127	\$ 0.43
150	Warehousing	0.000915	per square foot	\$ 0.2154	\$ 0.0065	\$ 0.22
151	Mini-Warehouse	0.000077	per square foot	\$ 0.0181	\$ 0.0005	\$ 0.02
152	High-Cube Warehouse	0.000076	per square foot	\$ 0.0179	\$ 0.0005	\$ 0.02
Lodging (300-399)						
310	Hotel or Conference Motel	0.569735	per room	\$ 134.1234	\$ 4.0237	\$ 138.15
311	All Suites Hotel	0.500000	per room	\$ 117.7068	\$ 3.5312	\$ 121.24
320	Motel	0.439500	per room	\$ 103.4644	\$ 3.1039	\$ 106.57
Recreational (400-499)						
430	Golf Course	0.245614	per acre	\$ 57.8209	\$ 1.7346	\$ 59.56
437	Bowling Alley	0.001000	per square foot	\$ 0.2354	\$ 0.0071	\$ 0.24
443	Movie Theater	0.001470	per square foot	\$ 0.3459	\$ 0.0104	\$ 0.36
460	Arena	3.333000	per acre	\$ 784.6335	\$ 23.5390	\$ 808.17
480	Amusement Park	9.094838	per acre	\$ 2,141.0484	\$ 64.2315	\$ 2,205.28
490	Tennis Courts	0.243888	per acre	\$ 57.4145	\$ 1.7224	\$ 59.14
491	Racquet/Tennis Club	0.000307	per square foot	\$ 0.0723	\$ 0.0022	\$ 0.07
492	Health/Fitness Center	0.000705	per square foot	\$ 0.1660	\$ 0.0050	\$ 0.17
495	Recreational Community Center	0.001241	per square foot	\$ 0.2922	\$ 0.0088	\$ 0.30
Institutional (500-599)						
520	Private Elementary School	0.000982	per square foot	\$ 0.2312	\$ 0.0069	\$ 0.24
530	Private High School	0.000653	per square foot	\$ 0.1537	\$ 0.0046	\$ 0.16
560	Church/Place of Worship	0.000347	per square foot	\$ 0.0817	\$ 0.0025	\$ 0.08
565	Day Care Center	0.002818	per square foot	\$ 0.6633	\$ 0.0199	\$ 0.68
566	Cemetery	0.081425	per acre	\$ 19.1686	\$ 0.5751	\$ 19.74
Medical (600-699)						
610	Hospital	0.002938	per square foot	\$ 0.6916	\$ 0.0207	\$ 0.71
620	Nursing Home	0.002331	per square foot	\$ 0.5488	\$ 0.0165	\$ 0.57
630	Clinic	0.003926	per square foot	\$ 0.9243	\$ 0.0277	\$ 0.95
Office (700-799)						
710	General Office Building	0.003322	per square foot	\$ 0.7821	\$ 0.0235	\$ 0.81
714	Corporate Headquarters Building	0.003425	per square foot	\$ 0.8063	\$ 0.0242	\$ 0.83
715	Single-Tenant Office Building	0.003149	per square foot	\$ 0.7412	\$ 0.0222	\$ 0.76
720	Medical-Dental Office Building	0.004055	per square foot	\$ 0.9546	\$ 0.0286	\$ 0.98
760	Research and Development Center	0.002928	per square foot	\$ 0.6892	\$ 0.0207	\$ 0.71
770	Business Park	0.003079	per square foot	\$ 0.7249	\$ 0.0217	\$ 0.75

Maximum Impact Fee Schedule - Fire Protection (Flemington Station)

ITE Code	Land Use	Employees	Unit of Measure	Net Fee per Unit	Adminis- tration (3%)	Total Impact Fee
Retail (800-899)						
812	Building Materials and Lumber Store	0.001406	per square foot	\$ 0.3310	\$ 0.0099	\$ 0.34
813	Free-Standing Discount Superstore	0.000960	per square foot	\$ 0.2260	\$ 0.0068	\$ 0.23
814	Variety Store	0.000960	per square foot	\$ 0.2260	\$ 0.0068	\$ 0.23
815	Free-Standing Discount Store	0.001985	per square foot	\$ 0.4672	\$ 0.0140	\$ 0.48
816	Hardware/Paint Store	0.000964	per square foot	\$ 0.2269	\$ 0.0068	\$ 0.23
817	Nursery (Garden Center)	0.003120	per square foot	\$ 0.7344	\$ 0.0220	\$ 0.76
818	Nursery (Wholesale)	0.001667	per square foot	\$ 0.3924	\$ 0.0118	\$ 0.40
820	Shopping Center	0.001670	per square foot	\$ 0.3931	\$ 0.0118	\$ 0.40
823	Factory Outlet Center	0.001670	per square foot	\$ 0.3931	\$ 0.0118	\$ 0.40
826	Specialty Retail Center	0.001982	per square foot	\$ 0.4666	\$ 0.0140	\$ 0.48
841	Automobile Sales	0.001528	per square foot	\$ 0.3597	\$ 0.0108	\$ 0.37
843	Auto Parts Store	0.000960	per square foot	\$ 0.2260	\$ 0.0068	\$ 0.23
848	Tire Store	0.001280	per square foot	\$ 0.3013	\$ 0.0090	\$ 0.31
849	Tire Superstore	0.001280	per square foot	\$ 0.3013	\$ 0.0090	\$ 0.31
850	Supermarket	0.001164	per square foot	\$ 0.2741	\$ 0.0082	\$ 0.28
851	Convenience Market (Open 24 Hours)	0.001800	per square foot	\$ 0.4237	\$ 0.0127	\$ 0.44
853	Convenience Market w/Gasoline Pumps	0.001800	per square foot	\$ 0.4237	\$ 0.0127	\$ 0.44
854	Discount Supermarket	0.002251	per square foot	\$ 0.5300	\$ 0.0159	\$ 0.55
860	Wholesale Market	0.000820	per square foot	\$ 0.1930	\$ 0.0058	\$ 0.20
857	Discount Club	0.001298	per square foot	\$ 0.3055	\$ 0.0092	\$ 0.31
862	Home Improvement Superstore	0.000960	per square foot	\$ 0.2260	\$ 0.0068	\$ 0.23
863	Electronics Superstore	0.000960	per square foot	\$ 0.2260	\$ 0.0068	\$ 0.23
876	Apparel Store	0.001670	per square foot	\$ 0.3931	\$ 0.0118	\$ 0.40
875	Department Store	0.001980	per square foot	\$ 0.4661	\$ 0.0140	\$ 0.48
880	Pharmacy/Drugstore	0.001670	per square foot	\$ 0.3931	\$ 0.0118	\$ 0.40
890	Furniture Store	0.000415	per square foot	\$ 0.0977	\$ 0.0029	\$ 0.10
Services (900-999)						
912	Drive-in Bank	0.004788	per square foot	\$ 1.1272	\$ 0.0338	\$ 1.16
931	Quality Restaurant	0.007460	per square foot	\$ 1.7562	\$ 0.0527	\$ 1.81
932	High-Turnover (Sit-Down) Restauant	0.007460	per square foot	\$ 1.7562	\$ 0.0527	\$ 1.81
934	Fast-Food Restaurant	0.010900	per square foot	\$ 2.5660	\$ 0.0770	\$ 2.64
941	Quick Lubrication Vehicle Shop	2.100000	per service bay	\$ 494.3685	\$ 14.8311	\$ 509.20
944	Gasoline/Service Station	0.160000	per pump	\$ 37.6662	\$ 1.1300	\$ 38.80
945	Gasoline Station w/Convenience Market	0.000216	per pump	\$ 0.0508	\$ 0.0015	\$ 0.05
947	Self-Service Car Wash	0.200000	per stall	\$ 47.0827	\$ 1.4125	\$ 48.50

Notes: ITE Code means the land use code assigned in the *Trip Generation* manual, by the Institute of Transportation Engineers, 9th Edition.

n/a - not applicable. Fee taken from the *Calculation of Housing Unit Fee* table.

The figures under the 'total impact fee' column are transferred to the Fire Protection column of the Maximum Impact Fee Schedule - Table 2, that begins on page 11 of this report.

Law Enforcement

■ Introduction

Flemington provides for law enforcement throughout the city through the employment of a patrol officer that is provided through a contract with the Liberty County Sheriff’s Department. The City provides the officer with a vehicle and a uniform with a Flemington patch.

■ Service Area

The city is considered a single service area for the provision of primary law enforcement services because all residents and employees in the city have equal access to the benefits of the program.

■ Level of Service

Table 29 presents two calculations of the Level of Service (LOS), one based on the current number of officers employed by the City (1) and a second LOS based on the number of patrol officers employed by the City of Hinesville for comparison. Day-night population is used as a measure in that law enforcement services are provided to both residences and businesses in the service area.

Table 29: Current Level of Service Calculations

Facility	Service Population	Level of Service
Existing Flemington Patrol Officers	2018 Day-Night Population	Flemington Officers per 2018 Day-Night Population
1	1,316	0.000760
Existing Hinesville Patrol Officers*	2018 Day-Night Population	Hinesville Officers per 2018 Day-Night Population
68	39,028	0.001742

* Patrol Division only. Excludes all other Police Department employees.

The first LOS calculation on Table 29 is based on the current officer and the current day-night population in the city. The second LOS reflects the number of patrol officers in Hinesville and Hinesville’s current day-night population. Note that only the officers in Hinesville’s patrol division are considered—no administrators, detectives or other Police Department employees are included.

Flemington does not provide a ‘police headquarters’ or any other space devoted exclusively to law enforcement activities.

■ Forecasts for Service Area

Future Demand

Applying the LOS based on Flemington’s current officer serving the city’s current day-night population, future growth and development would require an additional 3 officers by 2040. However, as the city grows in population, number of businesses and complexity, it may be more appropriate to apply the Hinesville LOS to Flemington’s future increase in day-night population. Under that scenario, an additional 8 officers would be justified, for a total of 9 covering all three shifts.

Table 30: Future Demand Calculation

Level of Service	Future Population	New Growth Demand
Flemington Officers per 2018 Day-Night Population	Day-Night Population Increase (2018-40)	Total New Officers for New Growth
0.000760	4,432	3.00
Hinesville Officers per 2018 Day-Night Population	Day-Night Population Increase (2018-40)	Total New Officers for New Growth
0.001742	4,432	7.72
Existing Flemington Patrol Officers	Future Flemington Patrol Officers	Percent New Officers
1	9	88.89%

Whether the City has 4 or 9 officers under contract, their salaries, vehicles, and uniforms would not be impact fee eligible. Personnel costs and equipment having a life of less than 10 years is disallowed under Georgia’s impact fee law. However, a building or floor area in a building dedicated to law enforcement activities would be eligible.

Future Cost

The future cost to provide the improvement needed to serve new growth to 2040 is shown in Table 31, which also indicates the year in which the system improvement project is anticipated. The project envisions a basic two-room space with a 12 x 20 square foot private office and a 20 x 20 square foot entry, assembly and storage space, for a total of 640 square feet. This space would provide adequate working area for future officers whether 4 or 9 in number working three full-time shifts.

Table 31: Future System Improvement Costs

Year	Facility	Costs in 2018 Dollars				Net Present Value
		Square Feet	Total Cost*	% Impact Fee Eligible	Total Impact Fee Eligible	
2017						
2018						
2019						
2020						
2021						
2022						
2023						
2024						
2025						
2026						
2027						
2028						
2029	Patrol Headquarters	640	\$263,750.40	88.89%	\$ 234,444.80	\$ 272,465.96
2030						
2031						
2032						
2033						
2034						
2035						
2036						
2037						
2038						
2039						
2040						
		640	\$263,750.40		\$ 234,444.80	\$ 272,465.96

* Based on per square foot cost of new fire station.

The estimated improvement cost (in 2018 dollars) is based on a construction cost averaging \$412.11 per square foot, which is all inclusive of a complete facility from site work to furnishings. This could be a stand-alone building, an extension to City Hall, or a part of a fire station.

The percentage that would be impact fee eligible is based on the 9-member alternate force reflecting the Hinesville LOS—the eight additional officers would then reflect 88.89% of the total 2040 force. This percentage is applied to the cost of the new space on Table 31 to determine the amount that could be collected in an impact fee program. In turn, the amount that is impact fee eligible (in 2018 dollars) is converted to Net Present Value in the last column.

The Net Present Value of the cost estimate for the space is calculated by increasing the current (2018) estimated construction cost using the Engineering News Record’s 10-year average building cost inflation (BCI) rate, and then discounting this future amount back to 2018 dollars using the Net Discount Rate. (The approach to calculating NPV is explained in detail in the Cost Adjustments chapter of this report.)

■ Impact Cost Calculation

The City will recoup the cost of preparing the Capital Improvements Element through impact fee collections in addition to the system improvement costs for the law enforcement office space. The total cost to prepare the CIE (\$35,450) has been divided equally among the three public facility categories being considered (fire protection, law enforcement, and road improvements) to produce an amount that is applied to each public facility category’s funding responsibility ($\$35,450 \div 3 = \$11,816.67$). The cost of the CIE preparation is wholly applicable to new growth since the demand for future services—the reason for the CIE preparation—is attributable to that same new growth. The cost of the CIE preparation is added to the total eligible project cost in the first part of Table 32.

Table 32: Net Cost to Serve New Growth

Description	Total
Eligible Cost of Police Projects	\$ 272,465.96
plus CIE Preparation	\$ 11,816.67
= Total Net Eligible Police Project Costs	\$ 284,282.62
÷ Day-Night Population Increase	4,432
= Net Impact Cost per Person	\$ 64.14

Using the ‘total net eligible police project costs’ figure on Table 32, the impact cost per person is calculated, based on the increase in day-night population between 2018 and 2040.

Because new residential growth is assessed impact fees per housing unit rather than on a person by person basis, a final calculation, shown in Table 33 is made in order to fairly distribute the portion of project costs that are specifically attributable to such growth.

Table 33: Calculation of Housing Unit Fee

Factor	Data
Residential Population Increase (2018-2040)	4,153
÷ Day-Night Population Increase (2018-2040)	4,432
= Residential Increase as % of Total Increase	93.705%
Total Net Eligible Police Project Costs	\$ 284,282.62
× Residential % of Total Day-Night Increase =	\$ 266,386.67
÷ New Housing Units in City (2018-2040)	1,593
= Net Impact Cost per Housing Unit	\$ 167.22

Avg Sales Price = \$ 300,000.00
 Impact Fee = 0.056%

Since the average household size may well change over the coming 20 years, a constant fee based on the number of persons per dwelling unit would be both unfair and impractical. Instead, the portion of project costs that is attributable to new residential growth is calculated and assigned to the anticipated housing unit increase. As shown on Table 33 this is accomplished by first identifying the percentage of the total

city population increase that will be made up by new residents. This percentage is then applied to the ‘total net eligible police project costs’ figure to produce the amount attributable to new residential growth. Finally, the cost attributable to new residential growth is divided by the number of new housing units that future growth and development is projected to generate, to produce a per housing unit impact fee.

■ Impact Fee Schedule - Law Enforcement

The fee schedule that follows presents the **maximum impact fee** that could be charged in Flemington for the law enforcement public facility category, based on the calculations carried out in this chapter. Impact fees for law enforcement services are collected from residential and nonresidential development.

The ‘per person’ net fee is translated into a ‘per square foot’ fee based on the average number of employees per floor area reported by the Institute of Transportation Engineers in its *Trip Generation* manual, 9th Edition for each land use category. A 3% administration fee is added to the net fees (in accordance with state law) to produce the total maximum impact fee for each land use category.

The figures under the ‘total impact fee’ column are transferred to the Law Enforcement column of each Maximum Impact Fee Schedule -Table 1 and Table 2, that begin on page 9 of this report.

Table 34: Maximum Impact Fee Schedule - Law Enforcement

ITE Code	Land Use	Employees	Unit of Measure	Net Fee per Unit	Adminis-tration (3%)	Total Impact Fee
Net Fee per Day-Night Person (Employee):				\$ 64.1432		
Residential (200-299)						
210	Single-Family Detached Housing	n/a	per dwelling	\$ 167.22	\$ 5.02	\$ 172.24
220	Apartment	n/a	per dwelling	\$ 167.22	\$ 5.02	\$ 172.24
230	Residential Condominium/Townhouse	n/a	per dwelling	\$ 167.22	\$ 5.02	\$ 172.24
Port and Terminal (000-099)						
030	Intermodal Truck Terminal	0.001415	per square foot	\$ 0.0908	\$ 0.0027	\$ 0.0935
Industrial/Agricultural (100-199)						
110	General Light Industrial	0.002308	per square foot	\$ 0.1480	\$ 0.0044	\$ 0.1524
120	General Heavy Industrial	0.001829	per square foot	\$ 0.1173	\$ 0.0035	\$ 0.1208
140	Manufacturing	0.001793	per square foot	\$ 0.1150	\$ 0.0035	\$ 0.1185
150	Warehousing	0.000915	per square foot	\$ 0.0587	\$ 0.0018	\$ 0.0605
151	Mini-Warehouse	0.000077	per square foot	\$ 0.0049	\$ 0.0001	\$ 0.0050
152	High-Cube Warehouse	0.000076	per square foot	\$ 0.0049	\$ 0.0001	\$ 0.0050
Lodging (300-399)						
310	Hotel	0.569735	per room	\$ 36.5446	\$ 1.0963	\$ 37.6409
311	All Suites Hotel	0.500000	per room	\$ 32.0716	\$ 0.9621	\$ 33.0337
320	Motel	0.439500	per room	\$ 28.1910	\$ 0.8457	\$ 29.0367
Recreational (400-499)						
430	Golf Course	0.245614	per acre	\$ 15.7545	\$ 0.4726	\$ 16.2271
437	Bowling Alley	0.001000	per square foot	\$ 0.0641	\$ 0.0019	\$ 0.0660
443	Movie Theater	0.001470	per square foot	\$ 0.0943	\$ 0.0028	\$ 0.0971
460	Arena	3.333000	per acre	\$ 213.7893	\$ 6.4137	\$ 220.2030
480	Amusement Park	9.094838	per acre	\$ 583.3719	\$ 17.5012	\$ 600.8731
490	Tennis Courts	0.243888	per acre	\$ 15.6437	\$ 0.4693	\$ 16.1130
491	Racquet/Tennis Club	0.000307	per square foot	\$ 0.0197	\$ 0.0006	\$ 0.0203
492	Health/Fitness Center	0.000705	per square foot	\$ 0.0452	\$ 0.0014	\$ 0.0466
495	Recreational Community Center	0.001241	per square foot	\$ 0.0796	\$ 0.0024	\$ 0.0820
Institutional (500-599)						
520	Private Elementary School	0.000982	per square foot	\$ 0.0630	\$ 0.0019	\$ 0.0649
530	Private High School	0.000653	per square foot	\$ 0.0419	\$ 0.0013	\$ 0.0432
560	Church/Place of Worship	0.000347	per square foot	\$ 0.0223	\$ 0.0007	\$ 0.0230
565	Day Care Center	0.002818	per square foot	\$ 0.1807	\$ 0.0054	\$ 0.1861
566	Cemetery	0.081425	per acre	\$ 5.2229	\$ 0.1567	\$ 5.3796
Medical (600-699)						
610	Hospital	0.002938	per square foot	\$ 0.1884	\$ 0.0057	\$ 0.1941
620	Nursing Home	0.002331	per square foot	\$ 0.1495	\$ 0.0045	\$ 0.1540
630	Clinic	0.003926	per square foot	\$ 0.2518	\$ 0.0076	\$ 0.2594
Office (700-799)						
710	General Office Building	0.003322	per square foot	\$ 0.2131	\$ 0.0064	\$ 0.2195
714	Corporate Headquarters Building	0.003425	per square foot	\$ 0.2197	\$ 0.0066	\$ 0.2263
715	Single-Tenant Office Building	0.003149	per square foot	\$ 0.2020	\$ 0.0061	\$ 0.2081
720	Medical-Dental Office Building	0.004055	per square foot	\$ 0.2601	\$ 0.0078	\$ 0.2679
760	Research and Development Center	0.002928	per square foot	\$ 0.1878	\$ 0.0056	\$ 0.1934
770	Business Park	0.003079	per square foot	\$ 0.1975	\$ 0.0059	\$ 0.2034

Maximum Impact Fee Schedule - Law Enforcement (continued)

ITE Code	Land Use	Employees	Unit of Measure	Net Fee per Unit	Adminis-tration (3%)	Total Impact Fee
Retail (800-899)						
812	Building Materials and Lumber Store	0.001406	per square foot	\$ 0.0902	\$ 0.0027	\$ 0.0929
813	Free-Standing Discount Superstore	0.000960	per square foot	\$ 0.0616	\$ 0.0018	\$ 0.0634
814	Variety Store	0.000960	per square foot	\$ 0.0616	\$ 0.0018	\$ 0.0634
815	Free-Standing Discount Store	0.001985	per square foot	\$ 0.1273	\$ 0.0038	\$ 0.1311
816	Hardware/Paint Store	0.000964	per square foot	\$ 0.0618	\$ 0.0019	\$ 0.0637
817	Nursery (Garden Center)	0.003120	per square foot	\$ 0.2001	\$ 0.0060	\$ 0.2061
818	Nursery (Wholesale)	0.001667	per square foot	\$ 0.1069	\$ 0.0032	\$ 0.1101
820	Shopping Center	0.001670	per square foot	\$ 0.1071	\$ 0.0032	\$ 0.1103
823	Factory Outlet Center	0.001670	per square foot	\$ 0.1071	\$ 0.0032	\$ 0.1103
826	Specialty Retail Center	0.001982	per square foot	\$ 0.1271	\$ 0.0038	\$ 0.1309
841	Automobile Sales	0.001528	per square foot	\$ 0.0980	\$ 0.0029	\$ 0.1009
843	Auto Parts Store	0.000960	per square foot	\$ 0.0616	\$ 0.0018	\$ 0.0634
848	Tire Store	0.001280	per square foot	\$ 0.0821	\$ 0.0025	\$ 0.0846
849	Tire Superstore	0.001280	per square foot	\$ 0.0821	\$ 0.0025	\$ 0.0846
850	Supermarket	0.001164	per square foot	\$ 0.0747	\$ 0.0022	\$ 0.0769
851	Convenience Market (Open 24 Hours)	0.001800	per square foot	\$ 0.1155	\$ 0.0035	\$ 0.1190
853	Convenience Market w/Gasoline Pumps	0.001800	per square foot	\$ 0.1155	\$ 0.0035	\$ 0.1190
854	Discount Supermarket	0.002251	per square foot	\$ 0.1444	\$ 0.0043	\$ 0.1487
860	Wholesale Market	0.000820	per square foot	\$ 0.0526	\$ 0.0016	\$ 0.0542
857	Discount Club	0.001298	per square foot	\$ 0.0832	\$ 0.0025	\$ 0.0857
862	Home Improvement Superstore	0.000960	per square foot	\$ 0.0616	\$ 0.0018	\$ 0.0634
863	Electronics Superstore	0.000960	per square foot	\$ 0.0616	\$ 0.0018	\$ 0.0634
876	Apparel Store	0.001670	per square foot	\$ 0.1071	\$ 0.0032	\$ 0.1103
875	Department Store	0.001980	per square foot	\$ 0.1270	\$ 0.0038	\$ 0.1308
880	Pharmacy/Drugstore	0.001670	per square foot	\$ 0.1071	\$ 0.0032	\$ 0.1103
890	Furniture Store	0.000415	per square foot	\$ 0.0266	\$ 0.0008	\$ 0.0274
Services (900-999)						
912	Drive-in Bank	0.004788	per square foot	\$ 0.3071	\$ 0.0092	\$ 0.3163
931	Quality Restaurant	0.007460	per square foot	\$ 0.4785	\$ 0.0144	\$ 0.4929
932	High-Turnover (Sit-Down) Restauant	0.007460	per square foot	\$ 0.4785	\$ 0.0144	\$ 0.4929
934	Fast-Food Restaurant	0.010900	per square foot	\$ 0.6992	\$ 0.0210	\$ 0.7202
941	Quick Lubrication Vehicle Shop	2.100000	per service bay	\$ 134.7007	\$ 4.0410	\$ 138.7417
944	Gasoline/Service Station	0.160000	per pump	\$ 10.2629	\$ 0.3079	\$ 10.5708
945	Gasoline Station w/Convenience Market	0.000216	per pump	\$ 0.0139	\$ 0.0004	\$ 0.0143
947	Self-Service Car Wash	0.200000	per stall	\$ 12.8286	\$ 0.3849	\$ 13.2135

Notes: ITE Code means the land use code assigned in the *Trip Generation* manual, by the Institute of Transportation Engineers, 9th Edition.

n/a - not applicable. Fee taken from the *Calculation of Housing Unit Fee* table.

Road Improvements

■ Introduction

Flemington contains a number of local streets and collectors that directly serve abutting properties, subdivisions and other land use projects, and establish a network on to which most future developments will connect. Other than US 84, which traverses the city from its southern city limits to the City of Hinesville on the west, all of the other streets are the responsibility of the City of Flemington.

As discussed below, the City has no road improvements currently scheduled for improvement that would increase traffic capacity and involve Flemington funding, and thus would be impact fee eligible. However, considering the enormous amount of traffic projected to be generated by new growth and development by 2040, the City intends to conduct a study of the traffic impact on its roads to determine what improvements would be needed to accommodate future traffic demands.

This chapter, therefore, establishes Level of Service standards that would guide such a traffic study and plan, and would be applied to identified future improvement projects.

■ Service Area

The service area for road projects is defined as the entire city, in that road projects are recognized as providing primary access to all properties within the city as part of the citywide network of streets and thoroughfares. All new development within the city will be served by this citywide network, either directly or as its traffic percolates through the city, such that improvements to any part of this network to relieve congestion or to otherwise improve capacity will positively affect capacity and reduce congestion throughout the city. Streets constructed within any part of a new development in the city are, of course, ‘project improvements’ and are the total responsibility of the developer.

■ Level of Service Standards

Two types of Level of Service standards are established for road improvements: one for the design of roadways at a designated operational level, and one for the actual accommodation of traffic to be generated by new growth and development. The latter standard allows the cost of improvements to the road system to be equitably allocated between improvements that accrue to existing traffic today and improvements that will accommodate traffic generated by future growth and development.

Operational Design Standards

Level of Service (LOS) for roadways and intersections is measured on a ‘letter grade’ system that rates a road within a range of service from A to F. Level of Service A is the best rating, representing roads operating with unencumbered travel; Level of Service F is the worst rating, representing operational conditions of heavy congestion and long delays. This system is a means of relating the connection between speed and travel time, freedom to maneuver, traffic interruption, comfort, convenience and safety to the capacity that exists in a roadway. This refers to both a quantitative measure expressed as a service flow rate and an assigned qualitative measure describing parameters. *The Highway Capacity Manual, Special Report 209*, Transportation Research Board (1985), defines operational design Level of Service A through F as having the following characteristics:

1. LOS A: free flow, excellent level of freedom and comfort;
2. LOS B: stable flow, decline in freedom to maneuver, desired speed is relatively unaffected;
3. LOS C: stable flow, but marks the beginning of users becoming affected by others, selection of speed and maneuvering becomes difficult, comfort declines at this level;
4. LOS D: high density, but stable flow, speed and freedom to maneuver are severely restricted, poor level of comfort, small increases in traffic flow will cause operational problems;
5. LOS E: at or near capacity level, speeds reduced to low but uniform level, maneuvering is extremely difficult, comfort level poor, frustration high, level unstable; and
6. LOS F: forced/breakdown of flow. The amount of traffic approaching a point exceeds the amount that can transverse the point. Queues form, stop & go. Arrival flow exceeds discharge flow.

The traffic volume that produces different Level of Service grades differs according to road type, size, signalization, topography, condition and access.

The City has set its Level of Service for road improvements at LOS ‘D’, a level to which it will strive ultimately. However, interim road improvement projects that do not result in a LOS of ‘D’ will still provide traffic relief to current and future traffic alike and are thus eligible for impact fee funding.

Accommodating Future Traffic

Regardless of the design of roads in the system, the system must address the future traffic demands that will be created by new growth and development.

All road improvement projects benefit existing and future traffic proportionally to the extent that relief from over-capacity conditions eases traffic problems for everyone. For example, since new growth by 2040 will represent a certain portion of all 2040 traffic, new growth would be responsible for that portion’s cost of all road improvements in the system that create new

capacity. This approach recognizes that some improvements to the road system do not create new capacity—such as resurfacing, road maintenance, bridge replacements with the same number of lanes, etc., while some road projects that do create new capacity may also involve resurfacing of the existing lanes or other non-capacity improvements.

■ Forecasts for Service Area

For the record, there are a number of road improvement projects in and serving Flemington included in the Hinesville Area Metropolitan Transportation Plan, prepared by the Liberty Consolidated Planning Commission for the Hinesville Area MPO, and in the City’s own current Capital Improvements List; these are shown on Table 35.

Table 35: Current Road Projects and Estimated Costs

Project Description	From	To	Description	Total Cost	Cost to City
Hinesville Area Metropolitan Transportation Plan					
Flemington Curve	Old Sunburry Road	Old Hines Road	Safety, Access Control - 4 lan	\$ 2,920,000	\$ -
Flemington Loop	US 84	Fort Stewart Rd 47	New Construction - 2 lanes	\$ 13,170,000	\$ -
WAAF Access Road	Old Hines/Flem Loop	Midcoast Reg. Airport	New Construction - 2 lanes	\$ 17,290,000	\$ -
Ft Stewart Rd 47	Flemington Loop	SR 144	4 lanes	\$ 19,080,000	\$ -
Oglethorpe Hwy/US 84	Brights Lake Road	John Martin	Safety, Access Control - 4 lan	\$ 1,320,000	\$ -
Oglethorpe Hwy/US 84	John Martin Road	Spires Drive	Safety, Access Control - 4 lan	\$ 1,500,000	\$ -
Oglethorpe Hwy/US 84	Spires Drive	Old Hines Road	Safety, Access Control - 4 lan	\$ 1,920,000	\$ -
Oglethorpe Hwy/US 84	Old Hines Road	General Stewart Way	Safety, Access Control - 4 lan	\$ 510,000	\$ -
Flemington Capital Improvements List					
Wallace Martin Road	SR 38/US 84	Josesph Martin Rd	Overlay 4,425 LF w/12.5 mm asphalt	\$ 191,331	\$ 191,331
Joseph Martin Road	Old Sunburry Rd	Tanglewood Dr	Overlay 2,825 LF w/9.5 mm asphalt	\$ 107,993	\$ 107,993
Patriots Trail	SR 38/US 84	Mary Lou Fraser Rd	Mill & Inlay & Underdrain 3,000 LF of Roadway	\$ 258,940	\$ 258,940
Kallquist Drive	Old Savannah Rd	Dead End	Pave existing road w/1.5" asphalt & ditches	\$ 243,089	\$ 243,089
Old Sunburry Road	SR 38/US 84	FS Boundary	Install 5' wide concrete sidewalk	\$ 582,435	\$ 582,435
Coates Road	Wallace Martin Rd	Elem School	Overlay 800 LF w/9.5 mm asphalt	\$ 31,611	\$ 31,611
Old Hines Road	O.C. Martin Jr Dr	Loop Road	Pave Old Hines Road from intersection of O.C. Martin Jr. Drive to proposed Flemington	\$ 243,089	\$ 243,089
John Mann Road	SR 38/US 84	Dead End	Pave existing road w/1.5" asphalt & ditches	\$ 248,065	\$ 248,065
Old Sunburry Road	SR 38/US 84	FS Boundary	Overlay 6,050 LF w/12.5 mm asphalt	\$ 256,739	\$ 256,739
Joseph Martin Road	Old Sunburry	Rd Tanglewood Dr	Install 5' wide concrete sidewalk	\$ 131,527	\$ 131,527
City Hall Parking Lot	N/A	N/A	Add 12 parking spaces	\$ 42,438	\$ 42,438
Shawn Court	E. Daryl Dr	Dead End	Mill & Inlay 1.5"	\$ 8,629	\$ 8,629
				\$ 60,055,886	\$ 2,345,886

Note: All cost figures rounded to the nearest whole dollar.

None of the projects, however, as needed and beneficial as they will be, involve local funding by Flemington or create additional capacity. As such, they are not eligible for impact fee collections by the City.

It is noted that the cost-impact of non-Flemington generated traffic on the roads traversing the city (cross commutes) is off-set by state and federal assistance to some extent, at least with regard to US 84. Old Sunbury Road, however, which connects US 84 to the southern entrance to Ft. Stewart, is a city street but carries a large number of cross-commutes that needs to be quantified for State assistance compared to local city traffic on the road.

■ Eligible Costs

As discussed in the Forecasts chapter of this report, over the coming 22 years Flemington is expected to increase its number of housing units from almost 300 today to almost 2,000 by 2040 – over 240 of which are currently under construction and a potential 361 more are already zoned. Overall, the day-night population is projected to increase from 1,316 to 4,432, increasing primary trips on the city’s roads from 9,488 to 24,765 on an average weekday (an increase of 15,277 primary trips).

Thus, new residential and nonresidential growth and development will represent 61.67% of the locally generated traffic on Flemington’s road network in 2040. This percentage represents new growth’s portion of system improvements that create the capacity needed to serve it, while the remaining 38.33% represents that portion of those projects that do not create new capacity, such as resurfacing, road maintenance, lane replacements during bridge widenings, and so forth.

Considering the unprecedented growth that the City potentially faces, a Traffic Improvements Study and Plan is proposed that will address all of the road system improvements needed to fully serve new growth and development in 2040. The study will determine the projected traffic on each of the roads and intersections for which the City is responsible, and the type and cost of improvements to meet the City’s adopted LOS. This will establish specific improvements to be undertaken, and the portion that will be needed to handle new growth and development.

Table 36: Eligible Cost Calculations

Project	Total Cost	% Impact Fee Eligible	Net Present Value
City Traffic Improvements Study & Plan	\$ 20,000.00	61.7%	\$ 12,337.52

The cost of the study is eligible for impact fee funding at the same percentage that future traffic represents compared to total local traffic since the study will focus on accommodating all future traffic, both existing now and projected from new growth and development in the future.

Net Impact Cost Calculation

The net impact cost per primary trip end is calculated in Table 37.

Table 37: Net Cost to Serve New Growth

Description	Total
Eligible Cost of Road Projects	\$ 12,337.52
plus CIE Preparation	\$ 11,816.67
= Net Eligible Road Project Cost	\$ 24,154.19
÷ New Growth Trip Ends*	2,778
= Net Impact Cost per Trip End	\$ 8.69
* Primary trip ends attributed to new growth over the coming four years.	

The eligible cost of the project, taken from Table 36, is increased by this category’s share of the cost of preparation of the Capital Improvements Element, producing a ‘net eligible road project cost’ amount. This figure, divided by the future increase in primary trip ends generated by new growth and development, results in a ‘net impact cost per trip end’, which will be used to calculate impact fees for all residential and nonresidential land uses.

■ Impact Fee Schedule - Road Improvements

The maximum net impact fees that could be charged in Flemington for the Road Improvements category, based on the calculations carried out in this chapter, are shown on Table 37 as the ‘net impact cost per trip end’. This figure is transferred to Table 38: Maximum Impact Fee Schedule - Road Improvements. A 3% administration fee is added to the net fees (in accordance with state law) to produce the total maximum impact fee for each land use category.

Note that total trip ends for each use, based on the *Trip Generation* manual published by the Institute of Transportation Engineers (ITE), is reduced by a percentage representing pass-by and diverted trips where applicable (also derived from ITE).

The figures under the ‘total impact fee’ column are transferred to the Road Projects column of each Maximum Impact Fee Schedule - Table 1 and Table 2, that begin on page 9 of this report.

Table 38: Maximum Impact Fee Schedule - Road Improvements

ITE Code	Land Use	Trip Ends*	% New Trips	Unit of Measure	Net Fee per Unit	Adminis-tration (3%)	Total Impact Fee
Net Cost per Trip End:					\$ 8.6948		
Residential (200-299)							
210	Single-Family Detached Housing	9.52	100%	per dwelling	\$ 82.7746	\$ 2.4832	\$ 85.26
220	Apartment	6.65	100%	per dwelling	\$ 57.8205	\$ 1.7346	\$ 59.56
230	Residential Condominium/Townhouse	5.81	100%	per dwelling	\$ 50.5169	\$ 1.5155	\$ 52.03
Port and Terminal (000-099)							
030	Intermodal Truck Terminal	9.89	92%	per square foot	\$ 0.0791	\$ 0.0024	\$ 0.08
Industrial/Agricultural (100-199)							
110	General Light Industrial	6.97	92%	per square foot	\$ 0.0558	\$ 0.0017	\$ 0.06
120	General Heavy Industrial	1.50	92%	per square foot	\$ 0.0120	\$ 0.0004	\$ 0.01
140	Manufacturing	3.82	92%	per square foot	\$ 0.0306	\$ 0.0009	\$ 0.03
150	Warehousing	3.56	92%	per square foot	\$ 0.0285	\$ 0.0009	\$ 0.03
151	Mini-Warehouse	2.50	92%	per square foot	\$ 0.0200	\$ 0.0006	\$ 0.02
152	High-Cube Warehouse	1.68	92%	per square foot	\$ 0.0134	\$ 0.0004	\$ 0.01
Lodging (300-399)							
310	Hotel or Conference Motel	8.17	100%	per room	\$ 71.0366	\$ 2.1311	\$ 73.17
311	All Suites Hotel	4.90	100%	per room	\$ 42.6046	\$ 1.2781	\$ 43.88
320	Motel	5.63	100%	per room	\$ 48.9518	\$ 1.4686	\$ 50.42
Recreational (400-499)							
430	Golf Course	5.04	85%	per acre	\$ 37.2486	\$ 1.1175	\$ 38.37
437	Bowling Alley	33.33	85%	per square foot	\$ 0.2463	\$ 0.0074	\$ 0.25
443	Movie Theater	78.06	85%	per square foot	\$ 0.5769	\$ 0.0173	\$ 0.59
460	Arena	33.33	85%	per acre	\$ 246.3284	\$ 7.3899	\$ 253.72
480	Amusement Park	75.76	85%	per acre	\$ 559.9111	\$ 16.7973	\$ 576.71
490	Tennis Courts	16.26	85%	per acre	\$ 120.1710	\$ 3.6051	\$ 123.78
491	Racquet/Tennis Club	14.03	85%	per square foot	\$ 0.1037	\$ 0.0031	\$ 0.11
492	Health/Fitness Center	32.93	85%	per square foot	\$ 0.2434	\$ 0.0073	\$ 0.25
495	Recreational Community Center	33.82	85%	per square foot	\$ 0.2499	\$ 0.0075	\$ 0.26
Institutional (500-599)							
520	Private Elementary School	15.43	80%	per square foot	\$ 0.1073	\$ 0.0032	\$ 0.11
530	Private High School	12.89	85%	per square foot	\$ 0.0953	\$ 0.0029	\$ 0.10
560	Church/Place of Worship	9.11	90%	per square foot	\$ 0.0713	\$ 0.0021	\$ 0.07
565	Day Care Center	79.26	10%	per square foot	\$ 0.0689	\$ 0.0021	\$ 0.07
566	Cemetery	4.73	90%	per acre	\$ 37.0138	\$ 1.1104	\$ 38.12
Medical (600-699)							
610	Hospital	13.22	77%	per square foot	\$ 0.0885	\$ 0.0027	\$ 0.09
620	Nursing Home	7.60	75%	per square foot	\$ 0.0496	\$ 0.0015	\$ 0.05
630	Clinic	31.45	77%	per square foot	\$ 0.2106	\$ 0.0063	\$ 0.22
Office (700-799)							
710	General Office Building	11.03	92%	per square foot	\$ 0.0882	\$ 0.0026	\$ 0.09
714	Corporate Headquarters Building	7.98	92%	per square foot	\$ 0.0638	\$ 0.0019	\$ 0.07
715	Single-Tenant Office Building	11.65	92%	per square foot	\$ 0.0932	\$ 0.0028	\$ 0.10
720	Medical-Dental Office Building	36.13	92%	per square foot	\$ 0.2890	\$ 0.0087	\$ 0.30
760	Research and Development Center	8.11	92%	per square foot	\$ 0.0649	\$ 0.0019	\$ 0.07
770	Business Park	12.44	92%	per square foot	\$ 0.0995	\$ 0.0030	\$ 0.10

Maximum Impact Fee Schedule - Road Improvements (continued)

ITE Code	Land Use	Trip Ends*	% New Trips	Unit of Measure	Net Fee per Unit	Adminis- tration (3%)	Total Impact Fee
Retail (800-899)							
812	Building Materials and Lumber Store	45.16	81%	per square foot	\$ 0.3181	\$ 0.0095	\$ 0.33
813	Free-Standing Discount Superstore	50.75	75%	per square foot	\$ 0.3309	\$ 0.0099	\$ 0.34
814	Variety Store	64.03	49%	per square foot	\$ 0.2728	\$ 0.0082	\$ 0.28
815	Free-Standing Discount Store	57.24	61%	per square foot	\$ 0.3036	\$ 0.0091	\$ 0.31
816	Hardware/Paint Store	51.29	40%	per square foot	\$ 0.1784	\$ 0.0054	\$ 0.18
817	Nursery (Garden Center)	68.10	81%	per square foot	\$ 0.4796	\$ 0.0144	\$ 0.49
818	Nursery (Wholesale)	39.00	81%	per square foot	\$ 0.2747	\$ 0.0082	\$ 0.28
820	Shopping Center	42.94	75%	per square foot	\$ 0.2800	\$ 0.0084	\$ 0.29
823	Factory Outlet Center	26.59	81%	per square foot	\$ 0.1873	\$ 0.0056	\$ 0.19
826	Specialty Retail Center	44.32	81%	per square foot	\$ 0.3121	\$ 0.0094	\$ 0.32
841	Automobile Sales	32.30	79%	per square foot	\$ 0.2219	\$ 0.0067	\$ 0.23
843	Auto Parts Store	61.91	44%	per square foot	\$ 0.2369	\$ 0.0071	\$ 0.24
848	Tire Store	24.87	67%	per square foot	\$ 0.1449	\$ 0.0043	\$ 0.15
849	Tire Superstore	20.36	83%	per square foot	\$ 0.1469	\$ 0.0044	\$ 0.15
850	Supermarket	102.24	43%	per square foot	\$ 0.3823	\$ 0.0115	\$ 0.39
851	Convenience Market (Open 24 Hours)	737.99	20%	per square foot	\$ 1.2833	\$ 0.0385	\$ 1.32
853	Convenience Market w/Gasoline Pumps	845.60	16%	per square foot	\$ 1.1764	\$ 0.0353	\$ 1.21
854	Discount Supermarket	90.86	52%	per square foot	\$ 0.4108	\$ 0.0123	\$ 0.42
860	Wholesale Market	6.73	61%	per square foot	\$ 0.0357	\$ 0.0011	\$ 0.04
857	Discount Club	41.80	61%	per square foot	\$ 0.2217	\$ 0.0067	\$ 0.23
862	Home Improvement Superstore	29.80	32%	per square foot	\$ 0.0829	\$ 0.0025	\$ 0.09
863	Electronics Superstore	45.04	27%	per square foot	\$ 0.1057	\$ 0.0032	\$ 0.11
876	Apparel Store	66.40	49%	per square foot	\$ 0.2829	\$ 0.0085	\$ 0.29
875	Department Store	22.88	49%	per square foot	\$ 0.0975	\$ 0.0029	\$ 0.10
880	Pharmacy/Drugstore	90.06	40%	per square foot	\$ 0.3132	\$ 0.0094	\$ 0.32
890	Furniture Store	5.06	20%	per square foot	\$ 0.0088	\$ 0.0003	\$ 0.01
Services (900-999)							
912	Drive-in Bank	148.15	22%	per square foot	\$ 0.2834	\$ 0.0085	\$ 0.29
931	Quality Restaurant	89.95	38%	per square foot	\$ 0.2972	\$ 0.0089	\$ 0.31
932	High-Turnover (Sit-Down) Restaurant	127.15	38%	per square foot	\$ 0.4201	\$ 0.0126	\$ 0.43
934	Fast-Food Restaurant	496.12	27%	per square foot	\$ 1.1647	\$ 0.0349	\$ 1.20
941	Quick Lubrication Vehicle Shop	40.00	83%	per service bay	\$ 288.6677	\$ 8.6600	\$ 297.33
944	Gasoline/Service Station	168.56	20%	per pump	\$ 293.1195	\$ 8.7936	\$ 301.91
945	Gasoline Station w/Convenience Market	162.78	14%	per pump	\$ 198.1478	\$ 5.9444	\$ 204.09
947	Self-Service Car Wash	108.00	40%	per stall	\$ 375.6159	\$ 11.2685	\$ 386.88

*Trip Ends are total trip ends per 1,000 square feet of floor area or other unit of measure as noted, per ITE *Trip Generation* manual.

Notes: ITE Code means the land use code assigned in the *Trip Generation* manual published by the Institute of Transportation Engineers, 9

n/a - not applicable. Fee taken from the Calculation of Housing Unit Fee table.

"Square foot" means square foot of gross building floor area.

Glossary

The following terms are used in the Impact Fee Methodology Report. Where possible, the definitions are taken directly from the Development Impact Fee Act.

Capital improvement: an improvement with a useful life of ten years or more, by new construction or other action, which increases the service capacity of a public facility.

Capital improvements element: a component of a comprehensive plan adopted pursuant to Chapter 70 of the Development Impact Fee Act which sets out projected needs for system improvements during a planning horizon established in the comprehensive plan, a schedule of capital improvements that will meet the anticipated need for system improvements, and a description of anticipated funding sources for each required improvement.

Development: any construction or expansion of a building, structure, or use, any change in use of a building or structure, or any change in the use of land, any of which creates additional demand and need for public facilities.

Development impact fee: a payment of money imposed upon development as a condition of development approval to pay for a proportionate share of the cost of system improvements needed to serve new growth and development.

Eligible facilities: capital improvements in one of the following categories:

(A) Water supply production, treatment, and distribution facilities;

(B) Waste-water collection, treatment, and disposal facilities;

(C) Roads, streets, and bridges, including rights of way, traffic signals, landscaping, and any local components of state or federal highways;

(D) Storm-water collection, retention, detention, treatment, and disposal facilities, flood control facilities, and bank and shore protection and enhancement improvements;

(E) Parks, open space, and recreation areas and related facilities;

(F) Public safety facilities, including police, fire, emergency medical, and rescue facilities; and

(G) Libraries and related facilities.

Impact Cost: the proportionate share of capital improvements costs to provide service to new growth, less any applicable credits.

Impact Fee: the impact cost plus surcharges for program administration and recoupment of the cost to prepare the Capital Improvements Element.

Level of Service: a measure of the relationship between service capacity and service demand for public facilities in terms of demand to capacity ratios or the comfort and convenience of use or service of public facilities or both.

Project improvements: site improvements and facilities that are planned and designed to provide service for a particular development project and that are necessary for the use and convenience of the occupants or users of the project and are not system improvements. The character of the improvement shall control a determination of whether an improvement is a project improvement or system improvement and the physical location of the improvement on site or off site shall not be considered determinative of whether an improvement is a project improvement or a system improvement. If an improvement or facility provides or will provide more than incidental service or facilities capacity to persons other than users or occupants of a particular project, the improvement or facility is a system improvement and shall not be considered a project improvement. No improvement or facility included in a plan for public facilities approved by the governing body of the municipality or county shall be considered a project improvement.

Proportionate share: means that portion of the cost of system improvements which is reasonably related to the service demands and needs of the project.

Rational Nexus: the clear and fair relationship between fees charged and services provided.

Service area: a geographic area defined by a municipality, county, or intergovernmental agreement in which a defined set of public facilities provide service to development within the area. Service areas shall be designated on the basis of sound planning or engineering principles or both.

System improvement costs: costs incurred to provide additional public facilities capacity needed to serve new growth and development for planning, design and engineering related thereto, including the cost of constructing or reconstructing system improvements or facility expansions, including but not limited to the construction contract price, surveying and engineering fees, related land acquisition costs (including land purchases, court awards and costs, attorneys' fees, and expert witness fees), and expenses incurred for qualified staff or any qualified engineer, planner, architect, landscape architect, or financial consultant for preparing or updating the capital improvement element, and administrative costs, provided that such administrative costs shall not exceed 3 percent of the total amount of the costs. Projected interest charges and other finance costs may be included if the impact fees are to be used for the payment of principal and interest on bonds, notes, or other financial obligations issued by or on behalf of the municipality or county to finance the capital improvements element but such costs do not include routine and periodic maintenance expenditures, personnel training, and other operating costs.

System improvements: capital improvements that are public facilities and are designed to provide service to the community at large, in contrast to 'project improvements'.