



Harris County Georgia

Impact Fee Program

Including the following
public facility categories:

Parks & Recreation
Sheriff's Office & Jail
Fire Protection
Emergency Medical Services
Emergency 911

Methodology Report

FINAL

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Introduction

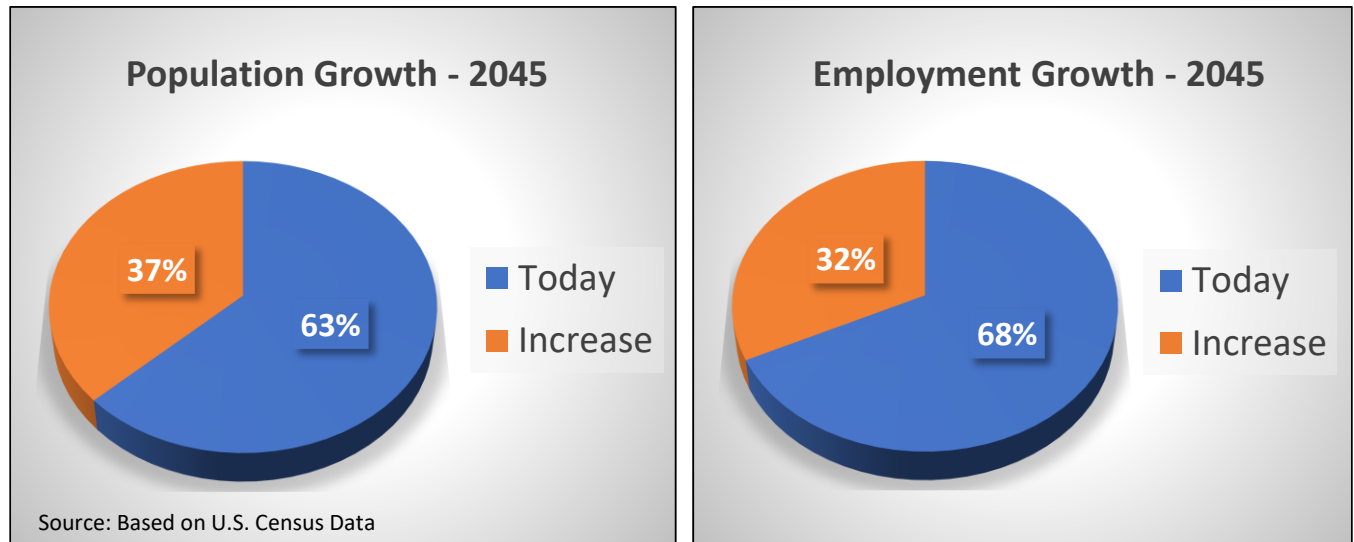
■ Looking Ahead: An Overview¹

Forecasts indicate major growth ahead for Harris County as people continue to move into the county and attract increases in jobs and services.

Over the coming 24 years, Harris County is projected to continue its previous rate of population growth, fully recovering from the lingering effects of the Great Recession. Overall, the county is expected to add almost 21,500 people to its current population of 36,619, generating a net of almost 9,000 additional housing units.

Employment in the county is also projected to continue at a steady pace. The number of 'value-added' employees² are projected to increase by 5,264, which equals over 47% of all jobs in the county today.

Over the next 24 years to 2045, it is expected that 37% of the people that will be living in Harris County then are not here today. This 37% of the 2045 total population equates to an almost 59% increase over the population living in the county now, accompanied by a similar increase in housing units. Employment will also increase, though not to the extent of population growth. By 2045, the total number of 'value added' jobs in the county will be home to 32% new businesses, which reflects a 47% increase over the number today.



Population and Housing Outlook

These future increases in population and housing are not as unprecedented as it may seem. Looking back over the past 19 years, since 2000 the county's population grew from over 23,900 to 35,240—an overall increase of more than 47%. During the decade of 2000-2010, the county's population

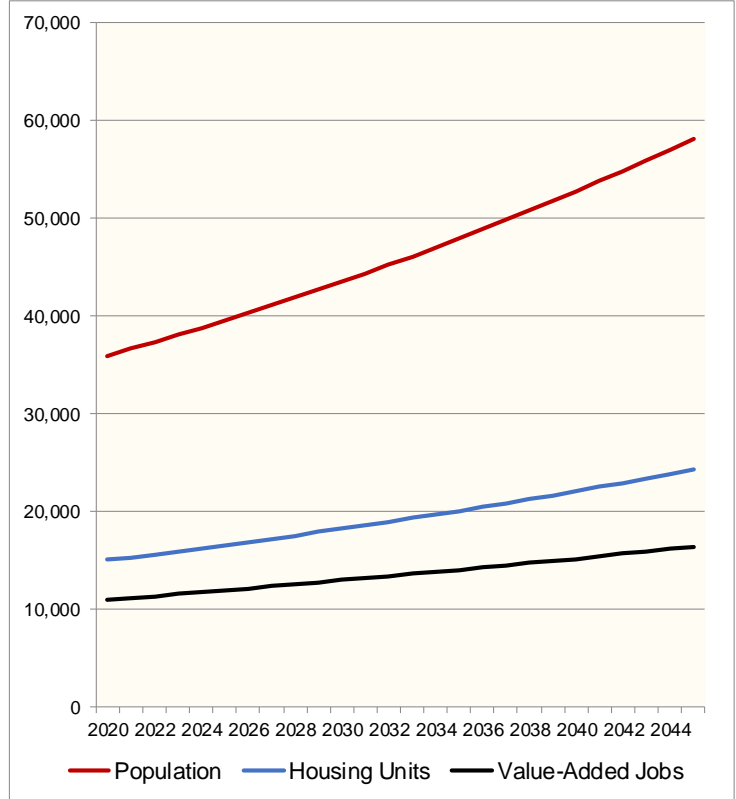
¹ Population, housing, and employment forecasts are presented in greater detail in the Forecasts chapter.

² 'Value-added jobs' are those working in businesses that would be subject to impact fees and thus exclude the types of jobs that would not be associated with an impact fee (such as farm workers, itinerant construction workers and governmental employees).

increased by 7,582, which dropped to a total of 3,087 new residents during the nine years since 2010. Full recovery from the Great Recession is anticipated, however, with the return to the county’s historic population growth over the coming 24 years.

Forecasts of Future Growth

| | Population | Housing Units | Value-Added Jobs |
|------|------------|---------------|------------------|
| 2020 | 35,921 | 15,027 | 10,901 |
| 2021 | 36,619 | 15,319 | 11,110 |
| 2022 | 37,330 | 15,617 | 11,312 |
| 2023 | 38,055 | 15,920 | 11,514 |
| 2024 | 38,795 | 16,230 | 11,716 |
| 2025 | 39,549 | 16,545 | 11,918 |
| 2026 | 40,317 | 16,866 | 12,124 |
| 2027 | 41,101 | 17,194 | 12,330 |
| 2028 | 41,899 | 17,528 | 12,535 |
| 2029 | 42,713 | 17,869 | 12,741 |
| 2030 | 43,543 | 18,216 | 12,947 |
| 2031 | 44,389 | 18,570 | 13,162 |
| 2032 | 45,252 | 18,931 | 13,377 |
| 2033 | 46,131 | 19,299 | 13,592 |
| 2034 | 47,027 | 19,673 | 13,807 |
| 2035 | 47,941 | 20,056 | 14,022 |
| 2036 | 48,873 | 20,446 | 14,250 |
| 2037 | 49,822 | 20,843 | 14,477 |
| 2038 | 50,790 | 21,248 | 14,705 |
| 2039 | 51,777 | 21,661 | 14,932 |
| 2040 | 52,783 | 22,081 | 15,160 |
| 2041 | 53,809 | 22,511 | 15,403 |
| 2042 | 54,854 | 22,948 | 15,646 |
| 2043 | 55,920 | 23,394 | 15,888 |
| 2044 | 57,007 | 23,848 | 16,131 |
| 2045 | 58,114 | 24,312 | 16,374 |



| | Population | Housing Units | Value-Added Jobs |
|--|------------|---------------|------------------|
|--|------------|---------------|------------------|

| | | | |
|----------|--------|--------|--------|
| 2021 | 36,619 | 15,319 | 11,110 |
| 2045 | 58,114 | 24,312 | 16,374 |
| Increase | 21,495 | 8,993 | 5,264 |
| Growth | 58.7% | 58.7% | 47.4% |

Note: Value-Added Jobs exclude outdoor (non-building based) farm, forestry, mining and construction workers, and government employees.

Source: Based on U.S. Census Data

Increased Job Opportunities

Not as robust as population growth, the nonresidential growth forecast indicates an increase in the number of private-sector jobs such that, by 2045, about 1 in 3 jobs (32%) will be new to the county. Compared to today’s ‘value-added’ employment of 11,110, new jobs will have increased by 5,264—a number equal to 47% of the number of today’s workers.

Numerically, the county is projected to add the largest number of new jobs in real estate (1,205 over 2021) followed by administrative positions (393), transportation and warehousing (294), finance & insurance (285), and manufacturing (247). Together, these five categories will account for over 2,400 new jobs, a little less than two-thirds (61%) of all new jobs added over the coming 24 years.

Proportionally, the greatest increases are expected in the real estate category (64% of real estate jobs in 2045) followed by administrative positions (40%), transportation and warehousing (38%), educational services (36%), and finance & insurance (35%).

What this residential and business growth means is that Harris County will be called upon to expand its services and infrastructure if it is to maintain the quality of life and business environment enjoyed by its residents and workers. Failing to keep up will bring an erosion of the lifestyles and employment opportunities that attract new growth and investment tomorrow and that enjoyed by the population today.

■ Impact Fees

Introduction to Impact Fees

Impact fees, examined in this report, present one potential revenue source for funding public facilities that will be needed to serve both existing *and* future residents and workers.

An impact fee is a FEE, not a tax. With taxes—like property taxes and sales taxes—there is no direct relationship between the taxes one pays and the return—the services—that each taxpayer receives. Everyone pays school taxes based on the value of their property, regardless of whether they have one child in school, six children in school or no children at all. A fee, on the other hand, must be related to the service being made available. For instance, only those obtaining a building permit pay the building permit fee (which covers the cost of plan reviews and approvals, and construction inspections). 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 County's cost of making particular services available—the cost of recreation facilities, for instance.

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 County 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. This includes the categories of:

- parks, open space, and recreation areas and related facilities;
- public safety facilities, including law enforcement, fire, emergency medical services, and E-911 emergency communications;
- animal control;
- libraries;
- roads, streets, and bridges;
- stormwater and flood control facilities;
- water supply, treatment, and distribution; and,
- wastewater collection, treatment, and disposal.

Revenue for such facilities can be produced from new development in two ways: through future taxes paid by the homes and businesses that growth creates, and through an impact fee assessed as new

development occurs. The collection of impact fees can help shift the burden for funding these facilities from the tax base as a whole to the new growth and development actually creating the need for these capital improvement projects. This meets the goal that is the essence and basis of impact fees: Everyone—both here today and coming in the future—pays their fair share of the capital improvements needed to serve them on an equal basis.

Focus of This Report

As stated above, under the State impact fee law, impact fees can be collected for several specific public facility categories. This report focuses on **Parks & Recreation** and Public Safety Facilities, specifically **Fire Protection, Emergency Medical Services, Emergency 911 (E-911), and the Sheriff's Office & Jail** public facilities that will be needed to meet the demands of future growth and development while maintaining the current level of service enjoyed by residents and businesses in the county today. The key is that the capital improvement, whether it is 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 county grows. Maintenance and personnel are not eligible for impact fee funding, nor would replacement of deteriorated floor space or 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.

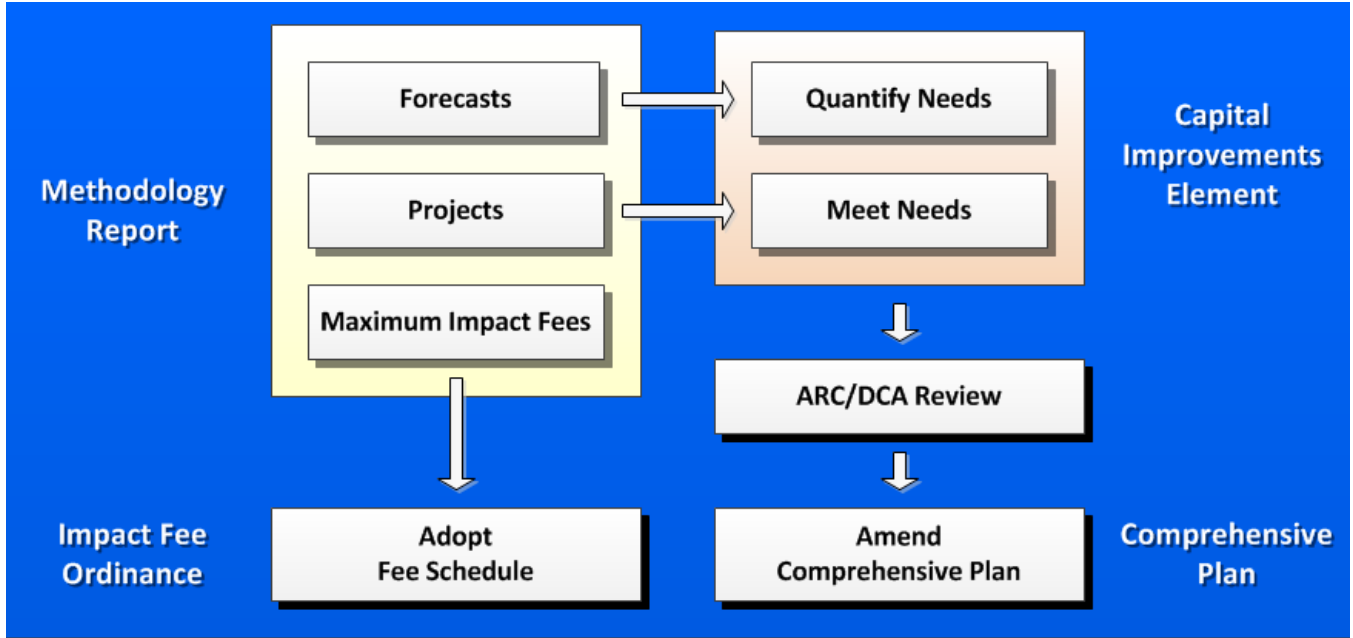
For each public facility category, this report identifies the current level of service provided throughout the county in order to quantify the capital facilities needed to meet future needs. Based on that analysis, calculations have been carried out in order to identify what portion of future capital facilities could be funded through impact fee collections.

In the end, impact fees represent a potential funding source that must be balanced against other needs of the County. In this report the *maximum* allowable impact fee for each public facility category has been calculated; this is the most that could be charged. ***The County may adopt a fee less than the maximum but cannot charge more.***

Components of the Impact Fee System

The Harris County Impact Fee System consists of four components, illustrated on the diagram below:

- This **Methodology Report**, which includes:
 - forecasts of population, housing units and employment for the county;
 - capital improvement projects to serve new growth, based on appropriate Level of Service (LOS) standards, for each public facility category; and,
 - the impact cost of new growth and development (and thus the maximum impact fees that could be assessed).
- A **Capital Improvements Element** (CIE) to implement the County's proposed improvements, including a 5-year Community Work Program.
- An **Impact Fee Ordinance**, including an impact fee schedule by land use category.
- The County's **Comprehensive Plan**, which will be amended by the adoption of the CIE.



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 current (2021) 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 2021 to account for the current value of future money. The Credits and Adjustments chapter of this report provides greater detail.

Three different cost inflators are used in the impact fee calculations, based on the type of project being considered. For infrastructure projects, such as recreation components, 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 park land), 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 on the right.

| Index | 10-Year Average Rate |
|--------------------------------|----------------------|
| Consumer Price Index (CPI) | 1.72% |
| Construction Cost Index (CCI)* | 1.63% |
| Building Cost Index (BCI)* | 2.10% |
| Discount Rate** | 0.00005% |

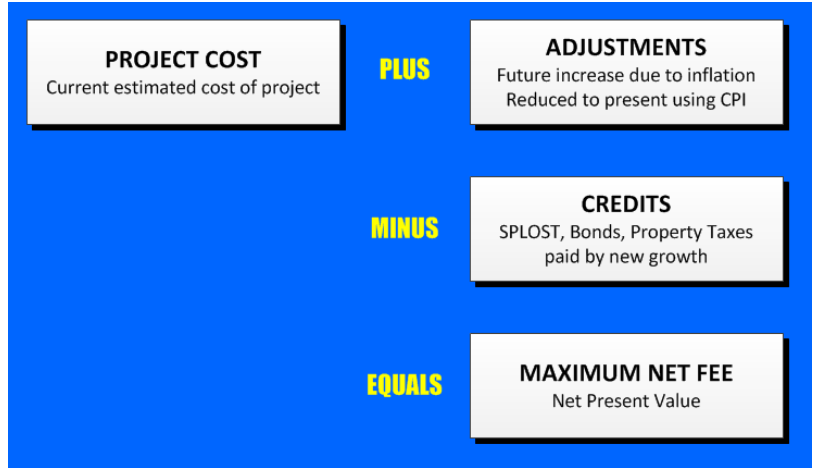
* Source: Engineering News Record, Average Annual Inflation Rates 2010-2020, rounded.

**Avg annual return at prevailing interest rate.

In all cases, the current interest rate that the County receives on its fund balances 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 2021 dollars using appropriate inflation factors, and the subtraction of credits (if any) for property taxes 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.



■ Editorial Conventions

This report observes the following conventions:

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

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

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 County's investment in impact fee eligible capital facilities. 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. The calculations and information contained in this Methodology Report, repeated (as applicable) for each category of public facility for which an impact fee will be charged, are:

- a **projection of needs** for the 24-year planning period—2021 to 2045;
- 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 will be provided;
- a **schedule of projects** listing impact fee related costs for the 24-year planning period;
- a description of **funding sources** for the 24-year planning period;
- the calculation of the **cost impact** of new development, credits, and impact fees; and
- a schedule of **maximum impact fees** that could be adopted, by land use category.

An additional document required for the collection of impact fees is called the Capital Improvements Element (CIE), and is adopted as a chapter, or 'element', in the County's Comprehensive Plan. As defined by the Georgia Department of Community Affairs (DCA), the CIE must include certain calculations and information, which will be drawn from this Methodology Report as applicable. The CIE must be reviewed and approved by DCA. Upon the local government's adoption of the approved CIE and commencement of impact fee collections, an annual reporting requirement called an Annual Update is required to be submitted to DCA. The Annual Update document must include a brief financial report for the last fiscal year and an updated five-year Community Work Program that identifies which projects in the CIE are anticipated to be implemented in the near term.

■ Investment Recovery

The Georgia Development Impact Fee Act (DIFA) 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 the facility meeting current needs must be borne by the locality (i.e., existing taxpayers), with future development being assessed only for the excess capacity that has been made available to serve that future growth in accordance with level of service standards that 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, a value for 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, Harris County is preparing this study of the impact of impact fees for the public facility categories noted previously. The chapters in this Methodology Report provide population and employment forecasts and detailed information regarding the inventory of current facilities, the level of service, and detailed calculations of the impact cost for the specific public facilities, as appropriate to the calculations.

■ Monitoring Change

A number of the factors that form the base-line assumptions in this report's impact cost calculations may change over time, as noted below. Generally, the impact fee methodologies for the public facilities categories should be reviewed periodically and should reflect changes in the growth and development of the county. 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 2045, covering a 24-year time span. When the County's Comprehensive Plan is again updated, the Methodology Report (and impact fee methodologies) should be considered for updating if needed and the horizon extended to 2050.
- The amount of future tax revenue generated by future growth is directly related to the County's population and employment projections. These projections should be reviewed periodically against other data, such as building permits and utility hook-ups, to confirm continuing validity or to modify the methodologies.
- Costs should be maintained in net present value terms. Land, building and equipment costs for public facilities should be updated as costs rise.
- Projections in tax base growth should be updated to reflect actual growth, and to update the average new house values and value/employee then current in future years, if needed.
- Any changes in funding strategy for the facilities included in the impact fee program should be reflected in the impact fee calculation.

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. Tax 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.

■ Reductions in Impact Fee Assessments

Because the state law provides that new growth and development cannot be charged more than their fair proportionate share of the costs of the capital improvements needed to serve it, this Methodology Report calculates the maximum that could be charged as an impact fee in order to establish the 'ceiling' above which the County cannot go. There are, however, several ways that a lower impact fee could be charged, either for a specific project, across the board for all projects, or for a group of specific land use categories that are of special benefit to the County. These are discussed below.

Adoption of Reduced Impact Fees

As noted, the fee schedule in this report shows the **maximum** impact fee that could be adopted under state law. The County may adopt the maximum fee for any given public facility category, or could adopt a lower fee, as part of the locally-adopted 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.

Individual Fee Assessment

A landowner or developer may request an individual assessment when the average figures used in this Methodology Report 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 or employment characteristics of the specific project, as applicable. Under the appeal procedures of the 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 Impact Fee Ordinance provides for the appeal by anyone assessed an impact fee, first to the County staff person that is designated as the Impact Fee Administrator³ and then, if not resolved, to the Board of County Commissioners.

Exemptions

Exemptions from the established impact fee amounts on the adopted Impact Fee Schedule can be adopted by the Board of County Commissioners for development that represents 'extraordinary economic or employment growth' or 'affordable housing'. The exemptions must be spelled out as part of the Impact Fee Ordinance and can be applied by the Board in whole or in part to specified uses based on standards included in the Ordinance or adopted pursuant to the Ordinance provisions.

■ 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 an interest-bearing account.
- Impact fees not spent or encumbered within six 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.
- Annual Financial Reporting and an update to the County's 5-year Community Work Program Update required each year.

³ The Impact Fee Administrator is typically the Planning Director or director of the department that issues building permits.

■ Maximum Impact Fee Schedule

The fee schedule starting on the next page shows the maximum impact fee that **could** be charged for each public facility in Harris County for the specific land use categories shown. The County may adopt a fee less than the maximum but cannot charge more.⁴

The land use categories in the fee schedule are the most common uses identified in the *Trip Generation Manual*, 9th Edition, Institute of Transportation Engineers (ITE); the ITE designation is shown in the left-hand column.

The maximum total impact fee shown for each public facility category is drawn from that public facility category's chapter and reflects the reductions for any applicable credits. The maximum total fees include a 3% fee for administration of the Impact Fee Program and an additional 1.5% fee for preparation of the Capital Improvements Element, as allowed by the State's impact fee law.

To read the Maximum 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 into categories. For example, all retail uses are grouped together. Next, find the Maximum Total Impact Fee figure. 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 a maximum impact fee of \$X per unit of measure.*

⁴ Regardless of what fee may be initially adopted, the County Board of Commissioners may modify the fee in the future by amending the Impact Fee Ordinance. Such an action would not require modifications to this Methodology Report or review by the Georgia Department of Community Affairs as long as it remains equal to or below the established maximum.

Table 1: Maximum Impact Fee Schedule

| Land Use Category | Maximum Impact Fee | | | | | Total Impact Fee* | Unit of Measure** |
|-----------------------------------|--------------------|------------------|---------------|-----------------|---------------|-------------------|-------------------|
| | Parks & Recreation | Sheriff's Office | EMS | Fire Protection | E-911 | | |
| Residential | | | | | | | |
| Single-Family Detached Housing | \$ 1,535.0733 | \$ 1,108.9883 | \$ 550.3998 | \$ 2,495.0965 | \$ 1,385.8936 | \$ 7,075.4515 | per dwelling |
| Apartment | \$ 1,535.0733 | \$ 1,108.9883 | \$ 550.3998 | \$ 2,495.0965 | \$ 1,385.8936 | \$ 7,075.4515 | per dwelling |
| Residential Condominium/Townhouse | \$ 1,535.0733 | \$ 1,108.9883 | \$ 550.3998 | \$ 2,495.0965 | \$ 1,385.8936 | \$ 7,075.4515 | per dwelling |
| Port and Terminal | | | | | | | |
| Intermodal Truck Terminal | \$ - | \$ 0.6564 | \$ 0.3252 | \$ 1.4745 | \$ 0.6564 | \$ 3.1125 | per square foot |
| Industrial/Agricultural | | | | | | | |
| General Light Industrial | \$ - | \$ 1.0707 | \$ 0.5306 | \$ 2.4054 | \$ 1.3360 | \$ 5.3427 | per square foot |
| General Heavy Industrial | \$ - | \$ 0.8486 | \$ 0.4205 | \$ 1.9064 | \$ 1.0590 | \$ 4.2345 | per square foot |
| Manufacturing | \$ - | \$ 0.8320 | \$ 0.4123 | \$ 1.8691 | \$ 1.0382 | \$ 4.1516 | per square foot |
| Warehousing | \$ - | \$ 0.4244 | \$ 0.2103 | \$ 0.9537 | \$ 0.5298 | \$ 2.1182 | per square foot |
| Mini-Warehouse | \$ - | \$ 0.0357 | \$ 0.0176 | \$ 0.0802 | \$ 0.0445 | \$ 0.1780 | per square foot |
| High-Cube Warehouse | \$ - | \$ 0.0352 | \$ 0.0174 | \$ 0.0790 | \$ 0.0438 | \$ 0.1754 | per square foot |
| Lodging | | | | | | | |
| Hotel or Conference Motel | \$ - | \$ 264.3424 | \$ 130.9885 | \$ 593.8027 | \$ 329.8258 | \$ 1,318.9594 | per room |
| All Suites Hotel | \$ - | \$ 231.9872 | \$ 114.9555 | \$ 521.1219 | \$ 289.4555 | \$ 1,157.5201 | per room |
| Motel | \$ - | \$ 203.9169 | \$ 101.0460 | \$ 458.0666 | \$ 254.4316 | \$ 1,017.4611 | per room |
| Recreational | | | | | | | |
| Golf Course | \$ - | \$ 113.9586 | \$ 56.4693 | \$ 255.9896 | \$ 142.1885 | \$ 568.6060 | per acre |
| Bowling Alley | \$ - | \$ 0.4639 | \$ 0.2299 | \$ 1.0422 | \$ 0.5789 | \$ 2.3149 | per square foot |
| Movie Theater | \$ - | \$ 0.6817 | \$ 0.3377 | \$ 1.5314 | \$ 0.8507 | \$ 3.4015 | per square foot |
| Arena | \$ - | \$ 1,546.4272 | \$ 766.2942 | \$ 3,473.7988 | \$ 1,929.5106 | \$ 7,716.0308 | per acre |
| Amusement Park | \$ - | \$ 4,219.7735 | \$ 2,091.0058 | \$ 9,479.0394 | \$ 5,265.1024 | \$ 21,054.9211 | per acre |
| Tennis Courts | \$ - | \$ 113.1576 | \$ 56.0725 | \$ 254.1905 | \$ 141.1892 | \$ 564.6098 | per acre |
| Racquet/Tennis Club | \$ - | \$ 0.1423 | \$ 0.0705 | \$ 0.3197 | \$ 0.1776 | \$ 0.7101 | per square foot |
| Health/Fitness Center | \$ - | \$ 0.3269 | \$ 0.1620 | \$ 0.7346 | \$ 0.4081 | \$ 1.6316 | per square foot |
| Recreational Community Center | \$ - | \$ 0.5757 | \$ 0.2852 | \$ 1.2934 | \$ 0.7184 | \$ 2.8727 | per square foot |
| Institutional | | | | | | | |
| Private Elementary School | \$ - | \$ 0.4556 | \$ 0.2257 | \$ 1.0235 | \$ 0.5685 | \$ 2.2733 | per square foot |
| Private High School | \$ - | \$ 0.3028 | \$ 0.1501 | \$ 0.6805 | \$ 0.3779 | \$ 1.5113 | per square foot |
| Church/Place of Worship | \$ - | \$ 0.1611 | \$ 0.0797 | \$ 0.3617 | \$ 0.2008 | \$ 0.8033 | per square foot |
| Day Care Center | \$ - | \$ 1.3072 | \$ 0.6476 | \$ 2.9366 | \$ 1.6311 | \$ 6.5225 | per square foot |
| Cemetery | \$ - | \$ 37.7791 | \$ 18.7206 | \$ 84.8650 | \$ 47.1380 | \$ 188.5027 | per acre |
| Medical | | | | | | | |
| Hospital | \$ - | \$ 1.3630 | \$ 0.6752 | \$ 3.0618 | \$ 1.7007 | \$ 6.8007 | per square foot |
| Nursing Home | \$ - | \$ 1.0816 | \$ 0.5358 | \$ 2.4296 | \$ 1.3495 | \$ 5.3965 | per square foot |
| Clinic | \$ - | \$ 1.8216 | \$ 0.9026 | \$ 4.0921 | \$ 2.2729 | \$ 9.0892 | per square foot |

*Includes 3% administration fee and a charge for recoupmnt of the cost to prepare the CIE.

** 'Square foot' means square foot of gross building floor area.

Methodology Report Creating the Impact Fee Program

| Land Use Category | Maximum Impact Fee | | | | | | Unit of Measure |
|-------------------------------------|--------------------|------------------|-------------|-----------------|---------------|----------------------|-----------------|
| | Parks & Recreation | Sheriff's Office | EMS | Fire Protection | E-911 | Total Impact Fee | |
| Office | | | | | | | |
| General Office Building | \$ - | \$ 1.5414 | \$ 0.7637 | \$ 3.4626 | \$ 1.9233 | \$ 7.6910 | per square foot |
| Corporate Headquarters Building | \$ - | \$ 1.5890 | \$ 0.7874 | \$ 3.5695 | \$ 1.9826 | \$ 7.9285 | per square foot |
| Single-Tenant Office Building | \$ - | \$ 1.4608 | \$ 0.7237 | \$ 3.2816 | \$ 1.8227 | \$ 7.2888 | per square foot |
| Medical-Dental Office Building | \$ - | \$ 1.8814 | \$ 0.9321 | \$ 4.2262 | \$ 2.3473 | \$ 9.3870 | per square foot |
| Research and Development Center | \$ - | \$ 1.3582 | \$ 0.6730 | \$ 3.0515 | \$ 1.6948 | \$ 6.7775 | per square foot |
| Business Park | \$ - | \$ 1.4287 | \$ 0.7079 | \$ 3.2092 | \$ 1.7824 | \$ 7.1282 | per square foot |
| Retail | | | | | | | |
| Building Materials and Lumber Store | \$ - | \$ 0.6522 | \$ 0.3231 | \$ 1.4653 | \$ 0.8138 | \$ 3.2544 | per square foot |
| Free-Standing Discount Superstore | \$ - | \$ 0.4452 | \$ 0.2206 | \$ 1.0005 | \$ 0.5556 | \$ 2.2219 | per square foot |
| Variety Store | \$ - | \$ 0.4452 | \$ 0.2206 | \$ 1.0005 | \$ 0.5556 | \$ 2.2219 | per square foot |
| Free-Standing Discount Store | \$ - | \$ 0.9208 | \$ 0.4563 | \$ 2.0684 | \$ 1.1488 | \$ 4.5943 | per square foot |
| Hardware/Paint Store | \$ - | \$ 0.4472 | \$ 0.2215 | \$ 1.0046 | \$ 0.5580 | \$ 2.2313 | per square foot |
| Nursery (Garden Center) | \$ - | \$ 1.4473 | \$ 0.7170 | \$ 3.2512 | \$ 1.8059 | \$ 7.2214 | per square foot |
| Nursery (Wholesale) | \$ - | \$ 0.7733 | \$ 0.3832 | \$ 1.7370 | \$ 0.9647 | \$ 3.8582 | per square foot |
| Shopping Center | \$ - | \$ 0.7748 | \$ 0.3839 | \$ 1.7404 | \$ 0.9666 | \$ 3.8657 | per square foot |
| Factory Outlet Center | \$ - | \$ 0.7748 | \$ 0.3839 | \$ 1.7404 | \$ 0.9666 | \$ 3.8657 | per square foot |
| Specialty Retail Center | \$ - | \$ 0.9196 | \$ 0.4556 | \$ 2.0658 | \$ 1.1474 | \$ 4.5884 | per square foot |
| Automobile Sales | \$ - | \$ 0.7088 | \$ 0.3512 | \$ 1.5924 | \$ 0.8843 | \$ 3.5367 | per square foot |
| Auto Parts Store | \$ - | \$ 0.4452 | \$ 0.2206 | \$ 1.0005 | \$ 0.5556 | \$ 2.2219 | per square foot |
| Tire Store | \$ - | \$ 0.5938 | \$ 0.2942 | \$ 1.3339 | \$ 0.7409 | \$ 2.9628 | per square foot |
| Tire Superstore | \$ - | \$ 0.5938 | \$ 0.2942 | \$ 1.3339 | \$ 0.7409 | \$ 2.9628 | per square foot |
| Supermarket | \$ - | \$ 0.5401 | \$ 0.2675 | \$ 1.2133 | \$ 0.6738 | \$ 2.6947 | per square foot |
| Convenience Market (Open 24 Hours) | \$ - | \$ 0.8350 | \$ 0.4137 | \$ 1.8760 | \$ 1.0420 | \$ 4.1667 | per square foot |
| Convenience Market with Gas Pumps | \$ - | \$ 0.8350 | \$ 0.4137 | \$ 1.8760 | \$ 1.0420 | \$ 4.1667 | per square foot |
| Discount Supermarket | \$ - | \$ 1.0443 | \$ 0.5175 | \$ 2.3462 | \$ 1.3032 | \$ 5.2112 | per square foot |
| Wholesale Market | \$ - | \$ 0.3803 | \$ 0.1884 | \$ 0.8543 | \$ 0.4745 | \$ 1.8975 | per square foot |
| Discount Club | \$ - | \$ 0.6020 | \$ 0.2982 | \$ 1.3525 | \$ 0.7511 | \$ 3.0038 | per square foot |
| Home Improvement Superstore | \$ - | \$ 0.4452 | \$ 0.2206 | \$ 1.0005 | \$ 0.5556 | \$ 2.2219 | per square foot |
| Electronics Superstore | \$ - | \$ 0.4452 | \$ 0.2206 | \$ 1.0005 | \$ 0.5556 | \$ 2.2219 | per square foot |
| Apparel Store | \$ - | \$ 0.7748 | \$ 0.3839 | \$ 1.7404 | \$ 0.9666 | \$ 3.8657 | per square foot |
| Department Store | \$ - | \$ 0.9185 | \$ 0.4551 | \$ 2.0636 | \$ 1.1462 | \$ 4.5834 | per square foot |
| Pharmacy/Drugstore | \$ - | \$ 0.7748 | \$ 0.3839 | \$ 1.7404 | \$ 0.9666 | \$ 3.8657 | per square foot |
| Furniture Store | \$ - | \$ 0.1925 | \$ 0.0953 | \$ 0.4326 | \$ 0.2403 | \$ 0.9607 | per square foot |
| Services | | | | | | | |
| Drive-in Bank | \$ - | \$ 2.2215 | \$ 1.1009 | \$ 4.9905 | \$ 2.7718 | \$ 11.0847 | per square foot |
| Quality Restaurant | \$ - | \$ 3.4611 | \$ 1.7151 | \$ 7.7751 | \$ 4.3185 | \$ 17.2698 | per square foot |
| High-Turnover (Sit-Down) Restaurant | \$ - | \$ 3.4611 | \$ 1.7151 | \$ 7.7751 | \$ 4.3185 | \$ 17.2698 | per square foot |
| Fast-Food Restaurant | \$ - | \$ 5.0571 | \$ 2.5059 | \$ 11.3604 | \$ 6.3100 | \$ 25.2334 | per square foot |
| Quick Lubrication Vehicle Shop | \$ - | \$ 974.3465 | \$ 482.8136 | \$ 2,188.7122 | \$ 1,215.7132 | \$ 4,861.5855 | per service bay |
| Gasoline/Service Station | \$ - | \$ 74.2358 | \$ 36.7857 | \$ 166.7589 | \$ 92.6257 | \$ 370.4061 | per pump |
| Gasoline Station w/Convenience Mkt | \$ - | \$ 100.2184 | \$ 49.6607 | \$ 225.1246 | \$ 125.0448 | \$ 500.0485 | per pump |
| Self-Service Car Wash | \$ - | \$ 92.7948 | \$ 45.9822 | \$ 208.4486 | \$ 115.7821 | \$ 463.0077 | per stall |

*Includes 3% administration fee and a charge for recoupment of the cost to prepare the CIE.

** 'Square foot' means square foot of gross building floor area.

Forecasts

In order to accurately calculate the demand for future services for Harris County, new growth and development must be quantified in future projections. These projections include forecasts for population, households, housing units, and employment to the year 2045. These projections provide the base-line conditions from which the current (2021) or future (2045) Level of Service calculations are produced.

■ Types of Projections

Accurate projections of population, households, housing units, and employment are important in that:

- Population data and forecasts are used to establish current and future demand for services where the Level of Service (LOS) standards are 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 certain service demands that are household based, such as parks, and are used to calculate impact costs when the cost is assessed when a building permit is issued. The number of households—defined as *occupied* housing units—is always smaller than the total supply of available housing units, which include vacant 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 requiring building permits to operate (i.e., are not assessed impact fees), as well as governmental uses that are not subject to impact fees.

‘Value-added’ employment data is combined with population data to produce what is known as the ‘day-night population.’ These figures represent the total number of persons receiving services, both in their homes and in their businesses, to produce an accurate picture of the total number of persons that rely on certain 24-hour services, such as emergency medical services.

The projections used for the Sheriff’s Office & Jail and the Parks & Recreation public facility categories are countywide forecasts because these services are delivered by Harris County throughout the county and are available to all residents regardless of whether a municipal police department or recreation department provides similar services within the incorporated areas. However, projections used for Fire Protection, Emergency Medical Services, and E-911 services are countywide *outside* of West Point because these services are provided throughout the county with the exception of that city. West Point has established Fire, EMS and E-911 departments of its own.

■ Historic Population Growth

Every year, the US Census Bureau estimates the population in Harris County between decennial censuses (e.g., 2000 and 2010). After a decennial census, the Bureau revises the annual estimates based on the actual Census count. Unlike the decennial censuses, which are ‘as of’ April 1, the annual estimates are ‘as of’ July 1 of each year. Those annual estimates are shown in Table 2.

Table 2: Annual Census Estimated Population

| | Population Estimate (as of July 1) | | | | | | | | | |
|-------------------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
| Harris County | 23,912 | 24,547 | 25,327 | 26,256 | 27,180 | 28,170 | 29,289 | 30,276 | 30,807 | 31,494 |
| Hamilton | 435 | 488 | 559 | 627 | 670 | 744 | 793 | 866 | 899 | 978 |
| Pine Mountain | 1,116 | 1,119 | 1,129 | 1,146 | 1,163 | 1,183 | 1,207 | 1,225 | 1,225 | 1,233 |
| Shiloh | 430 | 428 | 428 | 432 | 435 | 439 | 446 | 449 | 446 | 445 |
| Waverly Hall | 689 | 686 | 701 | 712 | 706 | 721 | 721 | 735 | 722 | 736 |
| West Point (part) | 793 | 793 | 796 | 805 | 815 | 825 | 840 | 849 | 848 | 848 |
| Unincorporated | 20,449 | 21,033 | 21,714 | 22,534 | 23,391 | 24,258 | 25,282 | 26,152 | 26,667 | 27,254 |

| | Population Estimate (as of July 1) | | | | | | | | | |
|-------------------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | 2010* | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| Harris County | 32,149 | 32,307 | 32,570 | 32,532 | 32,737 | 33,155 | 33,633 | 33,943 | 34,560 | 35,236 |
| Hamilton | 1,021 | 1,026 | 1,028 | 1,009 | 1,053 | 1,057 | 1,077 | 1,110 | 1,132 | 1,117 |
| Pine Mountain | 1,304 | 1,309 | 1,319 | 1,317 | 1,327 | 1,340 | 1,358 | 1,370 | 1,394 | 1,417 |
| Shiloh | 442 | 444 | 448 | 447 | 450 | 457 | 464 | 467 | 477 | 486 |
| Waverly Hall | 738 | 735 | 736 | 734 | 736 | 751 | 756 | 755 | 749 | 807 |
| West Point (part) | 866 | 870 | 877 | 876 | 881 | 893 | 906 | 914 | 931 | 949 |
| Unincorporated | 26,597 | 26,838 | 26,975 | 27,236 | 27,632 | 28,092 | 28,662 | 29,140 | 29,585 | 29,904 |

* 2010 estimate revised by Census Bureau in 2019.

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 2000 to 2009: *Intercensal Estimates 2000-2010*, US Bureau of the Census. For 2010 to 2019: *Census Annual Estimates Program*, US Bureau of the Census.

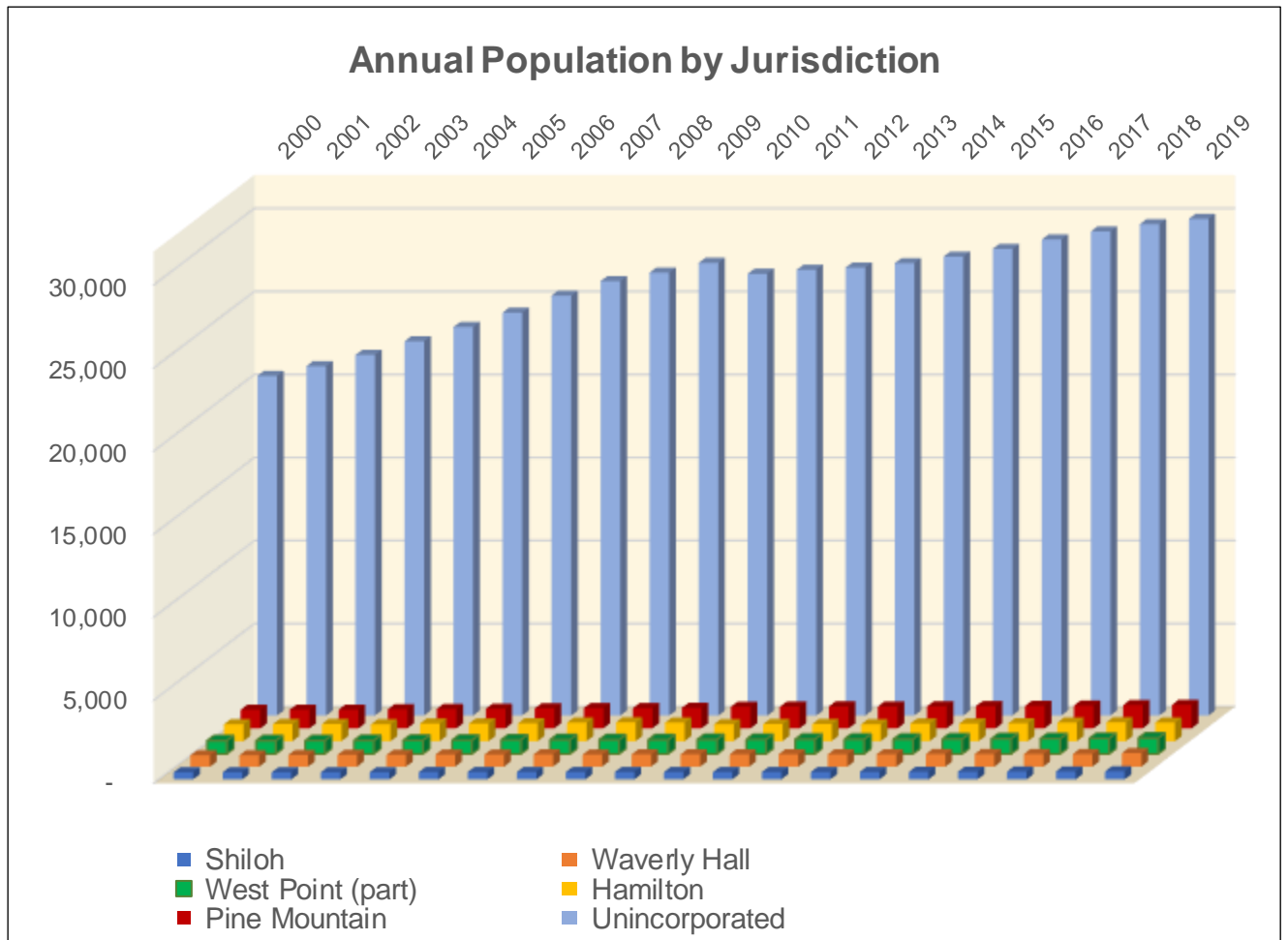
As shown by Table 2, Harris County posted a percentage increase in population between 2000 and 2019 overall of 47.36%; however, growth from 2000 to 2010 registered a higher growth increase for just those 10 years (34.45%) than the more recent 2010-2019 period (9.6%). Comparing the recent 9-year period to the previous 10-year period is not enough to explain the difference. Clearly the Great Recession, which began in mid-2008, had a notable impact on the housing industry and then the economy in general, affecting the county as well.

Reviewing the annual population estimates by the Census Bureau shown on Table 2, the annual percentage increase in population from 2000 through 2007 averaged 3.43% (from a low of 2.66% to a high of 3.97% in 2006). Reflecting the full impact of the recession during 2008 and continuing to 2014, this dropped to an average annual increase of only 1.13%. Since then, population growth has recovered somewhat, experiencing an annual low of 0.92% (in 2017) to a high of 1.96% (in 2019), an overall average of 1.48% during the recovery.

Population growth in Harris County has been dominated by growth in the unincorporated area. This is clearly illustrated in the data and chart on Table 3.

Table 3: Population Growth by Jurisdiction

| | 2000-2010 | | 2010-2019 | | Total 2000-2019 | |
|-------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|
| | Number Increase | Percent Increase | Number Increase | Percent Increase | Number Increase | Percent Increase |
| Harris County | 8,237 | 34.45% | 3,087 | 9.60% | 11,324 | 47.36% |
| Hamilton | 586 | 134.71% | 96 | 9.40% | 682 | 156.78% |
| Pine Mountain | 188 | 16.85% | 113 | 8.67% | 301 | 26.97% |
| Shiloh | 12 | 2.79% | 44 | 9.95% | 56 | 13.02% |
| Waverly Hall | 49 | 7.11% | 69 | 9.35% | 118 | 17.13% |
| West Point (part) | 73 | 9.21% | 83 | 9.58% | 156 | 19.67% |
| Unincorporated | 6,148 | 30.07% | 3,307 | 12.43% | 9,455 | 46.24% |



Unincorporated area growth underpins the forecasts to 2045 made in the next Section.

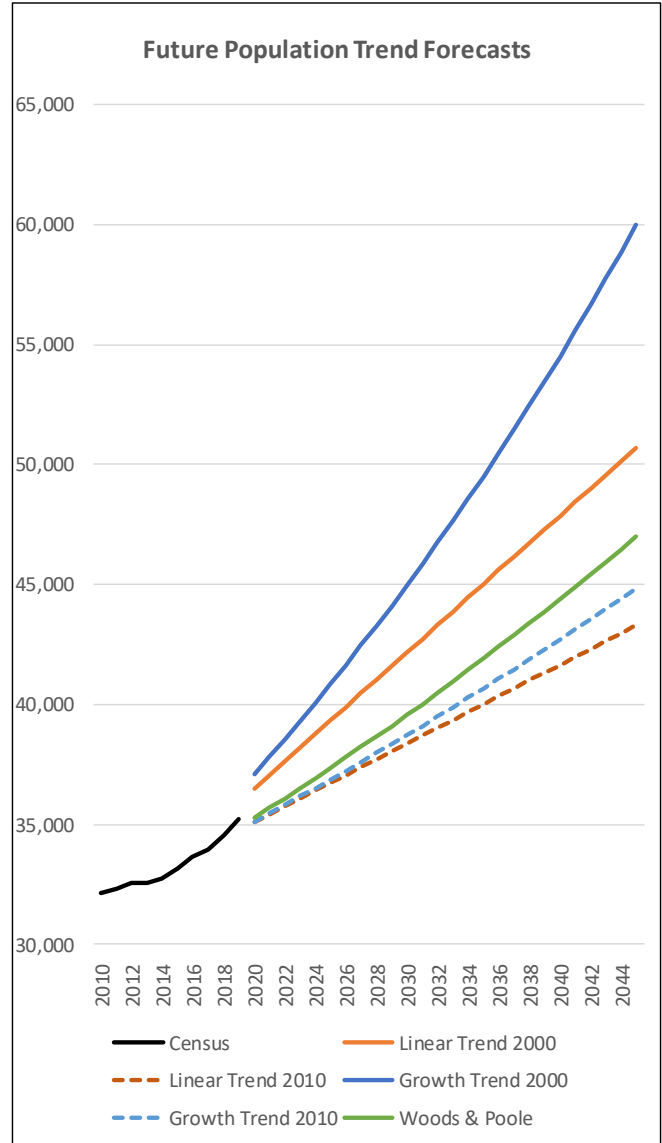
Population Forecasts

Two forecast methods were used to project the county’s past population growth forward to 2045, one using a ‘linear trend’ (straight line) and the other a ‘growth trend’ (curved line) forecast algorithm. Table 4 shows the results using both the Census estimates for 2000-2019 and the nearer term estimates for 2010-2019. The raw numbers of each projection method are shown.

Table 4: Future Population Trend Comparisons

| | Linear Trend | | Growth Trend | | Woods & Poole |
|--|--------------|--------------|--------------|--------------|---------------|
| | 2000 to 2045 | 2010 to 2045 | 2000 to 2045 | 2010 to 2045 | |

| | | | | | |
|------|--------|--------|--------|--------|--------|
| 2000 | 25,099 | | 25,242 | | 23,912 |
| 2001 | 25,668 | | 25,732 | | 24,547 |
| 2002 | 26,237 | | 26,232 | | 25,327 |
| 2003 | 26,806 | | 26,742 | | 26,256 |
| 2004 | 27,375 | | 27,262 | | 27,180 |
| 2005 | 27,944 | | 27,791 | | 28,170 |
| 2006 | 28,513 | | 28,331 | | 29,289 |
| 2007 | 29,082 | | 28,882 | | 30,276 |
| 2008 | 29,651 | | 29,443 | | 30,807 |
| 2009 | 30,220 | | 30,015 | | 31,494 |
| 2010 | 30,788 | 31,806 | 30,598 | 31,833 | 32,153 |
| 2011 | 31,357 | 32,134 | 31,193 | 32,147 | 32,309 |
| 2012 | 31,926 | 32,462 | 31,799 | 32,463 | 32,575 |
| 2013 | 32,495 | 32,790 | 32,417 | 32,783 | 32,539 |
| 2014 | 33,064 | 33,118 | 33,047 | 33,105 | 32,742 |
| 2015 | 33,633 | 33,446 | 33,689 | 33,431 | 33,159 |
| 2016 | 34,202 | 33,774 | 34,343 | 33,760 | 33,632 |
| 2017 | 34,771 | 34,103 | 35,011 | 34,093 | 33,943 |
| 2018 | 35,340 | 34,431 | 35,691 | 34,428 | 34,475 |
| 2019 | 35,909 | 34,759 | 36,385 | 34,767 | 34,873 |
| 2020 | 36,478 | 35,087 | 37,092 | 35,109 | 35,275 |
| 2021 | 37,047 | 35,415 | 37,812 | 35,455 | 35,682 |
| 2022 | 37,616 | 35,743 | 38,547 | 35,804 | 36,094 |
| 2023 | 38,185 | 36,071 | 39,296 | 36,156 | 36,510 |
| 2024 | 38,753 | 36,399 | 40,059 | 36,512 | 36,931 |
| 2025 | 39,322 | 36,727 | 40,838 | 36,871 | 37,357 |
| 2026 | 39,891 | 37,056 | 41,631 | 37,234 | 37,788 |
| 2027 | 40,460 | 37,384 | 42,440 | 37,601 | 38,224 |
| 2028 | 41,029 | 37,712 | 43,265 | 37,971 | 38,665 |
| 2029 | 41,598 | 38,040 | 44,106 | 38,345 | 39,111 |
| 2030 | 42,167 | 38,368 | 44,963 | 38,722 | 39,563 |
| 2031 | 42,736 | 38,696 | 45,836 | 39,103 | 40,019 |
| 2032 | 43,305 | 39,024 | 46,727 | 39,488 | 40,481 |
| 2033 | 43,874 | 39,352 | 47,635 | 39,877 | 40,948 |
| 2034 | 44,443 | 39,681 | 48,560 | 40,269 | 41,420 |
| 2035 | 45,012 | 40,009 | 49,504 | 40,665 | 41,898 |
| 2036 | 45,581 | 40,337 | 50,466 | 41,066 | 42,381 |
| 2037 | 46,149 | 40,665 | 51,446 | 41,470 | 42,870 |
| 2038 | 46,718 | 40,993 | 52,446 | 41,878 | 43,365 |
| 2039 | 47,287 | 41,321 | 53,465 | 42,290 | 43,865 |
| 2040 | 47,856 | 41,649 | 54,504 | 42,706 | 44,371 |
| 2041 | 48,425 | 41,977 | 55,563 | 43,127 | 44,883 |
| 2042 | 48,994 | 42,306 | 56,642 | 43,551 | 45,401 |
| 2043 | 49,563 | 42,634 | 57,743 | 43,980 | 45,925 |
| 2044 | 50,132 | 42,962 | 58,865 | 44,413 | 46,454 |
| 2045 | 50,701 | 43,290 | 60,009 | 44,850 | 46,990 |



Given the proposition that recovering from the Great Recession is an indication of future growth in the county, and that in the long run future growth will ultimately reflect growth over the past two decades, the 'growth trend 2000' projection most clearly reflects the future population growth to 2045. As population growth has steadily recovered since 2010 (as illustrated on the graph on Table 4), the 'growth trend 2000' projection curve most clearly represents the continuation of this recovery.

Correlating with the Census

The algorithms used to prepare the projections shown on Table 4 present a 'smooth' line from the 'start' date (2000 or 2010 depending on the projection period chosen), which also changes the population figures from the actual census data (shown on Table 2).

Because of this, the projected future population estimate for the county must be rectified so that the 2019 population figure (35,236) is the 'start' population for the forecast.

The actual Census estimate for 2019 (35,236) is about 97% (specifically 96.843295%) of the 2019 projected figure of 36,385. The full percentage is applied to each of the 'growth trend 2000' projected figures from 2019 on in order to create a smooth forecast to 2045.

The result is shown on Table 5 on the next page.

City Population Forecasts

Also shown on Table 5 are population forecasts for each of the incorporated areas in the county. Subtracting out the cities yields the population located in the unincorporated area.

Future population figures for the cities were calculated as follows:

For each city, the percentage of the county's total population located in the city was determined. For projection purposes, it is assumed that each city will grow in pace with overall growth in the county as a whole. Thus, the 2019 percentage was applied to the county total for each city to produce the stream of increased population figures.

Service Area Population Forecasts

More elaborate forecast methodologies were not applied to the cities because, with the exception of West Point, several of the public facility categories are countywide in the services they provide. For these countywide service areas, only the total county population applies.

West Point, on the other hand, has its own Fire and EMS Department, as well as its own E-911 Division. The service area for the County's Fire, EMS and E-911 services would therefore be all of the county except the portion of West Point that is located in Harris County.

These population projections for the county as a whole, West Point, and the remainder of the county (the unincorporated area and all of the cities except West Point) are shown on Table 6.

Table 5: Growth Trend Forecasts Rectified to Census

| | County Total | Hamilton | Pine Mountain | Shiloh | Waverly Hall | West Point (pt) | Unincorporated |
|------|--------------|----------|---------------|--------|--------------|-----------------|----------------|
| 2000 | 23,912 | 435 | 1,116 | 430 | 689 | 793 | 20,449 |
| 2001 | 24,547 | 488 | 1,119 | 428 | 686 | 793 | 21,033 |
| 2002 | 25,327 | 559 | 1,129 | 428 | 701 | 796 | 21,714 |
| 2003 | 26,256 | 627 | 1,146 | 432 | 712 | 805 | 22,534 |
| 2004 | 27,180 | 670 | 1,163 | 435 | 706 | 815 | 23,391 |
| 2005 | 28,170 | 744 | 1,183 | 439 | 721 | 825 | 24,258 |
| 2006 | 29,289 | 793 | 1,207 | 446 | 721 | 840 | 25,282 |
| 2007 | 30,276 | 866 | 1,225 | 449 | 735 | 849 | 26,152 |
| 2008 | 30,807 | 899 | 1,225 | 446 | 722 | 848 | 26,667 |
| 2009 | 31,494 | 978 | 1,233 | 445 | 736 | 848 | 27,254 |
| 2010 | 32,149 | 1,021 | 1,304 | 442 | 738 | 866 | 26,597 |
| 2011 | 32,307 | 1,026 | 1,309 | 444 | 735 | 870 | 26,838 |
| 2012 | 32,570 | 1,028 | 1,319 | 448 | 736 | 877 | 26,975 |
| 2013 | 32,532 | 1,009 | 1,317 | 447 | 734 | 876 | 27,236 |
| 2014 | 32,737 | 1,053 | 1,327 | 450 | 736 | 881 | 27,632 |
| 2015 | 33,155 | 1,057 | 1,340 | 457 | 751 | 893 | 28,092 |
| 2016 | 33,633 | 1,077 | 1,358 | 464 | 756 | 906 | 28,662 |
| 2017 | 33,943 | 1,110 | 1,370 | 467 | 755 | 914 | 29,140 |
| 2018 | 34,560 | 1,132 | 1,394 | 477 | 749 | 931 | 29,585 |
| 2019 | 35,236 | 1,117 | 1,417 | 486 | 807 | 949 | 29,904 |
| 2020 | 35,921 | 1,139 | 1,445 | 495 | 823 | 967 | 31,052 |
| 2021 | 36,619 | 1,161 | 1,473 | 505 | 839 | 986 | 31,656 |
| 2022 | 37,330 | 1,183 | 1,501 | 515 | 855 | 1,005 | 32,270 |
| 2023 | 38,055 | 1,206 | 1,530 | 525 | 872 | 1,025 | 32,897 |
| 2024 | 38,795 | 1,230 | 1,560 | 535 | 889 | 1,045 | 33,537 |
| 2025 | 39,549 | 1,254 | 1,590 | 545 | 906 | 1,065 | 34,188 |
| 2026 | 40,317 | 1,278 | 1,621 | 556 | 923 | 1,086 | 34,852 |
| 2027 | 41,101 | 1,303 | 1,653 | 567 | 941 | 1,107 | 35,530 |
| 2028 | 41,899 | 1,328 | 1,685 | 578 | 960 | 1,128 | 36,220 |
| 2029 | 42,713 | 1,354 | 1,718 | 589 | 978 | 1,150 | 36,924 |
| 2030 | 43,543 | 1,380 | 1,751 | 601 | 997 | 1,173 | 37,641 |
| 2031 | 44,389 | 1,407 | 1,785 | 612 | 1,017 | 1,196 | 38,372 |
| 2032 | 45,252 | 1,435 | 1,820 | 624 | 1,036 | 1,219 | 39,118 |
| 2033 | 46,131 | 1,462 | 1,855 | 636 | 1,057 | 1,242 | 39,878 |
| 2034 | 47,027 | 1,491 | 1,891 | 649 | 1,077 | 1,267 | 40,653 |
| 2035 | 47,941 | 1,520 | 1,928 | 661 | 1,098 | 1,291 | 41,443 |
| 2036 | 48,873 | 1,549 | 1,965 | 674 | 1,119 | 1,316 | 42,249 |
| 2037 | 49,822 | 1,579 | 2,004 | 687 | 1,141 | 1,342 | 43,069 |
| 2038 | 50,790 | 1,610 | 2,042 | 701 | 1,163 | 1,368 | 43,906 |
| 2039 | 51,777 | 1,641 | 2,082 | 714 | 1,186 | 1,394 | 44,759 |
| 2040 | 52,783 | 1,673 | 2,123 | 728 | 1,209 | 1,422 | 45,629 |
| 2041 | 53,809 | 1,706 | 2,164 | 742 | 1,232 | 1,449 | 46,516 |
| 2042 | 54,854 | 1,739 | 2,206 | 757 | 1,256 | 1,477 | 47,419 |
| 2043 | 55,920 | 1,773 | 2,249 | 771 | 1,281 | 1,506 | 48,340 |
| 2044 | 57,007 | 1,807 | 2,293 | 786 | 1,306 | 1,535 | 49,280 |
| 2045 | 58,114 | 1,842 | 2,337 | 802 | 1,331 | 1,565 | 50,237 |

Table 6: Service Area Population Forecasts 2021-2045

| | County Total | West Point | Net County Total* |
|------------------|--------------|------------|-------------------|
| 2020 | 35,921 | 967 | 34,954 |
| 2021 | 36,619 | 986 | 35,633 |
| 2022 | 37,330 | 1,005 | 36,325 |
| 2023 | 38,055 | 1,025 | 37,030 |
| 2024 | 38,795 | 1,045 | 37,750 |
| 2025 | 39,549 | 1,065 | 38,484 |
| 2026 | 40,317 | 1,086 | 39,231 |
| 2027 | 41,101 | 1,107 | 39,994 |
| 2028 | 41,899 | 1,128 | 40,771 |
| 2029 | 42,713 | 1,150 | 41,563 |
| 2030 | 43,543 | 1,173 | 42,370 |
| 2031 | 44,389 | 1,196 | 43,193 |
| 2032 | 45,252 | 1,219 | 44,033 |
| 2033 | 46,131 | 1,242 | 44,889 |
| 2034 | 47,027 | 1,267 | 45,760 |
| 2035 | 47,941 | 1,291 | 46,650 |
| 2036 | 48,873 | 1,316 | 47,557 |
| 2037 | 49,822 | 1,342 | 48,480 |
| 2038 | 50,790 | 1,368 | 49,422 |
| 2039 | 51,777 | 1,394 | 50,383 |
| 2040 | 52,783 | 1,422 | 51,361 |
| 2041 | 53,809 | 1,449 | 52,360 |
| 2042 | 54,854 | 1,477 | 53,377 |
| 2043 | 55,920 | 1,506 | 54,414 |
| 2044 | 57,007 | 1,535 | 55,472 |
| 2045 | 58,114 | 1,565 | 56,549 |
| Increase 2021-45 | 21,495 | 579 | 20,916 |

* The portion of the county outside of West Point, including the unincorporated area and all of the other cities.

■ Housing Unit Forecasts

Projecting new growth and development in terms of housing units is important because residential impact fees are assessed when building permits are issued for new units. Thus, the housing unit is used as the basis for assessing impact fees.

Using the housing unit for fee calculations rather than the number of residents that may occupy the housing unit is more equitable because the average number of residents in the unit, based on unit size, is unreliable. The number of people residing in a particular housing unit will most likely vary in the years ahead as lifestyles change, families grow, children grow up, occupants age, or the unit becomes occupied by a different household as the previous occupants move out. Thus, using average family sizes as the basis will vary widely as the years go by. This would result in a constant reassessment of the impact fees due because the demand for services would vary as the number of residents in the unit varies. Instead, using an average fee per housing unit based on average household sizes results in 'averaging' the demand for services which would otherwise vary as the population in the unit changes over time.

The future increase in the number of housing units in the county is based on the population forecasts presented in the previous section.

Household Projections

First, future population numbers from Table 5 are converted into the number of households expected in future years in the county as a whole, for each city, and for the unincorporated area.

This conversion is based on the average household size data taken from the 2010 Census for the county as a whole and for each city (the most recent reliable data available). These figures differ for each jurisdiction, and it is assumed that these ratios will persist into the future. The number of households in the unincorporated area of the county is determined by subtracting all of the city household numbers from the countywide total.

The results are shown on Table 7 on the following page.

Table 7: Households 2021-2045

| | County Total | Hamilton | Pine Mountain | Shiloh | Waverly Hall | West Point (pt) | Unincorporated |
|------------------|--------------|----------|---------------|--------|--------------|-----------------|----------------|
| 2020 | 13,262 | 3,747 | 618 | 193 | 269 | 398 | 8,037 |
| 2021 | 13,519 | 3,820 | 630 | 196 | 274 | 406 | 8,193 |
| 2022 | 13,782 | 3,894 | 643 | 200 | 279 | 414 | 8,352 |
| 2023 | 14,050 | 3,969 | 655 | 204 | 285 | 422 | 8,514 |
| 2024 | 14,323 | 4,047 | 668 | 208 | 290 | 430 | 8,680 |
| 2025 | 14,601 | 4,125 | 681 | 212 | 296 | 439 | 8,849 |
| 2026 | 14,885 | 4,205 | 694 | 216 | 302 | 447 | 9,020 |
| 2027 | 15,174 | 4,287 | 708 | 220 | 307 | 456 | 9,196 |
| 2028 | 15,469 | 4,370 | 721 | 225 | 313 | 465 | 9,374 |
| 2029 | 15,769 | 4,455 | 735 | 229 | 319 | 474 | 9,557 |
| 2030 | 16,076 | 4,542 | 750 | 233 | 326 | 483 | 9,742 |
| 2031 | 16,388 | 4,630 | 764 | 238 | 332 | 492 | 9,932 |
| 2032 | 16,707 | 4,720 | 779 | 243 | 338 | 502 | 10,125 |
| 2033 | 17,031 | 4,812 | 794 | 247 | 345 | 512 | 10,321 |
| 2034 | 17,362 | 4,905 | 810 | 252 | 352 | 522 | 10,522 |
| 2035 | 17,699 | 5,001 | 825 | 257 | 359 | 532 | 10,726 |
| 2036 | 18,044 | 5,098 | 841 | 262 | 365 | 542 | 10,935 |
| 2037 | 18,394 | 5,197 | 858 | 267 | 373 | 553 | 11,147 |
| 2038 | 18,751 | 5,298 | 874 | 272 | 380 | 563 | 11,364 |
| 2039 | 19,116 | 5,401 | 891 | 278 | 387 | 574 | 11,585 |
| 2040 | 19,487 | 5,506 | 909 | 283 | 395 | 585 | 11,810 |
| 2041 | 19,866 | 5,613 | 926 | 289 | 402 | 597 | 12,039 |
| 2042 | 20,252 | 5,722 | 944 | 294 | 410 | 608 | 12,273 |
| 2043 | 20,645 | 5,833 | 963 | 300 | 418 | 620 | 12,511 |
| 2044 | 21,047 | 5,946 | 981 | 306 | 426 | 632 | 12,755 |
| 2045 | 21,455 | 6,062 | 1,001 | 312 | 435 | 644 | 13,002 |
| Increase 2021-45 | 7,936 | 2,242 | 370 | 115 | 161 | 238 | 4,809 |
| Average HH Size | 2.7086 | 0.3039 | 2.3358 | 2.5723 | 3.0625 | 2.4286 | 3.8597 |

Note: Average household sizes are computed for each jurisdiction individually from 2010 Census data.

New Housing Units

A 'household' represents an occupied housing unit. Additional 'vacant' housing units, therefore, need to be added to the number of households in order to estimate the total number of housing units in the county and in each city.

This is accomplished by increasing the number of households in each jurisdiction with the vacancy rate reported in the 2010 Census (the latest and best available data). As above, these ratios are assumed to continue at the same ratio each year into the future on average.

To arrive at the estimated total housing units for each year, including vacant units, the number of households (i.e., occupied housing units) is increased by the applicable vacancy rate. These calculations are shown on Table 8.

Table 8: Housing Units 2021-2045

| | County Total | Hamilton | Pine Mountain | Shiloh | Waverly Hall | West Point (pt) | Unincorporated |
|------------------|--------------|----------|---------------|----------|--------------|-----------------|----------------|
| 2020 | 15,027 | 4,321 | 802 | 225 | 306 | 428 | 8,945 |
| 2021 | 15,319 | 4,405 | 817 | 229 | 312 | 436 | 9,120 |
| 2022 | 15,617 | 4,490 | 833 | 234 | 318 | 445 | 9,297 |
| 2023 | 15,920 | 4,577 | 849 | 238 | 324 | 453 | 9,479 |
| 2024 | 16,230 | 4,666 | 866 | 243 | 330 | 462 | 9,663 |
| 2025 | 16,545 | 4,757 | 883 | 248 | 336 | 471 | 9,850 |
| 2026 | 16,866 | 4,849 | 900 | 252 | 343 | 480 | 10,042 |
| 2027 | 17,194 | 4,944 | 917 | 257 | 350 | 490 | 10,236 |
| 2028 | 17,528 | 5,040 | 935 | 262 | 356 | 499 | 10,436 |
| 2029 | 17,869 | 5,138 | 953 | 267 | 363 | 509 | 10,639 |
| 2030 | 18,216 | 5,237 | 972 | 273 | 370 | 519 | 10,845 |
| 2031 | 18,570 | 5,339 | 991 | 278 | 378 | 529 | 11,055 |
| 2032 | 18,931 | 5,443 | 1,010 | 283 | 385 | 539 | 11,271 |
| 2033 | 19,299 | 5,549 | 1,029 | 289 | 392 | 550 | 11,490 |
| 2034 | 19,673 | 5,656 | 1,049 | 294 | 400 | 560 | 11,714 |
| 2035 | 20,056 | 5,766 | 1,070 | 300 | 408 | 571 | 11,941 |
| 2036 | 20,446 | 5,878 | 1,091 | 306 | 416 | 582 | 12,173 |
| 2037 | 20,843 | 5,993 | 1,112 | 312 | 424 | 594 | 12,408 |
| 2038 | 21,248 | 6,109 | 1,133 | 318 | 432 | 605 | 12,651 |
| 2039 | 21,661 | 6,228 | 1,155 | 324 | 440 | 617 | 12,897 |
| 2040 | 22,081 | 6,349 | 1,178 | 330 | 449 | 629 | 13,146 |
| 2041 | 22,511 | 6,472 | 1,201 | 337 | 458 | 641 | 13,402 |
| 2042 | 22,948 | 6,598 | 1,224 | 343 | 467 | 654 | 13,662 |
| 2043 | 23,394 | 6,726 | 1,248 | 350 | 476 | 666 | 13,928 |
| 2044 | 23,848 | 6,857 | 1,272 | 357 | 485 | 679 | 14,198 |
| 2045 | 24,312 | 6,990 | 1,297 | 364 | 494 | 692 | 14,475 |
| Increase 2021-45 | 8,993 | 2,585 | 480 | 135 | 182 | 256 | 5,355 |
| Vacancy Rate | 13.3130% | 15.3156% | 29.6226% | 16.7630% | 13.7500% | 7.4286% | 11.3677% |

Note: Vacany rates for the County and its cities are computed individually from 2010 Census data.

■ Employment Forecasts

For the employment projections, we looked first to the countywide forecasts prepared by Woods & Poole (W&P). W&P counts jobs, not just employed people, which captures people holding two or more jobs, self-employed sole proprietors and part-time workers, as well as vacant positions. This gives a more complete picture than Census figures (which report only the number of people with jobs).

On Table 9 on the following page, the number of jobs shown include the types of jobs that would not be associated with an impact fee (such as farm workers, itinerant construction workers and governmental employees). The remaining employment, called the 'value-added jobs', would be businesses subject to impact fees.

The Woods & Poole job numbers have been adjusted for Harris County because of an apparent undercount by Woods & Poole. The population forecast for Harris County by Woods & Poole to 2045 is only 46,990, compared to the population forecast for this report at 58,114, which is 24% higher. Looking at every year since 2020, the population forecast in this report is 3% higher in 2021 and progressively increases every year to 2045.

The jobs numbers shown on Table 9 for each year have therefore been adjusted across the board by the applicable percentage representing the 'undercount' in the year indicated.

Table 9: County-wide Employment Forecast (Jobs)

| | 2020 | 2021 | 2025 | 2030 | 2035 | 2040 | 2045 | 2021-2045 Change | |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------|--------------|
| | | | | | | | | Number | Percent |
| Total Employment | 10,901 | 11,110 | 11,918 | 12,947 | 14,022 | 15,160 | 16,374 | 5,264 | 32.1% |
| Farm Employment | 261 | 263 | 272 | 284 | 295 | 308 | 321 | 58 | 18.1% |
| Forestry, Fishing | 94 | 95 | 101 | 107 | 113 | 120 | 126 | 31 | 24.6% |
| Mining | 30 | 32 | 35 | 41 | 50 | 59 | 70 | 38 | 54.3% |
| Construction | 917 | 936 | 1,017 | 1,127 | 1,248 | 1,379 | 1,525 | 589 | 38.6% |
| Total Non-Building | 1,302 | 1,326 | 1,425 | 1,559 | 1,706 | 1,866 | 2,042 | 716 | 35.1% |
| Federal Civilian | 61 | 61 | 63 | 65 | 67 | 71 | 74 | 13 | 17.6% |
| Federal Military | 96 | 96 | 99 | 103 | 108 | 113 | 117 | 21 | 17.9% |
| State & Local Government | 1,369 | 1,389 | 1,474 | 1,583 | 1,699 | 1,822 | 1,950 | 561 | 28.8% |
| Total Government | 1,526 | 1,546 | 1,636 | 1,751 | 1,874 | 2,006 | 2,141 | 595 | 27.8% |
| Utilities | 57 | 56 | 57 | 58 | 59 | 60 | 61 | 5 | 8.2% |
| Manufacturing | 1,281 | 1,295 | 1,331 | 1,382 | 1,433 | 1,488 | 1,542 | 247 | 16.0% |
| Wholesale Trade | 147 | 150 | 160 | 169 | 177 | 185 | 194 | 44 | 22.7% |
| Retail Trade | 781 | 798 | 846 | 893 | 935 | 974 | 1,013 | 215 | 21.2% |
| Transportation & Warehousing | 534 | 545 | 589 | 647 | 708 | 771 | 839 | 294 | 35.0% |
| Information | 54 | 54 | 57 | 60 | 64 | 68 | 72 | 18 | 25.0% |
| Finance & Insurance | 552 | 572 | 643 | 717 | 776 | 822 | 857 | 285 | 33.3% |
| Real Estate | 627 | 658 | 794 | 991 | 1,229 | 1,516 | 1,863 | 1,205 | 64.7% |
| Professional & Technical Services | 375 | 383 | 413 | 448 | 482 | 516 | 549 | 166 | 30.2% |
| Management of Companies | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 1 | 20.0% |
| Administrative & Waste Services | 679 | 694 | 753 | 831 | 911 | 996 | 1,087 | 393 | 36.2% |
| Educational Services | 241 | 247 | 269 | 295 | 321 | 348 | 373 | 126 | 33.8% |
| Health Care & Social Assistance | 793 | 802 | 838 | 884 | 930 | 969 | 1,004 | 202 | 20.1% |
| Arts, Entertainment & Recreation | 380 | 384 | 401 | 423 | 443 | 463 | 483 | 99 | 20.5% |
| Accommodation & Food Services | 560 | 567 | 590 | 616 | 639 | 661 | 681 | 114 | 16.7% |
| Other Private Services | 1,008 | 1,029 | 1,112 | 1,218 | 1,330 | 1,446 | 1,568 | 539 | 34.4% |
| Total Value-Added | 8,073 | 8,238 | 8,857 | 9,637 | 10,442 | 11,288 | 12,191 | 3,953 | 32.4% |

Source: Woods & Poole Economics, Inc., 2020 Georgia Data Book, Harris County, as adjusted.

Table 10 provides a summary of future jobs in Harris County taken from Table 9 for the years shown on that table and interpolated for each year in between. As noted above, it is the 'value-added' jobs that impact fees can be applied to.

Table 10: Summary - Countywide Jobs

| | Total Jobs | Non-Building Related | Government | Value-Added Jobs |
|-------------------------|-------------------|-----------------------------|-------------------|-------------------------|
| 2021 | 11,110 | 1,326 | 1,546 | 8,238 |
| 2022 | 11,312 | 1,351 | 1,569 | 8,393 |
| 2023 | 11,514 | 1,376 | 1,591 | 8,548 |
| 2024 | 11,716 | 1,400 | 1,614 | 8,702 |
| 2025 | 11,918 | 1,425 | 1,636 | 8,857 |
| 2026 | 12,124 | 1,452 | 1,659 | 9,013 |
| 2027 | 12,330 | 1,479 | 1,682 | 9,169 |
| 2028 | 12,535 | 1,505 | 1,705 | 9,325 |
| 2029 | 12,741 | 1,532 | 1,728 | 9,481 |
| 2030 | 12,947 | 1,559 | 1,751 | 9,637 |
| 2031 | 13,162 | 1,588 | 1,776 | 9,798 |
| 2032 | 13,377 | 1,618 | 1,800 | 9,959 |
| 2033 | 13,592 | 1,647 | 1,825 | 10,120 |
| 2034 | 13,807 | 1,677 | 1,849 | 10,281 |
| 2035 | 14,022 | 1,706 | 1,874 | 10,442 |
| 2036 | 14,250 | 1,738 | 1,900 | 10,611 |
| 2037 | 14,477 | 1,770 | 1,927 | 10,780 |
| 2038 | 14,705 | 1,802 | 1,953 | 10,950 |
| 2039 | 14,932 | 1,834 | 1,980 | 11,119 |
| 2040 | 15,160 | 1,866 | 2,006 | 11,288 |
| 2041 | 15,403 | 1,901 | 2,033 | 11,469 |
| 2042 | 15,646 | 1,936 | 2,060 | 11,649 |
| 2043 | 15,888 | 1,972 | 2,087 | 11,830 |
| 2044 | 16,131 | 2,007 | 2,114 | 12,010 |
| 2045 | 16,374 | 2,042 | 2,141 | 12,191 |
| Increase 2021-45 | 5,264 | 716 | 595 | 3,953 |

■ Service Area Forecasts

Various county services are each provided in one of two service areas. Housing unit, population, and employment forecasts are presented on the following tables for each service area.

The service area is *countywide* for the Sheriff's Office & Jail and the Parks & Recreation public facility categories. These services are delivered by Harris County throughout the county and are available to all residents regardless of the whether a municipal police department or recreation department provides similar services within the incorporated areas. Countywide growth forecasts are shown on Table 11 for these services.

For Parks & Recreation services, only new residential development is assessed impact fees. Accordingly, impact fees are assessed exclusively on the basis of housing units. For the Sheriff and Jail, fees are based on the day-night population (i.e., residents and employee) because both residential and nonresidential development is assessed impact fees.

The service area is *countywide outside of West Point* for Fire Protection, EMS, and E-911 services. These services are provided throughout the county with the exception of West Point. That city has established Fire, EMS and E-911 departments of its own.

For Fire Protection, EMS, and E-911, impact fees are based on future growth throughout the county but excluding the portion of West Point that is inside the county. For each of these public facility categories, impact fees for residential uses are assessed on the basis of housing unit growth, while nonresidential uses are assessed using future growth in the 'day-night' population. See Table 12.

Table 11: Future Growth Forecasts - Countywide

| | Residential Uses | Nonresidential Uses | | |
|-------------------------|------------------|---------------------|------------------|----------------------|
| | Housing Units | Population | Value-Added Jobs | Day-Night Population |
| 2020 | 15,027 | 35,921 | 8,073 | 43,994 |
| 2021 | 15,319 | 36,619 | 8,238 | 44,857 |
| 2022 | 15,617 | 37,330 | 8,393 | 45,723 |
| 2023 | 15,920 | 38,055 | 8,548 | 46,603 |
| 2024 | 16,230 | 38,795 | 8,702 | 47,497 |
| 2025 | 16,545 | 39,549 | 8,857 | 48,406 |
| 2026 | 16,866 | 40,317 | 9,013 | 49,330 |
| 2027 | 17,194 | 41,101 | 9,169 | 50,270 |
| 2028 | 17,528 | 41,899 | 9,325 | 51,224 |
| 2029 | 17,869 | 42,713 | 9,481 | 52,194 |
| 2030 | 18,216 | 43,543 | 9,637 | 53,180 |
| 2031 | 18,570 | 44,389 | 9,798 | 54,187 |
| 2032 | 18,931 | 45,252 | 9,959 | 55,211 |
| 2033 | 19,299 | 46,131 | 10,120 | 56,251 |
| 2034 | 19,673 | 47,027 | 10,281 | 57,308 |
| 2035 | 20,056 | 47,941 | 10,442 | 58,383 |
| 2036 | 20,446 | 48,873 | 10,611 | 59,484 |
| 2037 | 20,843 | 49,822 | 10,780 | 60,602 |
| 2038 | 21,248 | 50,790 | 10,950 | 61,740 |
| 2039 | 21,661 | 51,777 | 11,119 | 62,896 |
| 2040 | 22,081 | 52,783 | 11,288 | 64,071 |
| 2041 | 22,511 | 53,809 | 11,469 | 65,278 |
| 2042 | 22,948 | 54,854 | 11,649 | 66,503 |
| 2043 | 23,394 | 55,920 | 11,830 | 67,750 |
| 2044 | 23,848 | 57,007 | 12,010 | 69,017 |
| 2045 | 24,312 | 58,114 | 12,191 | 70,305 |
| Increase 2021-45 | 8,993 | 21,495 | 3,953 | 25,448 |

Table 12: Future Growth Forecasts - Countywide Excluding West Point

| | Residential Uses | Nonresidential Uses | | |
|-------------------------|------------------|---------------------|------------------|----------------------|
| | Housing Units | Population | Value-Added Jobs | Day-Night Population |
| 2020 | 14,599 | 34,954 | 7,856 | 42,810 |
| 2021 | 14,883 | 35,633 | 8,016 | 43,649 |
| 2022 | 15,172 | 36,325 | 8,167 | 44,492 |
| 2023 | 15,467 | 37,030 | 8,317 | 45,347 |
| 2024 | 15,768 | 37,750 | 8,468 | 46,218 |
| 2025 | 16,074 | 38,484 | 8,618 | 47,102 |
| 2026 | 16,386 | 39,231 | 8,770 | 48,001 |
| 2027 | 16,704 | 39,994 | 8,922 | 48,916 |
| 2028 | 17,029 | 40,771 | 9,074 | 49,845 |
| 2029 | 17,360 | 41,563 | 9,226 | 50,789 |
| 2030 | 17,697 | 42,370 | 9,377 | 51,747 |
| 2031 | 18,041 | 43,193 | 9,534 | 52,727 |
| 2032 | 18,392 | 44,033 | 9,691 | 53,724 |
| 2033 | 18,749 | 44,889 | 9,847 | 54,736 |
| 2034 | 19,113 | 45,760 | 10,004 | 55,764 |
| 2035 | 19,485 | 46,650 | 10,161 | 56,811 |
| 2036 | 19,864 | 47,557 | 10,325 | 57,882 |
| 2037 | 20,249 | 48,480 | 10,490 | 58,970 |
| 2038 | 20,643 | 49,422 | 10,655 | 60,077 |
| 2039 | 21,044 | 50,383 | 10,819 | 61,202 |
| 2040 | 21,452 | 51,361 | 10,984 | 62,345 |
| 2041 | 21,870 | 52,360 | 11,160 | 63,520 |
| 2042 | 22,294 | 53,377 | 11,335 | 64,712 |
| 2043 | 22,728 | 54,414 | 11,511 | 65,925 |
| 2044 | 23,169 | 55,472 | 11,687 | 67,159 |
| 2045 | 23,620 | 56,549 | 11,863 | 68,412 |
| Increase 2021-45 | 8,737 | 20,916 | 3,847 | 24,763 |

Adjustments and Credits

■ 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 section describes the methodologies used to make appropriate adjustments to capital improvement project cost figures, both past and future, 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 a discount rate for future costs that have been inflated to the year of expenditure. In essence, the present value is considered in light of the value of money as it changes over time because of inflation.

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 five years ago; what is important is the money was spent five 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 when the expenditure will be made. 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 section, 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 cost 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. Essentially, 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 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 as they build up. This 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.

■ Cost Inflatoms

Three different cost inflators are used in the impact fee calculations, based on the type of project being considered. For infrastructure projects, a ‘construction cost inflator’ is used. For projects that require construction of a structure (such as a fire station expansion), a ‘building cost inflator’ is used as the appropriate inflation rate. For all non-construction types of projects (such as a fire truck or park land), 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 are calibrated regionally. For calculation of the CCI and the BCI, ENR sets its indexes in 1913 at 100.

Construction Cost Inflator

Table 13 uses the example of a calculation of the annual average rate of increase reflected in construction costs. For this analysis, the 2010-2020 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 13: Construction Cost Inflator – CCI

| Year | Amount | CCI* | | Effect of Inflation | |
|------|---------------|----------|----------|---------------------|-------------------|
| | | 1913=100 | 2010=1.0 | CCI | Avg. Rate = |
| | | | | | 1.6291673% |
| 2010 | \$ 100,000.00 | 5,742.83 | 1.000000 | \$ 100,000.00 | \$ 100,000.00 |
| 2011 | | 5,829.65 | 1.015118 | 101,511.78 | \$ 101,629.17 |
| 2012 | | 5,892.64 | 1.026087 | 102,608.66 | \$ 103,284.88 |
| 2013 | | 5,983.23 | 1.041861 | 104,186.15 | \$ 104,967.56 |
| 2014 | | 6,147.52 | 1.070469 | 107,046.94 | \$ 106,677.66 |
| 2015 | | 6,245.74 | 1.087572 | 108,757.20 | \$ 108,415.61 |
| 2016 | | 6,277.14 | 1.093039 | 109,303.91 | \$ 110,181.89 |
| 2017 | | 6,433.18 | 1.120212 | 112,021.20 | \$ 111,976.93 |
| 2018 | | 6,592.98 | 1.148037 | 114,803.70 | \$ 113,801.23 |
| 2019 | | 6,681.50 | 1.163450 | 116,345.04 | \$ 115,655.24 |
| 2020 | | 6,750.41 | 1.175450 | 117,545.04 | \$ 117,539.45 |
| | | | | \$ 1,194,129.62 | \$ 1,194,129.62 |

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

The table above shows a construction project that cost \$100,000 in 2010, and how much the same project would cost in each subsequent year using the Construction Cost Index published by Engineering News Record for the Atlanta area. Setting the 2010 Construction Cost Index (CCI) at '1.0,' the increase in the CCI as a multiple of 2010 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 2010-2020 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 infrastructure 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 (BCI) for each year from 2010 through 2020, and is calculated in the same manner as described above for the Construction Cost Inflator. Table 14 shows the results.

Table 14: Building Cost Inflator – BCI

| Year | Amount | BCI* | | Effect of Inflation | |
|------|---------------|----------|----------|---------------------|-------------------|
| | | 1913=100 | 2010=1.0 | BCI | Avg. Rate = |
| | | | | | 2.1015000% |
| 2010 | \$ 100,000.00 | 3,736.56 | 1.000000 | \$ 100,000.00 | \$ 100,000.00 |
| 2011 | | 3,837.47 | 1.027007 | \$ 102,700.70 | \$ 102,101.50 |
| 2012 | | 3,970.93 | 1.062725 | \$ 106,272.51 | \$ 104,247.16 |
| 2013 | | 4,022.11 | 1.076421 | \$ 107,642.11 | \$ 106,437.92 |
| 2014 | | 4,076.81 | 1.091061 | \$ 109,106.07 | \$ 108,674.71 |
| 2015 | | 4,108.05 | 1.099420 | \$ 109,942.02 | \$ 110,958.51 |
| 2016 | | 4,126.72 | 1.104418 | \$ 110,441.79 | \$ 113,290.30 |
| 2017 | | 4,278.39 | 1.145010 | \$ 114,500.96 | \$ 115,671.10 |
| 2018 | | 4,408.94 | 1.179947 | \$ 117,994.71 | \$ 118,101.93 |
| 2019 | | 4,523.59 | 1.210631 | \$ 121,063.09 | \$ 120,583.84 |
| 2020 | | 4,615.43 | 1.235209 | \$ 123,520.92 | \$ 123,117.91 |
| | | | | \$ 1,223,184.88 | \$ 1,223,184.88 |

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

CPI Inflator

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 15 shows the CPI figures for every year since 1982, updated to the most recently reported year (2019).

Using an annual expenditure of \$10,000 as an example, the multipliers on Table 15 yield the figures shown for the CPI on the table under the ‘present value’ heading. Cumulatively, the \$380,000 spent over the 1982-2019 period would have a total present value of \$600,974.62 in today’s dollars. Considering the present value figures for the \$10,000 annual expenditures, an average annual inflation rate of more than 2.572% yields the same total amount over the 1982-2019 period.

The 37-year average of annual CPI change (the period of 1982-2019) shown on Table 15 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 ten years from 2009 to 2019, an average annual inflation rate of slightly less than 1.72% best captures the change over that period. This lower inflation rate (compared to the 1982-2019 period) is assumed to be experienced 'on average' in future years, and is used for inflator calculations for future non-construction expenditures.

Table 15: Non-Construction Cost Inflator – CPI

| Year | Amount | CPI* | | Present Value: CPI | Long Term Inflator = | 10-Year Inflator = |
|---------|---------------|-------------|----------|--------------------|----------------------|--------------------|
| | | 1982-84=100 | 2019=1.0 | | | |
| | | | | | 2.33280065% | |
| 1982 | \$ 10,000.00 | 96.50 | 2.64929 | \$ 26,492.91 | \$ 23,471.99 | |
| 1983 | \$ 10,000.00 | 99.60 | 2.56883 | \$ 25,688.33 | \$ 22,936.91 | |
| 1984 | \$ 10,000.00 | 103.90 | 2.48060 | \$ 24,606.02 | \$ 22,414.04 | |
| 1985 | \$ 10,000.00 | 107.60 | 2.37599 | \$ 23,759.91 | \$ 21,903.08 | |
| 1986 | \$ 10,000.00 | 109.60 | 2.33283 | \$ 23,326.33 | \$ 21,403.78 | |
| 1987 | \$ 10,000.00 | 113.60 | 2.25050 | \$ 22,504.98 | \$ 20,915.85 | |
| 1988 | \$ 10,000.00 | 118.30 | 2.16109 | \$ 21,610.87 | \$ 20,439.05 | |
| 1989 | \$ 10,000.00 | 124.00 | 2.06175 | \$ 20,617.47 | \$ 19,973.12 | |
| 1990 | \$ 10,000.00 | 130.70 | 1.95606 | \$ 19,560.56 | \$ 19,517.80 | |
| 1991 | \$ 10,000.00 | 136.20 | 1.87707 | \$ 18,770.67 | \$ 19,072.87 | |
| 1992 | \$ 10,000.00 | 140.30 | 1.82221 | \$ 18,222.14 | \$ 18,638.08 | |
| 1993 | \$ 10,000.00 | 144.50 | 1.78925 | \$ 17,892.50 | \$ 18,213.20 | |
| 1994 | \$ 10,000.00 | 148.20 | 1.72508 | \$ 17,250.78 | \$ 17,798.01 | |
| 1995 | \$ 10,000.00 | 152.40 | 1.67754 | \$ 16,775.37 | \$ 17,392.28 | |
| 1996 | \$ 10,000.00 | 156.90 | 1.62942 | \$ 16,294.24 | \$ 16,995.81 | |
| 1997 | \$ 10,000.00 | 160.50 | 1.59288 | \$ 15,928.76 | \$ 16,608.37 | |
| 1998 | \$ 10,000.00 | 163.00 | 1.56845 | \$ 15,684.45 | \$ 16,229.76 | |
| 1999 | \$ 10,000.00 | 166.60 | 1.53455 | \$ 15,345.53 | \$ 15,859.78 | |
| 2000 | \$ 10,000.00 | 172.20 | 1.48465 | \$ 14,846.49 | \$ 15,498.24 | |
| 2001 | \$ 10,000.00 | 177.10 | 1.44357 | \$ 14,435.72 | \$ 15,144.94 | |
| 2002 | \$ 10,000.00 | 179.90 | 1.42110 | \$ 14,211.04 | \$ 14,799.69 | |
| 2003 | \$ 10,000.00 | 184.00 | 1.38944 | \$ 13,894.38 | \$ 14,462.31 | |
| 2004 | \$ 10,000.00 | 188.90 | 1.35340 | \$ 13,533.96 | \$ 14,132.63 | |
| 2005 | \$ 10,000.00 | 195.30 | 1.30905 | \$ 13,090.45 | \$ 13,810.46 | |
| 2006 | \$ 10,000.00 | 201.60 | 1.26814 | \$ 12,681.38 | \$ 13,495.63 | 1.719932% |
| 2007 | \$ 10,000.00 | 207.34 | 1.23302 | \$ 12,330.19 | \$ 13,187.98 | |
| 2008 | \$ 10,000.00 | 215.30 | 1.18743 | \$ 11,874.27 | \$ 12,887.35 | |
| 2009 | \$ 10,000.00 | 214.54 | 1.19167 | \$ 11,916.67 | \$ 12,593.56 | \$ 11,859.34 |
| 2010 | \$ 10,000.00 | 218.08 | 1.17244 | \$ 11,724.35 | \$ 12,306.48 | \$ 11,658.82 |
| 2011 | \$ 10,000.00 | 224.94 | 1.13656 | \$ 11,365.60 | \$ 12,025.94 | \$ 11,461.69 |
| 2012 | \$ 10,000.00 | 229.59 | 1.11352 | \$ 11,135.16 | \$ 11,751.79 | \$ 11,267.89 |
| 2013 | \$ 10,000.00 | 232.96 | 1.09744 | \$ 10,974.41 | \$ 11,483.89 | \$ 11,077.36 |
| 2014 | \$ 10,000.00 | 236.74 | 1.07992 | \$ 10,799.23 | \$ 11,222.10 | \$ 10,890.06 |
| 2015 | \$ 10,000.00 | 237.02 | 1.07884 | \$ 10,786.42 | \$ 10,966.28 | \$ 10,705.93 |
| 2016 | \$ 10,000.00 | 240.01 | 1.06520 | \$ 10,652.04 | \$ 10,716.29 | \$ 10,524.90 |
| 2017 | \$ 10,000.00 | 245.12 | 1.04299 | \$ 10,429.85 | \$ 10,472.00 | \$ 10,346.94 |
| 2018 | \$ 10,000.00 | 251.11 | 1.01812 | \$ 10,181.19 | \$ 10,233.28 | \$ 10,171.99 |
| 2019 | \$ 10,000.00 | 255.66 | 1.00000 | \$ 10,000.00 | \$ 10,000.00 | \$ 10,000.00 |
| 1982-19 | \$ 380,000.00 | | | \$ 600,974.62 | \$ 600,974.62 | |
| 2009-19 | \$ 110,000.00 | | | \$ 119,964.92 | ←→ | \$ 119,964.92 |

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

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 recreation center), the current cost estimate for the project is inflated into the future using the average Building Cost Inflater (from Table 14) 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 0.00005%) since this reflects the present value of a future amount of money.

For other construction projects (such as playground equipment), the current cost estimate for the project is inflated into the future using the average Construction Cost Inflater (from Table 13) applied to the number of years until the year planned for its installation. 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 purchase of an ambulance or land acquisition), the 10-year average CPI inflater (from Table 15) 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.

■ Tax Credits

An important restriction on an impact fee program is that new growth and development cannot be charged more in impact fees than their 'fair share' of the cost of funding the public facilities needed to serve just that new growth. The calculation of that 'fair share' is intrinsic to the impact fee calculations carried out in the chapters addressing each public facility category in this report. There is a situation, however, in which new development will be paying property taxes for the same projects for which impact fees are being assessed. This situation relates to the portion of impact fee projects that are not eligible for impact fee funding (such as a project that is only 90% impact fee eligible).

Per-Project Funding Shortfall Credit

As noted, some capital projects in the impact fee program may have portions that are not 100% impact fee eligible. These are situations in which a project serves both a future (impact fee eligible) need *and* a need to provide service to the current residents and businesses at the same level of service as new growth. Funding for these non-eligible portions are the responsibility of the current residents and businesses, not new growth.

To the extent that new growth will be contributing property taxes for non-eligible portions of impact fee projects (for which they are not financially responsible), a credit must be applied reflecting these tax collections in order to avoid new growth paying more than their 'fair share' of total costs.

For individual projects that are only partially eligible for impact fee funding, it is assumed for calculation purposes that the non-eligible portions will be covered by General Fund revenue.

Since both existing and future residents and businesses will be paying the property taxes, the situation that new growth would be paying both impact fees to cover its fair share of the costs and generating property taxes that can be used to cover the (ineligible) portion of the cost for which it is not responsible results in a form of 'double taxation'. This credit reduces the impact fee portion to account for the tax contribution.

To the extent that credits are due, they are subtracted from the impact fee project costs as part of the calculation of maximum impact fees allowed within each of the public facility chapters to which they apply.

The sections on the next eight pages explain how these credits are calculated.

Current Property Tax Bases

The two tables below on this page and the next page show the current tax base figures for the county as a whole (including all of the incorporated areas), and secondly the entire county except for West Point. These tables and the projections that follow form the basis leading up to the '% New Growth' columns on Table 20 and Table 21. It is the percentages in the '% New Growth' columns that are applied as a credit against any portion of an impact fee project that is not impact fee eligible.

Table 16 summarizes the current property tax base for the entire county, as reported to the State Department of Revenue. All properties in the county are assessed at the rate of 40% of their actual value. An additional column showing the total tax valuation calculated at 100% has been added for informational purposes. The abbreviation 'M&O' means Maintenance and Operations, which is the historical term for the General Fund tax levy or millage rate.

Table 16: Harris County Tax Base

| Category | Total Assessed Value (@40%) | Total Tax Valuation (100% value) |
|-----------------------------|-----------------------------|----------------------------------|
| Residential | \$ 967,185,962 | \$ 2,417,964,905 |
| Agricultural | \$ 173,799,025 | \$ 434,497,563 |
| Preferential | \$ 35,462 | \$ 88,655 |
| Conservation Use | \$ 122,536,623 | \$ 306,341,558 |
| Forest Conservation | \$ 41,926,680 | \$ 104,816,700 |
| Environmentally Sensitive | \$ 40,666,982 | \$ 101,667,455 |
| Commercial | \$ 73,904,039 | \$ 184,760,098 |
| Industrial | \$ 44,567,104 | \$ 111,417,760 |
| Utility | \$ 113,499,886 | \$ 283,749,715 |
| Motor Vehicle | \$ 22,932,660 | \$ 57,331,650 |
| Mobile Home | \$ 1,528,242 | \$ 3,820,605 |
| Timber | \$ 4,862,332 | \$ 12,155,830 |
| Heavy Equipment | \$ 375,464 | \$ 938,660 |
| Gross Digest | \$ 1,607,820,461 | \$ 4,019,551,153 |
| Exempt Residential | \$ 223,257,471 | \$ 558,143,678 |
| Exempt Environmental | \$ 40,666,982 | \$ 1,859,821,228 |
| Net M&O Tax Base | \$ 1,343,896,008 | \$ 3,359,740,020 |

Source: Ga Dept. of Revenue, Harris County Tax Digest, 2020.

The following Table 17 shows the same information for all of Harris County except for the portion of West Point located within the county. Because West Point provides fire, EMS and E-911 services to its residents itself, those County services would not be counted as serving West Point.

Table 17: Harris County Tax Base minus West Point

| Category | Total Assessed Value (@40%) | Total Tax Valuation (100% value) |
|-----------------------------|------------------------------------|---|
| Residential | \$ 942,916,694 | \$ 2,357,291,735 |
| Agricultural | \$ 173,094,302 | \$ 432,735,755 |
| Preferential | \$ 35,462 | \$ 88,655 |
| Conservation Use | \$ 122,338,097 | \$ 305,845,243 |
| Forest Conservation | \$ 41,926,680 | \$ 104,816,700 |
| Environmentally Sensitive | \$ 40,666,982 | \$ 101,667,455 |
| Commercial | \$ 68,332,554 | \$ 170,831,385 |
| Industrial | \$ 23,118,615 | \$ 57,796,538 |
| Utility | \$ 113,140,115 | \$ 282,850,288 |
| Motor Vehicle | \$ 22,637,200 | \$ 56,593,000 |
| Mobile Home | \$ 1,528,242 | \$ 3,820,605 |
| Timber | \$ 4,862,332 | \$ 12,155,830 |
| Heavy Equipment | \$ 375,464 | \$ 938,660 |
| Gross Digest | \$ 1,554,972,739 | \$ 3,887,431,848 |
| Exempt Residential | 220,235,628 | \$ 550,589,070 |
| Exempt Environmental | 40,666,982 | \$ 1,806,702,665 |
| Net M&O Tax Base | 1,294,070,129 | \$ 3,235,175,323 |

Source: Ga Dept. of Revenue, Harris County Tax Digest, 2020.

Countywide Tax Base Projections

In the following table, the total value added to the tax base by new growth and development throughout the county is calculated. New houses recently constructed for owner occupancy in the county⁵ are being offered at an overall average sales price of \$406,349, which would be a tax assessment value of \$162,540.

⁵ On June 22, 2021, Zillow reported 70 newly constructed homes for sale or on offer for single-family occupancy (none in West Point). Overall, offering prices ranged from a low of \$253,990 to a high of \$547,699.

Countywide nonresidential value added is calculated as the assessed value of all commercial, industrial and utility property in the county divided by the current number of 'value-added' jobs in the county, resulting in a figure of \$28,159 in assessed value per employee.

[The value added is expressed in *assessed* value terms; this is 40% of the market or appraised value. Millage rates are applied to assessed value, rather than appraised.]

Table 18: Tax Base Increases from New Growth – Countywide

| Year | Residential | | | Non-Residential | | | Total Annual Added Assessed Value |
|------|---------------------|-------------------|-----------------------|-----------------------|---------------|------------------------|-----------------------------------|
| | Total Housing Units | New Housing Units | Added Assessed Value* | Value-Added Employees | New Employees | Added Assessed Value** | |
| 2021 | 15,319 | | | 8,238 | | | |
| 2022 | 15,617 | 298 | \$ 48,436,801 | 8,393 | 155 | \$ 4,364,645 | \$ 52,801,446 |
| 2023 | 15,920 | 303 | \$ 49,249,499 | 8,548 | 155 | \$ 4,364,645 | \$ 53,614,144 |
| 2024 | 16,230 | 310 | \$ 50,387,276 | 8,702 | 155 | \$ 4,364,645 | \$ 54,751,921 |
| 2025 | 16,545 | 315 | \$ 51,199,974 | 8,857 | 155 | \$ 4,364,645 | \$ 55,564,619 |
| 2026 | 16,866 | 321 | \$ 52,175,212 | 9,013 | 156 | \$ 4,392,804 | \$ 56,568,016 |
| 2027 | 17,194 | 328 | \$ 53,312,989 | 9,169 | 156 | \$ 4,392,804 | \$ 57,705,793 |
| 2028 | 17,528 | 334 | \$ 54,288,226 | 9,325 | 156 | \$ 4,392,804 | \$ 58,681,030 |
| 2029 | 17,869 | 341 | \$ 55,426,004 | 9,481 | 156 | \$ 4,392,804 | \$ 59,818,808 |
| 2030 | 18,216 | 347 | \$ 56,401,241 | 9,637 | 156 | \$ 4,392,804 | \$ 60,794,045 |
| 2031 | 18,570 | 354 | \$ 57,539,018 | 9,798 | 161 | \$ 4,533,599 | \$ 62,072,617 |
| 2032 | 18,931 | 361 | \$ 58,676,796 | 9,959 | 161 | \$ 4,533,599 | \$ 63,210,395 |
| 2033 | 19,299 | 368 | \$ 59,814,573 | 10,120 | 161 | \$ 4,533,599 | \$ 64,348,172 |
| 2034 | 19,673 | 374 | \$ 60,789,810 | 10,281 | 161 | \$ 4,533,599 | \$ 65,323,409 |
| 2035 | 20,056 | 383 | \$ 62,252,667 | 10,442 | 161 | \$ 4,533,599 | \$ 66,786,266 |
| 2036 | 20,446 | 390 | \$ 63,390,444 | 10,611 | 169 | \$ 4,758,871 | \$ 68,149,315 |
| 2037 | 20,843 | 397 | \$ 64,528,221 | 10,780 | 169 | \$ 4,758,871 | \$ 69,287,092 |
| 2038 | 21,248 | 405 | \$ 65,828,538 | 10,950 | 169 | \$ 4,758,871 | \$ 70,587,409 |
| 2039 | 21,661 | 413 | \$ 67,128,855 | 11,119 | 169 | \$ 4,758,871 | \$ 71,887,726 |
| 2040 | 22,081 | 420 | \$ 68,266,632 | 11,288 | 169 | \$ 4,758,871 | \$ 73,025,503 |
| 2041 | 22,511 | 430 | \$ 69,892,028 | 11,469 | 181 | \$ 5,096,779 | \$ 74,988,807 |
| 2042 | 22,948 | 437 | \$ 71,029,805 | 11,649 | 181 | \$ 5,096,779 | \$ 76,126,584 |
| 2043 | 23,394 | 446 | \$ 72,492,662 | 11,830 | 181 | \$ 5,096,779 | \$ 77,589,441 |
| 2044 | 23,848 | 454 | \$ 73,792,978 | 12,010 | 181 | \$ 5,096,779 | \$ 78,889,757 |
| 2045 | 24,312 | 464 | \$ 75,418,374 | 12,191 | 181 | \$ 5,096,779 | \$ 80,515,153 |

*New housing unit value is estimated at a median assessed value per housing unit of: \$ 162,540

**Nonresidential value is estimated at an assessed value per employee of: \$ 28,159

Tax Base Projections – Countywide Outside of West Point

The following table follows the same path as described for the county as a whole, above in Table 18, but based on housing unit and value-added job forecasts taken from Table 12: Future Growth Forecasts - Countywide Excluding West Point.

Table 19: Tax Base Increases from New Growth - Outside West Point

| Year | Residential | | | Non-Residential | | | Total Annual Added Assessed Value |
|------|---------------------|-------------------|-----------------------|-----------------------|---------------|------------------------|-----------------------------------|
| | Total Housing Units | New Housing Units | Added Assessed Value* | Value-Added Employees | New Employees | Added Assessed Value** | |
| 2021 | 14,883 | | | 8,016 | | | |
| 2022 | 15,172 | 289 | \$ 46,973,944 | 8,167 | 151 | \$ 3,853,973 | \$ 50,827,917 |
| 2023 | 15,467 | 295 | \$ 47,949,182 | 8,317 | 150 | \$ 3,828,450 | \$ 51,777,632 |
| 2024 | 15,768 | 301 | \$ 48,924,420 | 8,468 | 151 | \$ 3,853,973 | \$ 52,778,393 |
| 2025 | 16,074 | 306 | \$ 49,737,118 | 8,618 | 150 | \$ 3,828,450 | \$ 53,565,568 |
| 2026 | 16,386 | 312 | \$ 50,712,355 | 8,770 | 152 | \$ 3,879,496 | \$ 54,591,851 |
| 2027 | 16,704 | 318 | \$ 51,687,593 | 8,922 | 152 | \$ 3,879,496 | \$ 55,567,089 |
| 2028 | 17,029 | 325 | \$ 52,825,370 | 9,074 | 152 | \$ 3,879,496 | \$ 56,704,866 |
| 2029 | 17,360 | 331 | \$ 53,800,608 | 9,226 | 152 | \$ 3,879,496 | \$ 57,680,104 |
| 2030 | 17,697 | 337 | \$ 54,775,845 | 9,377 | 151 | \$ 3,853,973 | \$ 58,629,818 |
| 2031 | 18,041 | 344 | \$ 55,913,622 | 9,534 | 157 | \$ 4,007,111 | \$ 59,920,733 |
| 2032 | 18,392 | 351 | \$ 57,051,400 | 9,691 | 157 | \$ 4,007,111 | \$ 61,058,511 |
| 2033 | 18,749 | 357 | \$ 58,026,637 | 9,847 | 156 | \$ 3,981,588 | \$ 62,008,225 |
| 2034 | 19,113 | 364 | \$ 59,164,414 | 10,004 | 157 | \$ 4,007,111 | \$ 63,171,525 |
| 2035 | 19,485 | 372 | \$ 60,464,731 | 10,161 | 157 | \$ 4,007,111 | \$ 64,471,842 |
| 2036 | 19,864 | 379 | \$ 61,602,508 | 10,325 | 164 | \$ 4,185,772 | \$ 65,788,280 |
| 2037 | 20,249 | 385 | \$ 62,577,746 | 10,490 | 165 | \$ 4,211,295 | \$ 66,789,041 |
| 2038 | 20,643 | 394 | \$ 64,040,602 | 10,655 | 165 | \$ 4,211,295 | \$ 68,251,897 |
| 2039 | 21,044 | 401 | \$ 65,178,380 | 10,819 | 164 | \$ 4,185,772 | \$ 69,364,152 |
| 2040 | 21,452 | 408 | \$ 66,316,157 | 10,984 | 165 | \$ 4,211,295 | \$ 70,527,452 |
| 2041 | 21,870 | 418 | \$ 67,941,553 | 11,160 | 176 | \$ 4,492,048 | \$ 72,433,601 |
| 2042 | 22,294 | 424 | \$ 68,916,790 | 11,335 | 175 | \$ 4,466,525 | \$ 73,383,315 |
| 2043 | 22,728 | 434 | \$ 70,542,186 | 11,511 | 176 | \$ 4,492,048 | \$ 75,034,234 |
| 2044 | 23,169 | 441 | \$ 71,679,964 | 11,687 | 176 | \$ 4,492,048 | \$ 76,172,012 |
| 2045 | 23,620 | 451 | \$ 73,305,360 | 11,863 | 176 | \$ 4,492,048 | \$ 77,797,408 |

*New housing unit value is estimated at an average assessed value per housing unit of: \$ 162,540

**Nonresidential value is estimated at an assessed value per employee of: \$ 25,523

As noted above, none of the new houses available for sale or on offer for single-family occupancy in the county were located within West Point. The same average assessed value for new housing units within the service area is therefore the same as shown on Table 18 - \$162,540.

Nonresidential value added is calculated as the assessed value of all commercial, industrial and utility property not located in West Point, divided by the current number of 'value-added' jobs in the service area from Table 12, resulting in a figure of \$25,523 in assessed value per employee.

Application of Credits Against Impact Fees – Generally

As the county grows, new development will add to property tax bases every year and will thus represent an ever-increasing proportion of the total taxable values.

Table 20 shows the net increase in taxable value created each year from residential development (new housing units) on the left, and from all new residential and nonresidential development together each year on the right (both taken from Table 18).

Also shown is the cumulative increase in the 'Net M&O Residential Tax Base' each year generated by the annual 'contribution' from new residential growth. (The same are shown on the right side for tax base increases generated by all residential and nonresidential growth together.)

For both tax base projections, the total cumulative new tax base growth is shown. By dividing the total tax bases each year by these cumulative new growth amounts, the percentage of the total tax base amounts generated by new growth and development is calculated.

These 'percent new growth' figures are used to determine the extent to which the ineligible portion of an impact fee project paid from the General Fund would represent a contribution from new growth for which it is not responsible (having covered its funding responsibility through the impact fees that it generated).

Table 21 shows the same data as in Table 20, but for the portion of the county lying outside of the City of West Point.

Application of Credits Against Impact Fees – Two Scenarios

Two scenarios that relate to Table 20 are discussed below.

Scenario 1: The left-hand portion of the table shows the tax base generated only by residential growth on a countywide basis. These figures would apply to projects for which only residential land uses would be assessed impact fees (i.e., recreation facilities).

Scenario 2: On the right-hand portion of the table, the growth in the countywide tax base generated by growth in the day-night population (i.e., population and businesses combined) is shown for each year, along with the tax base added by new growth alone. Dividing one by the other, the proportion of the total tax base that will be generated by new growth is shown as a percentage. This would be used for credits with respect to countywide services available to both residents and business, such as the Sheriff's Office & Jail.

In any given year, the percentage from the applicable '% New Growth' column for that year would be applied as a credit against any portion of an impact fee project that is intended to be expended that year which is not impact fee eligible.

By way of example, if a particular project were only 80% impact fee eligible, then the other 20% would be expected to be generated from non-new growth sources since the 'ineligible' portion would be the responsibility of the current residents and businesses in the county. Assuming property taxes are the funding source for the non-eligible portion, it must be recognized that some of that 20% would, in fact, be generated by new residential growth. The solution is to find the percentage of new

growth participation in property taxes for the particular year of expenditure (a parks project in 2030, for instance, would garner 40.15% in property tax revenue from new residential growth) and reduce the impact fee share of the project by that percentage (20% of the total cost times 40.15%). The object, in the long run, is to assure that new growth pays no more than its 'fair share' of the cost of facilities that are needed to specifically serve it through this combination of impact fees paid and property tax generated, while the existing residents and businesses pay their fair share of the cost that specifically serves only them.

The same scenarios apply to Table 21 in that that table shows the tax base generated by both residential growth (left-hand columns) and by day-night population growth (right-hand columns), but the growth *excludes* West Point. Accordingly, only the calculations for 'Fees Based on Day-Night Population' are applicable, since public facility categories affected (Fire Protection, EMS, and E-911) are assessed for services both to residential and nonresidential development.

As noted above, for portion of West Point that extends into the county, the City maintains its own fire department and emergency medical services, as well as its own E-911 system, for all of its residents. Harris County's provision of these same services do therefore not extend in to West Point. As a result, impact fees collected for these services would only be paid by new growth and development in the rest of the county, and any costs to be borne by the existing city residents and businesses would be addressed through their property taxes. However, new growth and development outside of West Point will also be generating property tax revenue to an increasing extent every year. Again, to avoid double taxation, a credit against impact fees must be given. This results in new growth's 'fair share' of the cost of facilities needed to serve it being generated by a combination of the impact fees collected and the property taxes generated.

The property tax credit calculations in Table 20 and Table 21 are summarized in Table 22: Summary – Tax Credits.

Table 20: New Growth Property Tax Generation - Countywide

| Year | Fees based on Housing Units | | | | Fees based on Day-Night Population | | | |
|------|-------------------------------|-----------------------------------|-------------------------------------|--------------|------------------------------------|--------------------------------------|--|--------------|
| | Net M&O Residential Tax Base* | Net New Tax Base from Residential | Total New Tax Base from Residential | % New Growth | Total Net M&O Tax Base* | Net New Tax Base from All New Growth | Total New Tax Base from All New Growth | % New Growth |
| 2021 | \$ 758,384,279 | | | | \$ 1,370,258,290 | | | |
| 2022 | \$ 806,821,079 | \$ 48,436,801 | \$ 48,436,801 | 6.39% | \$ 1,423,059,736 | \$ 52,801,446 | \$ 52,801,446 | 3.85% |
| 2023 | \$ 856,070,578 | \$ 49,249,499 | \$ 97,686,300 | 12.11% | \$ 1,476,673,880 | \$ 53,614,144 | \$ 106,415,590 | 7.48% |
| 2024 | \$ 906,457,854 | \$ 50,387,276 | \$ 148,073,576 | 17.30% | \$ 1,531,425,801 | \$ 54,751,921 | \$ 161,167,511 | 10.91% |
| 2025 | \$ 957,657,828 | \$ 51,199,974 | \$ 199,273,550 | 21.98% | \$ 1,586,990,420 | \$ 55,564,619 | \$ 216,732,130 | 14.15% |
| 2026 | \$ 1,009,833,040 | \$ 52,175,212 | \$ 251,448,761 | 26.26% | \$ 1,643,558,435 | \$ 56,568,016 | \$ 273,300,145 | 17.22% |
| 2027 | \$ 1,063,146,029 | \$ 53,312,989 | \$ 304,761,750 | 30.18% | \$ 1,701,264,228 | \$ 57,705,793 | \$ 331,005,938 | 20.14% |
| 2028 | \$ 1,117,434,255 | \$ 54,288,226 | \$ 359,049,976 | 33.77% | \$ 1,759,945,258 | \$ 58,681,030 | \$ 389,686,968 | 22.91% |
| 2029 | \$ 1,172,860,259 | \$ 55,426,004 | \$ 414,475,980 | 37.09% | \$ 1,819,764,066 | \$ 59,818,808 | \$ 449,505,776 | 25.54% |
| 2030 | \$ 1,229,261,500 | \$ 56,401,241 | \$ 470,877,221 | 40.15% | \$ 1,880,558,111 | \$ 60,794,045 | \$ 510,299,821 | 28.04% |
| 2031 | \$ 1,286,800,518 | \$ 57,539,018 | \$ 528,416,240 | 42.99% | \$ 1,942,630,729 | \$ 62,072,617 | \$ 572,372,439 | 30.44% |
| 2032 | \$ 1,345,477,314 | \$ 58,676,796 | \$ 587,093,035 | 45.62% | \$ 2,005,841,123 | \$ 63,210,395 | \$ 635,582,833 | 32.72% |
| 2033 | \$ 1,405,291,887 | \$ 59,814,573 | \$ 646,907,608 | 48.08% | \$ 2,070,189,295 | \$ 64,348,172 | \$ 699,931,005 | 34.89% |
| 2034 | \$ 1,466,081,697 | \$ 60,789,810 | \$ 707,697,418 | 50.36% | \$ 2,135,512,704 | \$ 65,323,409 | \$ 765,254,414 | 36.97% |
| 2035 | \$ 1,528,334,364 | \$ 62,252,667 | \$ 769,950,085 | 52.52% | \$ 2,202,298,970 | \$ 66,786,266 | \$ 832,040,680 | 38.96% |
| 2036 | \$ 1,591,724,808 | \$ 63,390,444 | \$ 833,340,529 | 54.53% | \$ 2,270,448,285 | \$ 68,149,315 | \$ 900,189,995 | 40.88% |
| 2037 | \$ 1,656,253,029 | \$ 64,528,221 | \$ 897,868,750 | 56.41% | \$ 2,339,735,377 | \$ 69,287,092 | \$ 969,477,087 | 42.70% |
| 2038 | \$ 1,722,081,567 | \$ 65,828,538 | \$ 963,697,288 | 58.19% | \$ 2,410,322,786 | \$ 70,587,409 | \$ 1,040,064,496 | 44.45% |
| 2039 | \$ 1,789,210,422 | \$ 67,128,855 | \$ 1,030,826,143 | 59.86% | \$ 2,482,210,512 | \$ 71,887,726 | \$ 1,111,952,222 | 46.13% |
| 2040 | \$ 1,857,477,054 | \$ 68,266,632 | \$ 1,099,092,775 | 61.43% | \$ 2,555,236,015 | \$ 73,025,503 | \$ 1,184,977,725 | 47.74% |
| 2041 | \$ 1,927,369,082 | \$ 69,892,028 | \$ 1,168,984,803 | 62.93% | \$ 2,630,224,822 | \$ 74,988,807 | \$ 1,259,966,532 | 49.31% |
| 2042 | \$ 1,998,398,887 | \$ 71,029,805 | \$ 1,240,014,608 | 64.34% | \$ 2,706,351,406 | \$ 76,126,584 | \$ 1,336,093,116 | 50.80% |
| 2043 | \$ 2,070,891,549 | \$ 72,492,662 | \$ 1,312,507,270 | 65.68% | \$ 2,783,940,847 | \$ 77,589,441 | \$ 1,413,682,557 | 52.24% |
| 2044 | \$ 2,144,684,527 | \$ 73,792,978 | \$ 1,386,300,248 | 66.94% | \$ 2,862,830,604 | \$ 78,889,757 | \$ 1,492,572,314 | 53.61% |
| 2045 | \$ 2,220,102,901 | \$ 75,418,374 | \$ 1,461,718,623 | 68.16% | \$ 2,943,345,758 | \$ 80,515,153 | \$ 1,573,087,468 | 54.95% |

* Total tax base and Residential tax base countywide including all M&O exemptions.

Table 21: New Growth Property Tax Generation - Outside West Point

| Year | Fees based on Housing Units | | | | Fees based on Day-Night Population | | | |
|------|-------------------------------|-----------------------------------|-------------------------------------|--------------|------------------------------------|--------------------------------------|--|--------------|
| | Net M&O Residential Tax Base* | Net New Tax Base from Residential | Total New Tax Base from Residential | % New Growth | Total Net M&O Tax Base* | Net New Tax Base from All New Growth | Total New Tax Base from All New Growth | % New Growth |
| 2021 | \$ 736,739,661 | | | | \$ 1,319,437,948 | | | |
| 2022 | \$ 783,713,605 | \$ 46,973,944 | \$ 46,973,944 | 5.99% | \$ 1,370,265,865 | \$ 50,827,917 | \$ 50,827,917 | 3.85% |
| 2023 | \$ 831,662,787 | \$ 47,949,182 | \$ 94,923,126 | 11.41% | \$ 1,422,043,497 | \$ 51,777,632 | \$ 102,605,549 | 7.49% |
| 2024 | \$ 880,587,207 | \$ 48,924,420 | \$ 143,847,546 | 16.34% | \$ 1,474,821,890 | \$ 52,778,393 | \$ 155,383,942 | 10.93% |
| 2025 | \$ 930,324,324 | \$ 49,737,118 | \$ 193,584,664 | 20.81% | \$ 1,528,387,458 | \$ 53,565,568 | \$ 208,949,510 | 14.17% |
| 2026 | \$ 981,036,679 | \$ 50,712,355 | \$ 244,297,019 | 24.90% | \$ 1,582,979,309 | \$ 54,591,851 | \$ 263,541,361 | 17.24% |
| 2027 | \$ 1,032,724,272 | \$ 51,687,593 | \$ 295,984,612 | 28.66% | \$ 1,638,546,398 | \$ 55,567,089 | \$ 319,108,450 | 20.16% |
| 2028 | \$ 1,085,549,642 | \$ 52,825,370 | \$ 348,809,982 | 32.13% | \$ 1,695,251,264 | \$ 56,704,866 | \$ 375,813,316 | 22.94% |
| 2029 | \$ 1,139,350,250 | \$ 53,800,608 | \$ 402,610,589 | 35.34% | \$ 1,752,931,367 | \$ 57,680,104 | \$ 433,493,419 | 25.57% |
| 2030 | \$ 1,194,126,095 | \$ 54,775,845 | \$ 457,386,434 | 38.30% | \$ 1,811,561,185 | \$ 58,629,818 | \$ 492,123,237 | 28.07% |
| 2031 | \$ 1,250,039,717 | \$ 55,913,622 | \$ 513,300,057 | 41.06% | \$ 1,871,481,919 | \$ 59,920,733 | \$ 552,043,971 | 30.47% |
| 2032 | \$ 1,307,091,117 | \$ 57,051,400 | \$ 570,351,456 | 43.64% | \$ 1,932,540,429 | \$ 61,058,511 | \$ 613,102,481 | 32.76% |
| 2033 | \$ 1,365,117,754 | \$ 58,026,637 | \$ 628,378,094 | 46.03% | \$ 1,994,548,655 | \$ 62,008,225 | \$ 675,110,707 | 34.93% |
| 2034 | \$ 1,424,282,169 | \$ 59,164,414 | \$ 687,542,508 | 48.27% | \$ 2,057,720,180 | \$ 63,171,525 | \$ 738,282,232 | 37.02% |
| 2035 | \$ 1,484,746,900 | \$ 60,464,731 | \$ 748,007,239 | 50.38% | \$ 2,122,192,022 | \$ 64,471,842 | \$ 802,754,074 | 39.01% |
| 2036 | \$ 1,546,349,408 | \$ 61,602,508 | \$ 809,609,748 | 52.36% | \$ 2,187,980,303 | \$ 65,788,280 | \$ 868,542,355 | 40.93% |
| 2037 | \$ 1,608,927,154 | \$ 62,577,746 | \$ 872,187,494 | 54.21% | \$ 2,254,769,344 | \$ 66,789,041 | \$ 935,331,396 | 42.75% |
| 2038 | \$ 1,672,967,757 | \$ 64,040,602 | \$ 936,228,096 | 55.96% | \$ 2,323,021,241 | \$ 68,251,897 | \$ 1,003,583,293 | 44.51% |
| 2039 | \$ 1,738,146,136 | \$ 65,178,380 | \$ 1,001,406,476 | 57.61% | \$ 2,392,385,393 | \$ 69,364,152 | \$ 1,072,947,445 | 46.19% |
| 2040 | \$ 1,804,462,293 | \$ 66,316,157 | \$ 1,067,722,632 | 59.17% | \$ 2,462,912,844 | \$ 70,527,452 | \$ 1,143,474,896 | 47.80% |
| 2041 | \$ 1,872,403,846 | \$ 67,941,553 | \$ 1,135,664,185 | 60.65% | \$ 2,535,346,445 | \$ 72,433,601 | \$ 1,215,908,497 | 49.37% |
| 2042 | \$ 1,941,320,636 | \$ 68,916,790 | \$ 1,204,580,976 | 62.05% | \$ 2,608,729,761 | \$ 73,383,315 | \$ 1,289,291,813 | 50.85% |
| 2043 | \$ 2,011,862,823 | \$ 70,542,186 | \$ 1,275,123,162 | 63.38% | \$ 2,683,763,995 | \$ 75,034,234 | \$ 1,364,326,047 | 52.30% |
| 2044 | \$ 2,083,542,786 | \$ 71,679,964 | \$ 1,346,803,126 | 64.64% | \$ 2,759,936,007 | \$ 76,172,012 | \$ 1,440,498,059 | 53.67% |
| 2045 | \$ 2,156,848,146 | \$ 73,305,360 | \$ 1,420,108,485 | 65.84% | \$ 2,837,733,414 | \$ 77,797,408 | \$ 1,518,295,466 | 55.01% |

* Total tax base and Residential tax base outside West Point including all M&O exemptions.

The following tables summarize the property tax credit calculations from Table 20 for residential growth (on a per-housing unit basis) and for all new development (on a day-night population basis) applicable in the county-wide service area, and for the same categories for the service area excluding West Point from Table 21.

The 'Tax Credit – Countywide' percentages is used for credit situations in the Sheriff’s Office & Jail and Parks & Recreation public facility categories, and the 'Tax Credit – Outside West Point' applies to the Fire Protection, EMS, and E-911 categories. The applicable 'Day-Night Population' figures apply to all public facility categories except for Parks & Recreation. In this instance, the 'Housing Units' percentages are applicable, since only residential land uses would be assessed impact fees for Parks & Recreation projects.

Table 22: Summary – Tax Credits

Tax Credit - Countywide

| Year | For Fees Based on: | |
|------|--------------------|------------------------|
| | Housing Units* | Day- Night Population* |

| | | |
|------|--------|--------|
| 2022 | 6.39% | 3.85% |
| 2023 | 12.11% | 7.48% |
| 2024 | 17.30% | 10.91% |
| 2025 | 21.98% | 14.15% |
| 2026 | 26.26% | 17.22% |
| 2027 | 30.18% | 20.14% |
| 2028 | 33.77% | 22.91% |
| 2029 | 37.09% | 25.54% |
| 2030 | 40.15% | 28.04% |
| 2031 | 42.99% | 30.44% |
| 2032 | 45.62% | 32.72% |
| 2033 | 48.08% | 34.89% |
| 2034 | 50.36% | 36.97% |
| 2035 | 52.52% | 38.96% |
| 2036 | 54.53% | 40.88% |
| 2037 | 56.41% | 42.70% |
| 2038 | 58.19% | 44.45% |
| 2039 | 59.86% | 46.13% |
| 2040 | 61.43% | 47.74% |
| 2041 | 62.93% | 49.31% |
| 2042 | 64.34% | 50.80% |
| 2043 | 65.68% | 52.24% |
| 2044 | 66.94% | 53.61% |
| 2045 | 68.16% | 54.95% |

| | | |
|---------|--------|--------|
| Average | 39.75% | 28.74% |
| Median | 42.99% | 30.44% |

* Average Annual Mid-Year (July 1) number.

Tax Credit - Outside West Point

| Year | For Fees Based on: | |
|------|--------------------|------------------------|
| | Housing Units* | Day- Night Population* |

| | | |
|------|--------|--------|
| 2022 | 5.99% | 3.85% |
| 2023 | 11.41% | 7.49% |
| 2024 | 16.34% | 10.93% |
| 2025 | 20.81% | 14.17% |
| 2026 | 24.90% | 17.24% |
| 2027 | 28.66% | 20.16% |
| 2028 | 32.13% | 22.94% |
| 2029 | 35.34% | 25.57% |
| 2030 | 38.30% | 28.07% |
| 2031 | 41.06% | 30.47% |
| 2032 | 43.64% | 32.76% |
| 2033 | 46.03% | 34.93% |
| 2034 | 48.27% | 37.02% |
| 2035 | 50.38% | 39.01% |
| 2036 | 52.36% | 40.93% |
| 2037 | 54.21% | 42.75% |
| 2038 | 55.96% | 44.51% |
| 2039 | 57.61% | 46.19% |
| 2040 | 59.17% | 47.80% |
| 2041 | 60.65% | 49.37% |
| 2042 | 62.05% | 50.85% |
| 2043 | 63.38% | 52.30% |
| 2044 | 64.64% | 53.67% |
| 2045 | 65.84% | 55.01% |

| | | |
|---------|--------|--------|
| Average | 38.03% | 28.78% |
| Median | 41.06% | 30.47% |

* Average Annual Mid-Year (July 1) number.

■ Other Fees and Charges

In addition to the net impact fees for each public facility category, there are two additional charges than can be assessed in an impact fee program. Based on the definition of “system improvement costs” (see the Glossary), there are possible impact fee charges beyond the categories already discussed that are allowed under state law. These may be directly or indirectly related to the cost of capital projects and can include a fee for the administration of the impact fee program as well as a fee to recoup the cost to prepare the Capital Improvements Element. Specifically, DIFA allows for the collection of impact fees reflecting:

“administrative costs, provided that such administrative costs shall not exceed 3 percent of the total amount of the costs”

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”.

Program Administration

A surcharge of 3%, the maximum allowable under state law, has been added to the subtotal of impact fees for the individual categories (this is shown in the Maximum Impact Fee Schedule in the Introduction section of this report). The fees collected in this category can be used for all costs related to 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 building permit staff, some or all of the cost for the finance department to process, record and distribute impact fees, and some or all of the cost for the management and oversight of the program by administrative staff.

CIE Preparation Fee

A 1.5% surcharge for the recoupment of the cost to prepare the Capital Improvements Element has been added to the subtotal of the individual category impact fees (not including the administration fee).

Parks & Recreation

■ Introduction

Public recreational opportunities are available in Harris County through a number of parks facilities operated by the Harris County Parks and Recreation Department. Demand for recreational facilities is almost exclusively related to the county's resident population. Businesses make some incidental use of public parks for office events, company softball leagues, etc., but the use is minimal compared to that of the families and individuals who live in the county. Thus, the parks and recreation impact fee is limited to future residential growth.



■ Service Area

Parks and recreational facilities are made available to the county's population without regard to the political jurisdiction within which the resident lives. In addition, the facilities are provided equally to all residents, and often used on the basis of the programs available, as opposed to proximity of the facility. For instance, children active in the little leagues may play games at various locations throughout the county, based on scheduling rather than geography. Other programs are located only at certain centralized facilities, to which any Harris County resident can come. As a general rule, parks facilities are located throughout the county, and future facilities will continue to be located around the county so that all residents will have recreational opportunities available on an equal basis. Thus, the entire county is considered a single service area for parks & recreation.

■ Level of Service

The determination of Level of Service (LOS) standards begins with an inventory of existing County facilities. Table 23 focuses on lands operated as parks by the Parks and Recreation Department. This land encompasses 295 acres that is used for five parks. A variety of recreation components are located in the County's parks and are inventoried in Table 24: Level of Service Calculations.

Table 23: Current Inventory of Park Lands

| Park | Acreage |
|---------------------------|---------------|
| Charles Moultrie Park | 29.00 |
| E.C. Pate Park | 100.00 |
| Ellerslie Park | 120.00 |
| Soccer Complex | 34.00 |
| Pine Mountain Valley Park | 12.00 |
| Total Park Acres | 295.00 |



Table 24 shows the current inventory of recreation components provided by the County, as well as components the County does not currently have in its recreation system but plans to add over the next two decades. These currently show as '0' in the 'current inventory' column.

Table 24 also presents the Level of Service (LOS) in recreation land and facilities per population, converts this to the Level of Service per the number of housing units occupied by that population, and then expresses the Level of Service per housing unit (since impact fees are assessed per housing unit when building permits are issued, not population).

Table 24: Level of Service Calculations

| Component Type | Current Inventory | Level of Service per "X" Population** | Level of Service per "X" Housing Units** | Level of Service per Housing Unit*** |
|---|-------------------|---------------------------------------|--|---------------------------------------|
| Park Acres | 295.00 | 1 per 124 Population = | 1 per 52 Housing Units = | 0.019231 for each Housing Unit |
| Recreation Buildings & Supporting Facilities * | | | | |
| <i>Community Center</i> | <i>1</i> | <i>1 per 36,619 Population =</i> | <i>1 per 15,319 Housing Units =</i> | <i>0.000065 for each Housing Unit</i> |
| <i>Concessions/Restroom Building</i> | <i>5</i> | <i>1 per 6,457 Population =</i> | <i>1 per 2,701 Housing Units =</i> | <i>0.000370 for each Housing Unit</i> |
| <i>Restroom Building</i> | <i>2</i> | <i>1 per 18,310 Population =</i> | <i>1 per 7,660 Housing Units =</i> | <i>0.000131 for each Housing Unit</i> |
| <i>Maintenance Building</i> | <i>3</i> | <i>1 per 12,206 Population =</i> | <i>1 per 5,106 Housing Units =</i> | <i>0.000196 for each Housing Unit</i> |
| <i>Parking Spaces</i> | <i>1,205</i> | <i>1 per 30 Population =</i> | <i>1 per 13 Housing Units =</i> | <i>0.076923 for each Housing Unit</i> |
| Park and Recreation Components * | | | | |
| <i>Baseball/Softball Field</i> | <i>13</i> | <i>1 per 2,817 Population =</i> | <i>1 per 1,178 Housing Units =</i> | <i>0.000849 for each Housing Unit</i> |
| <i>Basketball Court, Outdoor</i> | <i>3</i> | <i>1 per 12,206 Population =</i> | <i>1 per 5,106 Housing Units =</i> | <i>0.000196 for each Housing Unit</i> |
| <i>Batting Cage</i> | <i>11</i> | <i>1 per 3,329 Population =</i> | <i>1 per 1,393 Housing Units =</i> | <i>0.000718 for each Housing Unit</i> |
| <i>Boat/Fishing Dock</i> | <i>0</i> | <i>1 per 58,114 Population =</i> | <i>1 per 24,312 Housing Units =</i> | <i>0.000041 for each Housing Unit</i> |
| <i>Disc Golf Course</i> | <i>0</i> | <i>1 per 58,114 Population =</i> | <i>1 per 24,312 Housing Units =</i> | <i>0.000041 for each Housing Unit</i> |
| <i>Fitness Stations, Outdoor</i> | <i>0</i> | <i>1 per 7,264 Population =</i> | <i>1 per 3,039 Housing Units =</i> | <i>0.000329 for each Housing Unit</i> |
| <i>Football Field</i> | <i>1</i> | <i>1 per 36,619 Population =</i> | <i>1 per 15,319 Housing Units =</i> | <i>0.000065 for each Housing Unit</i> |
| <i>Pavilion, Small</i> | <i>3</i> | <i>1 per 7,264 Population =</i> | <i>1 per 3,039 Housing Units =</i> | <i>0.000329 for each Housing Unit</i> |
| <i>Pavilion, Large</i> | <i>1</i> | <i>1 per 14,529 Population =</i> | <i>1 per 6,078 Housing Units =</i> | <i>0.000165 for each Housing Unit</i> |
| <i>Pickleball Court, Outdoor</i> | <i>0</i> | <i>1 per 5,811 Population =</i> | <i>1 per 2,431 Housing Units =</i> | <i>0.000411 for each Housing Unit</i> |
| <i>Playground</i> | <i>2</i> | <i>1 per 7,264 Population =</i> | <i>1 per 3,039 Housing Units =</i> | <i>0.000329 for each Housing Unit</i> |
| <i>Agricultural Events Center</i> | <i>0</i> | <i>1 per 58,114 Population =</i> | <i>1 per 24,312 Housing Units =</i> | <i>0.000041 for each Housing Unit</i> |
| <i>Soccer Field</i> | <i>10</i> | <i>1 per 2,906 Population =</i> | <i>1 per 1,216 Housing Units =</i> | <i>0.000822 for each Housing Unit</i> |
| <i>Splash Pad</i> | <i>0</i> | <i>1 per 29,057 Population =</i> | <i>1 per 12,156 Housing Units =</i> | <i>0.000082 for each Housing Unit</i> |
| <i>Tennis Court</i> | <i>3</i> | <i>1 per 3,059 Population =</i> | <i>1 per 1,280 Housing Units =</i> | <i>0.000781 for each Housing Unit</i> |
| <i>Mountain Bike Trail (miles)</i> | <i>0</i> | <i>0 per 29,057 Population =</i> | <i>0 per 12,156 Housing Units =</i> | <i>0.000082 for each Housing Unit</i> |
| <i>Park Trail, Paved (miles)</i> | <i>2.4</i> | <i>1 per 13,208 Population =</i> | <i>1 per 5,525 Housing Units =</i> | <i>0.000181 for each Housing Unit</i> |
| <i>Park Trail, Soft Surface (miles)</i> | <i>4</i> | <i>1 per 5,811 Population =</i> | <i>1 per 2,431 Housing Units =</i> | <i>0.000411 for each Housing Unit</i> |
| <i>Rails to Trails Multi-Use Path</i> | <i>10</i> | <i>1 per 2,767 Population =</i> | <i>1 per 1,158 Housing Units =</i> | <i>0.000864 for each Housing Unit</i> |

* *Italics*: LOS is based on the current inventory divided by the current population. Non-italics: LOS is based on the number of each component that is anticipated to serve local needs through 2045.

** *Italics*: Converted using average population per housing unit in 2021. Non-italics: Converted using the average population per housing unit in 2045.

*** "1" divided by the number of housing units for each component under 'Level of Service per "X" Housing Units' column.

Table 24 incorporates a combination of LOS standards reflecting current conditions as well as future plans where applicable, relevant and useful to the impact fee calculations. The LOS for current facilities is expressed in terms of the number of people each recreation component currently serves (shown in italicized text in the table above and calculated by using the current inventory for the component divided into the current population), with the following exceptions: components that are not currently in the system but are intended to be added over time (shown as "0") and component types that exist but for which the County has identified the need to add to in order to serve future growth over the next 20 years (shown on Table 24 as non-italicized text). In these instances, the

LOS is based on the total number of recreation components anticipated to serve local needs through 2045.

These LOS 'per population' standards are then re-calculated as the number of housing units served by each component based on the number of people living in an average household (the average household size in the county). Since impact fees are assessed at the time a building permit is issued (and the impact fee will be applied only to residential uses), the LOS then must be converted to a 'per housing unit' basis.

■ Forecasts for Service Area

Future Demand

Table 25 below applies the LOS calculations from Table 24 to determine the facilities needed to meet the demand created by the existing residents of the county as well as the future demand for recreation components that will be generated by new growth and development.

The current number of housing units (15,319) is multiplied by the LOS standard ('LOS per Housing Unit') to determine the existing demand of today's population. The increase in housing units between 2021 and 2045 (8,993 - see Table 8) is multiplied by the same LOS to produce the future demand created by future growth.

Table 25: Existing and Future Demand

| Component Type | LOS Per Housing Unit | Existing Demand (2021)* | New Growth Demand (2021-2045)** |
|---|----------------------|-------------------------|---------------------------------|
| Park Acres | 0.019231 | 294.60 | 172.94 |
| Recreation Buildings & Supporting Facilities | | | |
| Community Center | 0.000065 | 1.00 | 0.59 |
| Concessions/Restroom Building | 0.000370 | 5.67 | 3.33 |
| Restroom Building | 0.000131 | 2.00 | 1.17 |
| Maintenance Building | 0.000196 | 3.00 | 1.76 |
| Parking Spaces | 0.076923 | 1,178.38 | 691.77 |
| Park and Recreation Components | | | |
| Baseball/Softball Field | 0.000849 | 13.00 | 7.63 |
| Basketball Court, Outdoor | 0.000196 | 3.00 | 1.76 |
| Batting Cage | 0.000718 | 11.00 | 6.46 |
| Boat/Fishing Dock | 0.000041 | 0.63 | 0.37 |
| Disc Golf Course | 0.000041 | 0.63 | 0.37 |
| Fitness Stations, Outdoor | 0.000329 | 5.04 | 2.96 |
| Football Field | 0.000065 | 1.00 | 0.59 |
| Pavilion, Small | 0.000329 | 5.04 | 2.96 |
| Pavilion, Large | 0.000165 | 2.52 | 1.48 |
| Pickleball Court, Outdoor | 0.000411 | 6.30 | 3.70 |
| Playground | 0.000329 | 5.04 | 2.96 |
| Agricultural Events Center | 0.000041 | 0.63 | 0.37 |
| Soccer Field | 0.000822 | 12.60 | 7.40 |
| Splash Pad | 0.000082 | 1.26 | 0.74 |
| Tennis Court | 0.000781 | 11.97 | 7.03 |
| Mountain Bike Trail (miles) | 0.000082 | 1.26 | 0.74 |
| Park Trail, Paved (miles) | 0.000181 | 2.77 | 1.63 |
| Park Trail, Soft Surface (miles) | 0.000411 | 6.30 | 3.70 |
| Rails to Trails Multi-Use Path | 0.000864 | 13.23 | 7.77 |



* 2021 Housing Units = 15,319
 ** New Units (2021-2045) = 8,993

Impact Fee Eligibility

New recreation components are eligible for impact fee funding only to the extent that the improvements are needed to specifically serve new growth and development, and only at the Level of Service applicable countywide. Table 26 shows the number of new recreation components that are needed to satisfy needs of the county’s future residents, and the extent to which fulfillment of those needs will serve future growth demand.

Table 26: Future Park Facility Impact Fee Eligibility

| Component Type | Current Inventory | Existing Demand | Excess or (Shortfall) | New Growth Demand | Net Total Needed* | Total Needed** | % Impact Fee Eligible |
|---|-------------------|-----------------|-----------------------|-------------------|-------------------|----------------|-----------------------|
| Park Acres | 295.00 | 294.60 | 0.40 | 172.94 | 172.54 | 172.54 | 100.00% |
| Recreation Buildings & Supporting Facilities | | | | | | | |
| Community Center | 1 | 1.00 | 0.00 | 0.59 | 0.59 | 1.00 | 58.70% |
| Concessions/Restroom Building | 5 | 5.67 | (0.67) | 3.33 | 4.00 | 4.00 | 83.24% |
| Restroom Building | 2 | 2.00 | 0.00 | 1.17 | 1.17 | 1.00 | 100.00% |
| Maintenance Building | 3 | 3.00 | 0.00 | 1.76 | 1.76 | 2.00 | 88.06% |
| Parking Spaces | 1,205 | 1,178.38 | 26.62 | 691.77 | 665.15 | 665.00 | 100.00% |
| Park and Recreation Components | | | | | | | |
| Baseball/Softball Field | 13 | 13.00 | 0.00 | 7.63 | 7.63 | 8.00 | 95.43% |
| Basketball Court, Outdoor | 3 | 3.00 | 0.00 | 1.76 | 1.76 | 2.00 | 88.06% |
| Batting Cage | 11 | 11.00 | 0.00 | 6.46 | 6.45 | 6.00 | 100.00% |
| Boat/Fishing Dock | 0 | 0.63 | (0.63) | 0.37 | 1.00 | 1.00 | 36.99% |
| Disc Golf Course | 0 | 0.63 | (0.63) | 0.37 | 1.00 | 1.00 | 36.99% |
| Fitness Stations, Outdoor | 0 | 5.04 | (5.04) | 2.96 | 8.00 | 8.00 | 36.99% |
| Football Field | 1 | 1.00 | 0.00 | 0.59 | 0.59 | 1.00 | 58.70% |
| Pavilion, Small | 3 | 5.04 | (2.04) | 2.96 | 5.00 | 5.00 | 59.18% |
| Pavilion, Large | 1 | 2.52 | (1.52) | 1.48 | 3.00 | 3.00 | 49.32% |
| Pickleball Court, Outdoor | 0 | 6.30 | (6.30) | 3.70 | 10.00 | 10.00 | 36.99% |
| Playground | 2 | 5.04 | (3.04) | 2.96 | 6.00 | 6.00 | 49.32% |
| Agricultural Events Center | 0 | 0.63 | (0.63) | 0.37 | 1.00 | 1.00 | 36.99% |
| Soccer Field | 10 | 12.60 | (2.60) | 7.40 | 9.99 | 10.00 | 73.96% |
| Splash Pad | 0 | 1.26 | (1.26) | 0.74 | 2.00 | 2.00 | 36.99% |
| Tennis Court | 3 | 11.97 | (8.97) | 7.03 | 15.99 | 16.00 | 43.91% |
| Mountain Bike Trail (miles) | 0 | 1.26 | (1.26) | 0.74 | 2.00 | 2.00 | 36.99% |
| Park Trail, Paved (miles) | 2 | 2.77 | (0.37) | 1.63 | 2.00 | 2.00 | 81.37% |
| Park Trail, Soft Surface (miles) | 4 | 6.30 | (2.30) | 3.70 | 6.00 | 6.00 | 61.65% |
| Rails to Trails Multi-Use Path | 10 | 13.23 | (3.23) | 7.77 | 11.00 | 11.00 | 70.60% |

* Additional components needed to meet future growth needs.

** For recreation components that can only be built in whole numbers: 'Total Needed' rounded to nearest whole number. For park acres and walking trails, actual number shown.

Table 26 begins with the current inventory of recreation components, and the 'existing demand' for those components to meet the needs of the current (2021) population based on the applicable Level of Service standards (shown on Table 24).

The 'Excess or (Shortfall)' column compares the existing demand to the current inventory for each recreation component. If an 'excess' were to exist, that would mean that more components (or portions of components) exist than are needed to meet the demands of the current population, and those 'excesses' would create capacity to meet the recreational needs of future growth. This is the case for two components in Harris County—park acres and parking spaces.

Conversely, a 'shortfall' indicates that there are not enough components (or portions of components) to meet the recreational needs of the current population based on the LOS standard (e.g., concessions/restroom buildings, pavilions, playgrounds, etc.).

In all other instances, 'existing demand' is the same as the 'current inventory' and there is no excess or shortfall (e.g., community centers, restroom buildings, baseball/softball fields, etc.). This occurs where 'existing demand' is used in the calculation of LOS standards in Table 24.

The column on Table 26 labeled 'New Growth Demand' shows the total demand for recreation components specifically to meet future growth needs (from Table 25). The 'Net Total Needed' column shows all existing and future needs combined, which equates to the number of new components that are needed to be added to the recreation system. The current 'shortfall' that exists for recreation components is added to new growth's facility needs to bring the current population up to the current Level of Service required to be available to all—both current and future residents.

For all components except park acres and trail miles, the 'Total Needed' column is rounded to the nearest whole numbers. This is simply because the County cannot build a portion of a facility, it must build entire facilities. As a result, the '% Impact Fee Eligible' column may reflect a percentage less than 100%.

For example, new growth mathematically demands only 1.76 basketball courts, and not two full courts. The County cannot build a portion of a basketball court for it to serve its intended purpose; it must build an entire court for it to be usable. Thus, two basketball courts need to be added, which is technically slightly more than what new growth requires. This results in the total cost of the courts being less than 100% impact fee eligible; the portion that is impact fee eligible (1.76) results in the percentage that is impact fee eligible (88.06%).

Conversely, in some cases the 'net total needed' figure is rounded down to the nearest whole number in the 'Total Needed' column. For example, new growth demand for restroom buildings is only 1.17. To round that number up to '2' would result in one facility being 100% impact fee eligible and the other only 17% eligible. In these cases, it makes more sense from a public expenditures standpoint to fund only 1 building with impact fees (at 100% eligible) now and to delay the construction of a second until a future date when new impact fee calculations (a revised CIE with a horizon extended beyond 2045) would more fully justify the second restroom facility.

The '% Impact Fee Eligible' column shows the percentage of each new facility that is eligible for impact fee funding. A majority of recreation facilities are only partially eligible for impact fee funding. Soccer fields, for example, are 73.96% impact fee eligible. This percentage equates to the portion of needed fields (10) that are demanded by new growth alone (73.96%), calculated by dividing '7.40' by '10'. The remaining 26.04% is needed to satisfy existing demand due to the 'shortfall' in the County's inventory of soccer fields based on the LOS standard.

Future Costs

Table 27 is a listing of the future capital project costs to provide the additional recreation components needed to attain the applicable Level of Service standards.

Table 27: Costs to Meet Future Demand for Parks and Recreation

| Component Type | Total Proposed | Net Cost Per Unit* | Gross Cost Per Unit** | Total Cost (2021) | % Impact Fee Eligible | New Growth Share (2021) | Net Present Value*** |
|---|----------------|--------------------|-----------------------|-----------------------------|-----------------------|-------------------------|----------------------|
| Park Acres | 172.54 | \$ 5,000 | \$ 6,100 | \$ 1,052,485 | 100.00% | \$ 1,052,485 | \$ 1,291,475 |
| Recreation Buildings & Supporting Facilities | | | | | | | |
| Community Center | 1 | \$ 750,000 | \$ 915,000 | \$ 915,000 | 58.70% | \$ 537,150 | \$ 689,411 |
| Concessions/Restroom Building | 4 | \$ 100,000 | \$ 122,000 | \$ 488,000 | 83.24% | \$ 406,200 | \$ 521,342 |
| Restroom Building | 1 | \$ 80,000 | \$ 97,600 | \$ 97,600 | 100.00% | \$ 97,600 | \$ 125,266 |
| Maintenance Building | 2 | \$ 80,000 | \$ 97,600 | \$ 195,200 | 88.06% | \$ 171,899 | \$ 220,626 |
| Parking Spaces | 665 | \$ 500 | \$ 610 | \$ 405,650 | 100.00% | \$ 405,650 | \$ 492,458 |
| Park and Recreation Components | | | | | | | |
| Baseball/Softball Field | 8 | \$ 100,000 | \$ 122,000 | \$ 976,000 | 95.43% | \$ 931,363 | \$ 1,130,673 |
| Basketball Court, Outdoor | 2 | \$ 75,000 | \$ 91,500 | \$ 183,000 | 88.06% | \$ 161,155 | \$ 195,642 |
| Batting Cage | 6 | \$ 20,000 | \$ 24,400 | \$ 146,400 | 100.00% | \$ 146,400 | \$ 177,729 |
| Boat/Fishing Dock | 1 | \$ 35,000 | \$ 42,700 | \$ 42,700 | 36.99% | \$ 15,795 | \$ 19,175 |
| Disc Golf Course | 1 | \$ 20,000 | \$ 24,400 | \$ 24,400 | 36.99% | \$ 9,026 | \$ 10,957 |
| Fitness Stations, Outdoor | 8 | \$ 35,000 | \$ 42,700 | \$ 341,600 | 36.99% | \$ 126,358 | \$ 153,398 |
| Football Field | 1 | \$ 400,000 | \$ 488,000 | \$ 488,000 | 58.70% | \$ 286,480 | \$ 347,786 |
| Pavilion, Small | 5 | \$ 40,000 | \$ 48,800 | \$ 244,000 | 59.18% | \$ 144,409 | \$ 175,312 |
| Pavilion, Large | 3 | \$ 80,000 | \$ 97,600 | \$ 292,800 | 49.32% | \$ 144,409 | \$ 175,312 |
| Pickleball Court, Outdoor | 10 | \$ 35,000 | \$ 42,700 | \$ 427,000 | 36.99% | \$ 157,960 | \$ 191,763 |
| Playground | 6 | \$ 100,000 | \$ 122,000 | \$ 732,000 | 49.32% | \$ 361,022 | \$ 438,280 |
| Agricultural Events Center | 1 | \$ 500,000 | \$ 610,000 | \$ 610,000 | 36.99% | \$ 225,639 | \$ 273,925 |
| Soccer Field | 10 | \$ 50,000 | \$ 61,000 | \$ 610,000 | 73.96% | \$ 451,129 | \$ 547,670 |
| Splash Pad | 2 | \$ 150,000 | \$ 183,000 | \$ 366,000 | 36.99% | \$ 135,383 | \$ 164,355 |
| Tennis Court | 16 | \$ 50,000 | \$ 61,000 | \$ 976,000 | 43.91% | \$ 428,573 | \$ 520,286 |
| Mountain Bike Trail (miles) | 2 | \$ 25,000 | \$ 30,500 | \$ 61,000 | 36.99% | \$ 22,564 | \$ 27,392 |
| Park Trail, Paved (miles) | 2 | \$ 50,000 | \$ 61,000 | \$ 122,022 | 81.37% | \$ 99,289 | \$ 120,537 |
| Park Trail, Soft Surface (miles) | 6 | \$ 60,000 | \$ 73,200 | \$ 439,260 | 61.65% | \$ 270,789 | \$ 328,737 |
| Rails to Trails Multi-Use Path | 11 | \$ 750,000 | \$ 915,000 | \$ 10,065,000 | 70.60% | \$ 7,105,868 | \$ 8,626,506 |
| | | | | Totals \$ 20,301,117 | | \$ 13,894,593 | \$ 16,966,012 |

* Cost estimates are based on known or comparable facility costs.

** Includes contingency at 15% and architectural/engineering services at 7%.

*** Construction dates vary. NPV based on CPI, CCI or BCI as appropriate, in an average construction year of 2033.

Facility construction costs in the 'Net Cost per Unit' column are based on costs drawn from a variety of sources, including facilities that have been previously constructed by the County and similar facilities that have been built in other counties. Each of these 2021 estimated cost figures are then increased to the gross cost by 22% to account for architectural and engineering services as well as contingencies.

These 'Total Cost (2021)' figures on the Table are converted to 'New Growth Share (2021)' dollars based on the percentage that each improvement is impact fee eligible (from Table 26).

The Net Present Value of new growth's share of the cost for each component is calculated as follows:

Since the actual pace and timing of construction for the improvements proposed to meet future demand have not been programmed, an 'average' year of 2033 is used for Net Present Value calculations—some improvements will occur earlier for less money, and some later at greater cost. All will average out.

To calculate the Net Present Value (NPV) of the impact fee eligible cost estimates for the construction of the recreation components, the NPVs are calculated by increasing the current (2021) estimated costs using Engineering News Record’s (ENR) 10-year average building cost inflation (BCI) rate for buildings (such as maintenance buildings), the 10-year average CPI rate for acreage, and the 10-year average construction cost inflation (CCI) for all other projects. All project costs are then reduced to current NPV dollars using the Net Discount Rate.

Credit Calculation

Property Tax Credit

Credits against impact fees are applied when those being assessed the fee will also be contributing to the project’s cost through their property taxes, thus creating a double-taxation situation. For this calculation it is assumed the County will meet its financial obligations toward non-eligible project costs through general fund expenditures. For this reason, the credit calculated here is based on future property tax contributions into the general fund that will be generated by new residential growth and development to pay for the non-eligible costs.

Table 28: New Residential Growth Contribution through Property Taxes

| Year | Ineligible Funding Required (NPV)* | Property Tax Credit** | Contribution from New Growth |
|---|------------------------------------|-----------------------|------------------------------|
| 2021 | | 0.00% | |
| 2022 | | 6.39% | |
| 2023 | | 12.11% | |
| 2024 | | 17.30% | |
| 2025 | | 21.98% | |
| 2026 | | 26.26% | |
| 2027 | | 30.18% | |
| 2028 | | 33.77% | |
| 2029 | | 37.09% | |
| 2030 | | 40.15% | |
| 2031 | | 42.99% | |
| 2032 | | 45.62% | |
| 2033 | \$ 7,811,051.67 | 48.08% | \$ 3,755,565.92 |
| 2034 | | 50.36% | |
| 2035 | | 52.52% | |
| 2036 | | 54.53% | |
| 2037 | | 56.41% | |
| 2038 | | 58.19% | |
| 2039 | | 59.86% | |
| 2040 | | 61.43% | |
| 2041 | | 62.93% | |
| 2042 | | 64.34% | |
| 2043 | | 65.68% | |
| 2044 | | 66.94% | |
| 2045 | | 68.16% | |
| Total New Residential Contribution | | \$ | 3,755,565.92 |

In order to calculate the tax credit, the total non-eligible project costs are shown in the 'average' year of construction, 2033. The 'Property Tax Credit' is the percentage of the total countywide residential tax base that represents accumulated new growth for each designated year, taken from the Cost Adjustments and Credits chapter. (Residential tax generation is used because the impact fee for parks and recreation facilities will only be levied against residential growth.)

The 'Contribution from New Growth' column shows the cost of non-impact fee eligible park costs multiplied by the 'Property Tax Credit' tax credit percentage for pertinent years. In 2033, for instance, new growth is expected to increase the county’s tax base by 48.08%.

* Net Present Value of amount to be paid from property taxes to cover costs not eligible for impact fee funding.

** The percentage that new growth will generate in property taxes that would be applied to the ineligible portion of impact fee projects.

■ Net Impact Cost Calculation

As noted, Parks and Recreation impact fees are collected from residential development only.

In calculating the net impact cost on Table 29, the credit for future property tax contributions (from Table 28) is subtracted from the total impact fee eligible cost, as discussed above. Using the net eligible cost figure, the net impact cost per housing unit is calculated, based on the increase in dwelling units between 2021 and 2045.

Table 29: Net Cost to Serve New Growth

| Description | Total |
|--|--------------------|
| Total Eligible Cost of Park & Rec Projects | \$ 16,966,012.02 |
| minus credit for Tax Contributions | \$ (3,755,565.92) |
| = Net Eligible Parks & Rec Project Costs | \$ 13,210,446.09 |
| ÷ Housing Unit Increase (2021-2045) | 8,993 |
| = Net Impact Cost per Housing Unit | \$ 1,468.97 |

Note that an administration fee and a fee for the preparation of the CIE is added to the net cost figure to produce the gross fee, which is shown on the Maximum Impact Fee Schedule.



Maximum Impact Fee Schedule—Parks & Recreation

The maximum net impact fee that could be charged in Harris County for the Parks & Recreation facility category, based on the calculations carried out in this chapter, is shown on Table 30.

The following are added to the net impact fee to produce the total maximum impact fee on Table 30:

- A 3% administrative fee; and,
- A 1.5% fee to cover the cost of preparing the Capital Improvements Element (CIE).

The total impact fees on the following table are transferred to the Maximum Impact Fee Schedule in the Introduction Chapter of this report.

Table 30: Calculation of Maximum Impact Fee – Parks & Recreation

| ITE Code | Land Use | Employees | Unit of Measure | Net Fee per Unit | Administration (3%) | CIE Prep (1.5%) | Total Impact Fee |
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|

Net Cost per Housing Unit: \$ 1,468.9698

Residential (200-299)

| | | | | | | | |
|-----|-----------------------------------|-----|--------------|---------------|------------|------------|---------------|
| 210 | Single-Family Detached Housing | n/a | per dwelling | \$ 1,468.9698 | \$ 44.0690 | \$ 22.0345 | \$ 1,535.0733 |
| 220 | Apartment | n/a | per dwelling | \$ 1,468.9698 | \$ 44.0690 | \$ 22.0345 | \$ 1,535.0733 |
| 230 | Residential Condominium/Townhouse | n/a | per dwelling | \$ 1,468.9698 | \$ 44.0690 | \$ 22.0345 | \$ 1,535.0733 |

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

Sheriff's Office & Jail

■ Introduction

The Harris County Sheriff's Office & Jail category focuses on the law enforcement activities of the Office and includes the Uniform Patrol Division, Criminal Investigations Division (CID), and the Court Service Department. The Sheriff's Office also provides security for all courts, processes warrants, and operates the county jail in the Law Enforcement Center. The county jail is a holding facility for individuals charged with a criminal offense waiting for a court appearance and for persons already sentenced but waiting for a transfer to a state or federal facility. The jail also holds persons found guilty of certain misdemeanors and sentenced to twelve months or less.



■ Service Area

The entire county is considered a single service area for the provision of law enforcement activities and facilities under the Sheriff's Office & Jail category because all residents and employees of the county benefit from them. Although each city maintains its own police department, the Sheriff's Office provides back up within each incorporated area and also provides supplemental services throughout the county, including serving court papers and documents.

■ Level of Service

The Level of Service is determined by an inventory of the square footage and specialized heavy vehicles currently used by the Sheriff's Office, and by a future expansion of the county jail planned to meet the needs of the County in 2045.

Table 31 shows the inventory of existing building area occupied by the Sheriff's Office for law enforcement activities, including administrative offices and evidence storage space. One heavy vehicle (defined as a vehicle having a service life of 10 years or more) – a transport van – is included in the inventory. Note that rolling stock such as patrol cars are not generally eligible for cost recovery because they do not last at least 10 years and are therefore not included in the inventory below.

Table 31 also shows the existing and planned number of beds in the county jail, which is located in the Law Enforcement Center. The future expansion project will add 98 beds to the 115 that are in the jail.



Table 31: Inventory of Sheriff's Office & Jail Facilities

| Description | Location | Quantity |
|---|--------------------|------------------------|
| Existing Facilities | | |
| | | <i>Square Feet</i> |
| Sheriff's Office | 9989 Highway 116 | 8,000 |
| Evidence Storage Space* | 9825 Highway 116 | 600 |
| Harris County Courthouse** | 102 N. College St. | 1,900 |
| | | 10,500 |
| | | <i>Beds</i> |
| Law Enforcement Center (County Jail) | 9825 Highway 116 | 115 |
| | | <i>Number</i> |
| Heavy Vehicle*** - Prisoner Transport Van | | 1 |
| Planned Facilities | | |
| | | <i>Additional Beds</i> |
| Jail Expansion | | 98 |

*Located in the Law Enforcement Center.

** Space in the courthouse that is used by the Sheriff's Office.

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

Table 32: Level of Service Calculations

| Level of Service | | | Future Demand | |
|---|------------------------------------|---|---------------------------------------|-----------------------------------|
| Facilities | Service Population | Level of Service | Future Population | New Growth Demand* |
| Existing Square Feet | Day-Night Population (2021) | Square Feet of Floor Area per Person | 2021-2045 Day-Night Population | Net New Square Feet Needed |
| 10,500 | 44,857 | 0.234077 | 25,448 | 5,957 |
| Existing & Planned Jail Beds | Day-Night Population (2045) | Beds per Person | Day-Night Population (2045) | Net New Jail Beds Needed |
| 213 | 70,305 | 0.003030 | 70,305 | 98 |
| Existing Heavy Vehicles | Day-Night Population (2021) | Vehicles per Person | 2021-2045 Day-Night Population | New Heavy Vehicles Needed |
| 1 | 44,857 | 0.000022 | 25,448 | 0.57 |

* System improvements are 100% impact fee eligible to the whole number. One heavy vehicle is 57% impact fee eligible.

Table 32 presents the calculation of Level of Service based on the inventory and planned improvements on Table 31. Day-night population is used in calculating Level of Service and demand for future facilities due to the Sheriff's Office and Jail serving both residences and businesses throughout the county on a 24-hour basis.

The LOS is measured in terms of the existing building area in square feet and heavy vehicles used by the Sheriff's Office per 2021 day-night population in the county. For the county jail, the LOS is based on the total number of beds that are sufficient to meet the needs of the County through 2045.

■ Forecasts for Service Area

Future Demand

Table 32 also calculates the future demand for facilities that will be required to fully meet the needs of the residents and businesses in the year 2045. For building area (square footage) and heavy vehicles, demand is based on the Level of Service standards shown on the table that are then applied to the expected day-night population growth between 2021 and 2045. As shown on the table, only a portion (.57) of a heavy vehicle is required to serve future growth based on the Level of Service. Only that portion (57%) of the cost of the vehicle is therefore impact fee eligible. However, the 5,957 in square feet of new building area is the number 'demanded' by new growth and is therefore 100% impact fee eligible.

The future demand for jail beds is based on the plans of the Sheriff's Office to serve future growth. This demand calculation is based on the forward-looking LOS calculation in the table, minus the existing jail beds. Thus, the 'Net New Jail Beds Needed' are those needed to serve future growth in the county in the coming 20 years. Since the new building area and the jail expansion are exactly what is required to serve new growth, the projects are 100% impact fee eligible. This is represented in the 'New Growth Demand' column.

Future Costs

In the absence of specific building projects for the Sheriff's Office (not including the jail), and since the actual pace and timing of construction for the improvements to meet future demand have not been programmed, an 'average' year of 2033 is used for the Net Present Value calculations – some will occur earlier for less money, and some later at greater cost. All will average out.

To calculate the Net Present Value (NPV) of the impact fee eligible cost estimate for the construction of future building area (which may be an expansion of an existing facility or the construction of a new building) and the jail expansion, the NPV is calculated by increasing the current (2021) estimated costs using the Engineering News Record's (ENR) 10-year average building cost inflation (BCI) rate, and then discounting this future amount back using the Net Discount Rate.

A per-square foot construction cost of \$295 has been used to estimate the cost of future non-jail construction projects, based on an average of similar projects included in recent editions of a nationally recognized source (BNI Publications annual building cost books). The estimated cost of the jail is based on information compiled by the Sheriff's Office.

To calculate the NPV of the impact fee eligible cost estimate of the transport van, the current estimated cost is inflated to the target year (2033) using the 10-year average Consumer Price Index (CPI) and then reduced using the Net Discount Rate to produce the Net Present Value.

The project costs are shown on Table 33: Project Costs to Meet Future Demand.

Table 33: Project Costs to Meet Future Demand

| Description | Number | 2021 Total Cost * | Estimated Cost 2033 (NPV) | % Impact Fee Eligible | Total Impact Fee Eligible Cost |
|----------------------------|--------|-------------------|---------------------------|-----------------------|--------------------------------|
| New Building Area (sq.ft.) | 5,957 | \$1,759,200 | \$ 2,257,865.62 | 100% | \$ 2,257,865.62 |
| Jail Expansion (beds) | 98 | \$7,000,000 | \$ 8,984,230.88 | 100% | \$ 8,984,230.88 |
| Transport Van | 1 | \$ 110,000.00 | \$ 134,977.95 | 57% | \$ 76,937.43 |
| | | Totals | \$ 11,377,074.44 | | \$ 11,319,033.92 |

* Building cost estimates (\$295/square foot for new building area and \$7,000,000 for the jail expansion) are based on information provided by Sheriff's Office and on comparable facilities included in the Green Building Square Foot Costbook, 2018, edition, BNI Publications. Transport van cost is based on the existing vehicle in the County fleet.

**2021 cost estimate inflated to target year (2033) using the BCI and CPI, reduced to NPV using the Discount Rate.

■ Credit Calculation

Property Tax Credit

Credits against impact fees are applied when those being assessed the fee will also be contributing to the project's cost through their property taxes, thus creating a double-taxation situation. For this calculation it is assumed the County will meet its financial obligations toward non-eligible project costs through general fund expenditures. For this reason, the credit calculated here is based on future property tax contributions into the general fund that will be generated by new growth and development to pay for the non-eligible costs.

The credit, or future contribution from new growth, is shown on Table 34: New Growth Contribution from Future Property Taxes.

Table 34: New Growth Contribution from Future Property Taxes

| Year | Ineligible Funding Required (NPV)* | Property Tax Credit** | Contribution from New Growth |
|--------------------------------------|------------------------------------|-----------------------|------------------------------|
| 2033 | \$ 58,040.52 | 34.89% | \$ 20,253.03 |
| Total New Growth Contribution | | | \$ 20,253.03 |

* Net Present Value of amount to be paid from property taxes to cover costs not eligible for impact fee funding.

** The percentage that new growth will generate in property taxes that would be applied to the ineligible portion of impact fee projects.

The 'Property Tax Credit' is the percentage of the total countywide tax base (i.e., population and businesses combined) that represents accumulated new growth for each designated year, taken from the Cost Adjustments and Credits chapter.

The 'Contribution from New Growth' column shows the cost of the non-impact fee portion of the transport van project, multiplied by the tax credit percentage for the 'average' implementation year (2033).

■ Net Impact Cost Calculation

Sheriff's Office and Jail impact fees are collected from both residential and nonresidential development.

Table 35: Net Cost to Serve New Growth

| Description | Total |
|---|--------------------|
| Total Cost of Eligible Sheriff's Office & Jail Projects | \$ 11,319,033.92 |
| minus credit for Tax Contributions | \$ (20,253.03) |
| = Net Sheriff's Office Project Costs | \$ 11,298,780.89 |
| ÷ Day-Night Pop Increase (2021-2045) | 25,448 |
| = Net Impact Cost per Person | \$ 443.9948 |

Note that an administration fee and a fee for the preparation of the CIE is added to the net cost figure to produce the gross fee, which is shown on the Maximum Impact Fee Schedule.

In calculating the net impact cost on Table 35, the credit for future property tax contributions (from Table 34) is subtracted from the total impact fee eligible cost, as discussed above. Using the net eligible cost figure, the net impact cost per person is calculated, based on the increase in the day-night population between 2021 and 2045. This figure will be used to calculate impact fees for all nonresidential land uses.

A final calculation, shown in Table 36, is necessary in order to fairly distribute the portion of project

costs that are attributable to residential growth, because they are assessed impact fees per housing unit rather than by person.

Table 36: Calculation of Net Housing Fee

| Factor | Data |
|---|----------------------|
| Residential Population Increase (2021-2045) | 21,495 |
| ÷ Day-Night Population Increase (2021-2045) | 25,448 |
| = Residential Increase as % of Total Increase | 84.47% |
| Total Net Sheriff's Office & Jail Project Costs | \$ 11,298,780.89 |
| × Residential % of Total Day-Night Increase = | \$ 9,543,669.26 |
| ÷ New Housing Units (2021-2045) | 8,993 |
| = Net Impact Fee per Housing Unit | \$ 1,061.2330 |

The portion of project cost that is attributable to new residential growth is calculated 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 project cost figure to produce the cost attributable to new residential growth. Finally, this cost attributable to new residential growth is divided by the number of new housing units projected to 2045 to produce a 'net impact fee per housing unit'.

■ Maximum Impact Fee Schedule—Sheriff’s Office & Jail

The maximum net impact fee that could be charged in Harris County for the Sheriff’s Office & Jail category, based on the calculations carried out in this chapter, is shown on Table 36.

The following are added to the net impact fee to produce the total maximum impact fee on Table 37:

- A 3% administrative fee; and,
- A 1.5% fee to cover the cost of preparing the Capital Improvements Element (CIE).

The total impact fees on the following table are transferred to the Maximum Impact Fee Schedule in the Introduction Chapter of this report.

Table 37: Calculation of Maximum Impact Fee – Sheriff's Office & Jail

| ITE Code | Land Use | Employees | Unit of Measure | Net Fee per Unit | Administration (3%) | CIE Prep (1.5%) | Total Impact Fee |
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|

Net Cost per Day/Night Person (Employee): \$ 443.9948

Residential (200-299)

| | | | | | | | |
|-----|-----------------------------------|-----|--------------|---------------|------------|------------|---------------|
| 210 | Single-Family Detached Housing | n/a | per dwelling | \$ 1,061.2330 | \$ 31.8369 | \$ 15.9184 | \$ 1,108.9883 |
| 220 | Apartment | n/a | per dwelling | \$ 1,061.2330 | \$ 31.8369 | \$ 15.9184 | \$ 1,108.9883 |
| 230 | Residential Condominium/Townhouse | n/a | per dwelling | \$ 1,061.2330 | \$ 31.8369 | \$ 15.9184 | \$ 1,108.9883 |

Port and Terminal (000-099)

| | | | | | | | |
|----|---------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 30 | Intermodal Truck Terminal | 0.001415 | per square foot | \$ 0.6282 | \$ 0.0188 | \$ 0.0094 | \$ 0.6564 |
|----|---------------------------|----------|-----------------|-----------|-----------|-----------|-----------|

Industrial/Agricultural (100-199)

| | | | | | | | |
|-----|--------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 110 | General Light Industrial | 0.002308 | per square foot | \$ 1.0247 | \$ 0.0307 | \$ 0.0153 | \$ 1.0707 |
| 120 | General Heavy Industrial | 0.001829 | per square foot | \$ 0.8122 | \$ 0.0243 | \$ 0.0121 | \$ 0.8486 |
| 140 | Manufacturing | 0.001793 | per square foot | \$ 0.7963 | \$ 0.0238 | \$ 0.0119 | \$ 0.8320 |
| 150 | Warehousing | 0.000915 | per square foot | \$ 0.4063 | \$ 0.0121 | \$ 0.0060 | \$ 0.4244 |
| 151 | Mini-Warehouse | 0.000077 | per square foot | \$ 0.0342 | \$ 0.0010 | \$ 0.0005 | \$ 0.0357 |
| 152 | High-Cube Warehouse | 0.000076 | per square foot | \$ 0.0337 | \$ 0.0010 | \$ 0.0005 | \$ 0.0352 |

Lodging (300-399)

| | | | | | | | |
|-----|---------------------------|----------|----------|-------------|-----------|-----------|-------------|
| 310 | Hotel or Conference Motel | 0.569735 | per room | \$ 252.9594 | \$ 7.5887 | \$ 3.7943 | \$ 264.3424 |
| 311 | All Suites Hotel | 0.500000 | per room | \$ 221.9974 | \$ 6.6599 | \$ 3.3299 | \$ 231.9872 |
| 320 | Motel | 0.439500 | per room | \$ 195.1359 | \$ 5.8540 | \$ 2.9270 | \$ 203.9169 |

Recreational (400-499)

| | | | | | | | |
|-----|-------------------------------|----------|-----------------|---------------|-------------|------------|---------------|
| 430 | Golf Course | 0.245614 | per acre | \$ 109.0514 | \$ 3.2715 | \$ 1.6357 | \$ 113.9586 |
| 437 | Bowling Alley | 0.001000 | per square foot | \$ 0.4440 | \$ 0.0133 | \$ 0.0066 | \$ 0.4639 |
| 443 | Movie Theater | 0.001470 | per square foot | \$ 0.6525 | \$ 0.0195 | \$ 0.0097 | \$ 0.6817 |
| 460 | Arena | 3.333000 | per acre | \$ 1,479.8347 | \$ 44.3950 | \$ 22.1975 | \$ 1,546.4272 |
| 480 | Amusement Park | 9.094838 | per acre | \$ 4,038.0608 | \$ 121.1418 | \$ 60.5709 | \$ 4,219.7735 |
| 490 | Tennis Courts | 0.243888 | per acre | \$ 108.2849 | \$ 3.2485 | \$ 1.6242 | \$ 113.1576 |
| 491 | Racquet/Tennis Club | 0.000307 | per square foot | \$ 0.1363 | \$ 0.0040 | \$ 0.0020 | \$ 0.1423 |
| 492 | Health/Fitness Center | 0.000705 | per square foot | \$ 0.3130 | \$ 0.0093 | \$ 0.0046 | \$ 0.3269 |
| 495 | Recreational Community Center | 0.001241 | per square foot | \$ 0.5510 | \$ 0.0165 | \$ 0.0082 | \$ 0.5757 |

Methodology Report Sheriff's Office & Jail

| ITE Code | Land Use | Employees | Unit of Measure | Net Fee per Unit | Administration (3%) | CIE Prep (1.5%) | Total Impact Fee |
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|

Institutional (500-599)

| | | | | | | | |
|-----|---------------------------|----------|-----------------|------------|-----------|-----------|------------|
| 520 | Private Elementary School | 0.000982 | per square foot | \$ 0.4361 | \$ 0.0130 | \$ 0.0065 | \$ 0.4556 |
| 530 | Private High School | 0.000653 | per square foot | \$ 0.2899 | \$ 0.0086 | \$ 0.0043 | \$ 0.3028 |
| 560 | Church/Place of Worship | 0.000347 | per square foot | \$ 0.1542 | \$ 0.0046 | \$ 0.0023 | \$ 0.1611 |
| 565 | Day Care Center | 0.002818 | per square foot | \$ 1.2510 | \$ 0.0375 | \$ 0.0187 | \$ 1.3072 |
| 566 | Cemetery | 0.081425 | per acre | \$ 36.1524 | \$ 1.0845 | \$ 0.5422 | \$ 37.7791 |

Medical (600-699)

| | | | | | | | |
|-----|--------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 610 | Hospital | 0.002938 | per square foot | \$ 1.3044 | \$ 0.0391 | \$ 0.0195 | \$ 1.3630 |
| 620 | Nursing Home | 0.002331 | per square foot | \$ 1.0351 | \$ 0.0310 | \$ 0.0155 | \$ 1.0816 |
| 630 | Clinic | 0.003926 | per square foot | \$ 1.7433 | \$ 0.0522 | \$ 0.0261 | \$ 1.8216 |

Office (700-799)

| | | | | | | | |
|-----|---------------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 710 | General Office Building | 0.003322 | per square foot | \$ 1.4751 | \$ 0.0442 | \$ 0.0221 | \$ 1.5414 |
| 714 | Corporate Headquarters Building | 0.003425 | per square foot | \$ 1.5206 | \$ 0.0456 | \$ 0.0228 | \$ 1.5890 |
| 715 | Single-Tenant Office Building | 0.003149 | per square foot | \$ 1.3980 | \$ 0.0419 | \$ 0.0209 | \$ 1.4608 |
| 720 | Medical-Dental Office Building | 0.004055 | per square foot | \$ 1.8004 | \$ 0.0540 | \$ 0.0270 | \$ 1.8814 |
| 760 | Research and Development Center | 0.002928 | per square foot | \$ 1.2999 | \$ 0.0389 | \$ 0.0194 | \$ 1.3582 |
| 770 | Business Park | 0.003079 | per square foot | \$ 1.3672 | \$ 0.0410 | \$ 0.0205 | \$ 1.4287 |

Retail (800-899)

| | | | | | | | |
|-----|-------------------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 812 | Building Materials and Lumber Store | 0.001406 | per square foot | \$ 0.6242 | \$ 0.0187 | \$ 0.0093 | \$ 0.6522 |
| 813 | Free-Standing Discount Superstore | 0.000960 | per square foot | \$ 0.4262 | \$ 0.0127 | \$ 0.0063 | \$ 0.4452 |
| 814 | Variety Store | 0.000960 | per square foot | \$ 0.4262 | \$ 0.0127 | \$ 0.0063 | \$ 0.4452 |
| 815 | Free-Standing Discount Store | 0.001985 | per square foot | \$ 0.8812 | \$ 0.0264 | \$ 0.0132 | \$ 0.9208 |
| 816 | Hardware/Paint Store | 0.000964 | per square foot | \$ 0.4280 | \$ 0.0128 | \$ 0.0064 | \$ 0.4472 |
| 817 | Nursery (Garden Center) | 0.003120 | per square foot | \$ 1.3851 | \$ 0.0415 | \$ 0.0207 | \$ 1.4473 |
| 818 | Nursery (Wholesale) | 0.001667 | per square foot | \$ 0.7400 | \$ 0.0222 | \$ 0.0111 | \$ 0.7733 |
| 820 | Shopping Center | 0.001670 | per square foot | \$ 0.7415 | \$ 0.0222 | \$ 0.0111 | \$ 0.7748 |
| 823 | Factory Outlet Center | 0.001670 | per square foot | \$ 0.7415 | \$ 0.0222 | \$ 0.0111 | \$ 0.7748 |
| 826 | Specialty Retail Center | 0.001982 | per square foot | \$ 0.8800 | \$ 0.0264 | \$ 0.0132 | \$ 0.9196 |
| 841 | Automobile Sales | 0.001528 | per square foot | \$ 0.6784 | \$ 0.0203 | \$ 0.0101 | \$ 0.7088 |

Methodology Report Sheriff's Office & Jail

| ITE Code | Land Use | Employees | Unit of Measure | Net Fee per Unit | Administration (3%) | CIE Prep (1.5%) | Total Impact Fee |
|----------|--|-----------|-----------------|------------------|---------------------|-----------------|------------------|
| 843 | Auto Parts Store | 0.000960 | per square foot | \$ 0.4262 | \$ 0.0127 | \$ 0.0063 | \$ 0.4452 |
| 848 | Tire Store | 0.001280 | per square foot | \$ 0.5683 | \$ 0.0170 | \$ 0.0085 | \$ 0.5938 |
| 849 | Tire Superstore | 0.001280 | per square foot | \$ 0.5683 | \$ 0.0170 | \$ 0.0085 | \$ 0.5938 |
| 850 | Supermarket | 0.001164 | per square foot | \$ 0.5169 | \$ 0.0155 | \$ 0.0077 | \$ 0.5401 |
| 851 | Convenience Market (Open 24 Hours) | 0.001800 | per square foot | \$ 0.7992 | \$ 0.0239 | \$ 0.0119 | \$ 0.8350 |
| 853 | Convenience Market with Gasoline Pumps | 0.001800 | per square foot | \$ 0.7992 | \$ 0.0239 | \$ 0.0119 | \$ 0.8350 |
| 854 | Discount Supermarket | 0.002251 | per square foot | \$ 0.9995 | \$ 0.0299 | \$ 0.0149 | \$ 1.0443 |
| 860 | Wholesale Market | 0.000820 | per square foot | \$ 0.3640 | \$ 0.0109 | \$ 0.0054 | \$ 0.3803 |
| 861 | Discount Club | 0.001298 | per square foot | \$ 0.5762 | \$ 0.0172 | \$ 0.0086 | \$ 0.6020 |
| 862 | Home Improvement Superstore | 0.000960 | per square foot | \$ 0.4262 | \$ 0.0127 | \$ 0.0063 | \$ 0.4452 |
| 863 | Electronics Superstore | 0.000960 | per square foot | \$ 0.4262 | \$ 0.0127 | \$ 0.0063 | \$ 0.4452 |
| 870 | Apparel Store | 0.001670 | per square foot | \$ 0.7415 | \$ 0.0222 | \$ 0.0111 | \$ 0.7748 |
| 875 | Department Store | 0.001980 | per square foot | \$ 0.8791 | \$ 0.0263 | \$ 0.0131 | \$ 0.9185 |
| 880 | Pharmacy/Drugstore | 0.001670 | per square foot | \$ 0.7415 | \$ 0.0222 | \$ 0.0111 | \$ 0.7748 |
| 890 | Furniture Store | 0.000415 | per square foot | \$ 0.1843 | \$ 0.0055 | \$ 0.0027 | \$ 0.1925 |

Services (900-999)

| | | | | | | | |
|-----|---------------------------------------|----------|-----------------|-------------|------------|------------|-------------|
| 912 | Drive-in Bank | 0.004788 | per square foot | \$ 2.1260 | \$ 0.0637 | \$ 0.0318 | \$ 2.2215 |
| 931 | Quality Restaurant | 0.007460 | per square foot | \$ 3.3122 | \$ 0.0993 | \$ 0.0496 | \$ 3.4611 |
| 932 | High-Turnover (Sit-Down) Restauant | 0.007460 | per square foot | \$ 3.3122 | \$ 0.0993 | \$ 0.0496 | \$ 3.4611 |
| 934 | Fast-Food Restaurant | 0.010900 | per square foot | \$ 4.8395 | \$ 0.1451 | \$ 0.0725 | \$ 5.0571 |
| 941 | Quick Lubrication Vehicle Shop | 2.100000 | per service bay | \$ 932.3891 | \$ 27.9716 | \$ 13.9858 | \$ 974.3465 |
| 944 | Gasoline/Service Station | 0.160000 | per pump | \$ 71.0392 | \$ 2.1311 | \$ 1.0655 | \$ 74.2358 |
| 945 | Gasoline Station w/Convenience Market | 0.216000 | per pump | \$ 95.9029 | \$ 2.8770 | \$ 1.4385 | \$ 100.2184 |
| 947 | Self-Service Car Wash | 0.200000 | per stall | \$ 88.7990 | \$ 2.6639 | \$ 1.3319 | \$ 92.7948 |

Notes: ITE Code means the land use code assigned in the *Trip Generation* manual published by the Institute of Transportation Engineers, 9th Ed.
n/a - not applicable. Fee taken from the *Calculation of Housing Unit Fee* table.
"Square foot" means square foot of gross building floor area.

Fire Protection

■ Introduction

Fire protection is provided in Harris County through ten volunteer fire departments. Each department has under its command fire stations and fire trucks. The departments currently maintain 17 stations and substations located throughout the county and coordinate their activities and coverage through a Council of Fire Chiefs.

■ Service Area

Fire protection is provided countywide outside of the City of West Point, which has its own department and operates independently from the volunteer fire departments. For this reason, the entire county outside of West Point is considered a single service area for the provision of fire protection because all residents and employees within this area have equal access to the benefits of the service.

■ Level of Service

The current Level of Service is determined by an inventory of the square footage and heavy vehicles used for fire protection services. As shown in Table 38 and Table 39, the volunteer fire departments currently provide service with a combined building square footage of 61,945 in its 17 fire stations and supporting facilities, utilizing a total of 51 fire-fighting apparatus.

Table 38: Inventory of Fire Apparatus

Type and Number of Existing Vehicles*

Fire Apparatus

| | |
|-----------------------------|-----------|
| Pumper | 32 |
| Tender | 4 |
| Ladder | 1 |
| Rescue | 6 |
| Brush Truck | 8 |
| Total Fire Apparatus | 51 |

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



Note that the term 'fire apparatus' applies to any rolling stock which is used for the primary purpose of fighting, suppressing or controlling fires of any type—buildings, fields, automobile wrecks, wooded areas, etc. The County does not contemplate acquiring any type of fire apparatus other than those listed above.

Table 39: Inventory of Fire Stations and Facilities

| Existing Fire Stations and Facilities | | |
|---|--|-------------------|
| Name | Location | Floor Area |
| Antioch VFD - Station 100 | | |
| Station 1 | 5430 GA Hwy 210, Fortson | 4,422 |
| Station 2 | 5219 Lickskillet Road, Hamilton | 448 |
| Station 3 | 85 Satellite Circle, Fortson | 448 |
| Station 4 | 7840 GA Hwy 219, Hamilton | 809 |
| Station 5 | 3534 Mountain Hill Road, Fortson | 468 |
| Station 6 | 580 Harrisville Road, Fortson | 1,280 |
| Cataula VFD - Station 200 | | |
| Station 1 | 107 Raymond Drive, Cataula | 2,170 |
| Station 2 | 7120 GA Hwy 315, Cataula | 5,200 |
| Ellerslie VFD - Station 300 | | |
| Station 300 | 13425 Warm Springs Road, Ellerslie | 8,400 |
| Hamilton VFD - Station 1100 | | |
| Station 1100 | 10188 GA Hwy 16, Hamilton | 7,700 |
| Hopewell VFD - Station 500 | | |
| Station 500 | 6381 Hopewell Church Road, Pine Mountain | 2,716 |
| NW Harris VFD - Station 800 | | |
| Station 1 | 4433 Pine Lake Road, West Point | 9,100 |
| Station 2 | 2340 Piedmont Lake Road, Pine Mountain | 984 |
| Pine Mountain VFD - Station 1200 | | |
| Station 1200 | 301 East Chipley Street, Pine Mountain | 4,160 |
| Pine Mountain Valley VFD - Station 900 | | |
| Station 900 | 95 Park Lane, Pine Mountain Valley | 6,100 |
| Shiloh VFD - Station 1300 | | |
| Station 1300 | 1165 Main Street, Shiloh | 3,840 |
| Waverly Hall VFD - Station 1400 | | |
| Station 1400 | 547 O'Neal Drive, Waverly Hall | 2,500 |
| Fire Training Center | | |
| Burn Building | 10188 GA Hwy 116, Hamilton | 1,200 |
| Total Existing Square Footage | | 61,945 |

Table 40: Level of Service Calculations

| Level of Service | | | Future Demand | |
|-------------------------|----------------------------|---------------------------|---|-------------------------------|
| Facilities | Current Service Population | Level of Service | Future Service Population | New Growth Demand* |
| Existing Square Feet | 2021 Day-Night Population | Square Feet per Person | Day-Night Population Increase (2021-45) | Net New Square Feet Needed |
| 61,945 | 43,649 | 1.419170 | 24,763 | 35,143 |
| Existing Fire Apparatus | 2021 Day-Night Population | Fire Apparatus per Person | Day-Night Population Increase (2021-45) | Net New Fire Apparatus Needed |
| 51 | 43,649 | 0.001168 | 24,763 | 28.93 |

*Number of fire apparatus will be rounded down to 28 vehicles having 100% impact fee eligibility.

Table 40 presents the calculation of Level of Service based on the inventory in the preceding tables. Day-night population is used in calculating Level of Service and demand for future facilities due to fire protection services being available to both residences and businesses on a 24-hour basis.

The Level of Service is measured in terms of the existing building area in square feet and fire apparatus per 2021 day-night population in the county.

■ Forecasts for Service Area

Future Demand

Table 40 also calculates the future demand for square footage and fire apparatus, based on the LOS standards shown on the table that are applied to the expected day-night population growth between 2021 and 2045. Facilities needed to serve new growth in 2045 include 35,143 square feet in space that is 100% impact fee eligible because it is the full amount needed to meet new growth demand. Additional future needs are 28.93 fire apparatus. Note that, because only ‘whole’ vehicles can be purchased (as opposed to the portion of one – .93 of a vehicle – that is technically needed to meet future demand), this figure is rounded down to the nearest whole number, resulting in 28 fire apparatus that are 100% impact fee eligible.

Future Costs

Since the actual pace and timing of construction for the improvements to meet future demand have not been programmed, an ‘average’ year of 2033 is used for the Net Present Value calculations – some will occur earlier for less money, and some later at greater cost. All will average out.

To calculate the Net Present Value (NPV) of the impact fee eligible cost estimate for the construction of future fire stations or supporting facilities (which may be an expansion of an existing facility or the construction of a new building), the NPV is calculated by increasing the current (2021) estimated costs using the Engineering News Record’s (ENR) 10-year average building cost inflation (BCI) rate, and then discounting this future amount back using the Net Discount Rate.

A per-square foot construction cost of \$300 has been used to estimate the cost of future building projects, based on an average of similar projects in Georgia communities.

To calculate the NPV of the impact fee eligible cost estimate of the fire apparatus, the current estimated cost is inflated to the target year (2033) using the 10-year average Consumer Price Index (CPI) and then reduced using the Net Discount Rate to produce the Net Present Value. The estimated unit cost is the average cost of the existing vehicle types operating in the County, based on current prevailing rates.

The project costs are shown on Table 41: Project Costs to Meet Future Demand.

Table 41: Project Costs to Meet Future Demand

| Description | Number | 2021 Cost Each* | Total 2021 Cost | Estimated Cost 2033 (NPV)** | % Impact Fee Eligible | Total Impact Fee Eligible Cost |
|----------------------------|--------|-----------------|-------------------------|-----------------------------|-----------------------|--------------------------------|
| New Building Area (sq.ft.) | 35,143 | \$ 300.00 | \$ 10,542,907.00 | \$ 13,531,415.80 | 100% | \$ 13,531,415.80 |
| New Fire Apparatus | 28 | \$ 325,000.00 | \$ 9,100,000.00 | \$ 11,166,357.31 | 100% | \$ 11,166,357.31 |
| Totals | | | \$ 19,642,907.00 | \$ 24,697,773.11 | | \$ 24,697,773.11 |

* Building cost estimates based on comparable facilities in other Georgia communities; estimated fire apparatus unit cost represents the average cost of vehicle types in the existing inventory based on current prevailing rates.

**2021 cost estimate inflated to target year (2033) using the BCI and CPI, reduced to NPV using the Discount Rate.

Since the new building area and fire apparatus are exactly what is required to serve new growth, the projects are 100% impact fee eligible. The impact fee eligible square footage may be allocated across various new or expanded fire stations or other supporting facilities and may be implemented in different years. As previously stated, an ‘average’ year of 2033 is used for the Net Present Value calculations since it is unknown when additional building space will be constructed and when additional fire apparatus will be purchased.

■ Credit Calculation

Property Tax Credit

There is no property tax credit for this public facility category because there is no non-eligible portion of the projects that would otherwise be funded by new growth and development.

■ Net Impact Cost Calculation

Fire Protection impact fees are collected from both residential and nonresidential development.

Table 42: Net Cost to Serve New Growth

| Description | Total |
|---|-------------------------|
| Total Eligible Cost of Fire Projects | \$ 24,697,773.11 |
| minus credit for Tax Contribution | \$ - |
| = Total Net Eligible Fire Protection Costs | \$ 24,697,773.11 |
| ÷ Day-Night Pop Increase (2021-2045) in Service Area | 24,763 |
| = Cost per Person | \$ 997.3626 |

Using the total eligible cost figure for project costs from Table 41, in Table 42 the net impact cost per day-night person is calculated, based on the increase in the day-night population between 2021 and 2045. Since there are no credits applicable to the Fire Protection category, the total eligible costs equals the net eligible costs. This figure, divided by the future increase in day-night population in the service area, results in a 'cost per person', which will be used to calculate impact fees for all nonresidential land uses.

Note that an administration fee and a fee for the preparation of the CIE is added to the net cost figure to produce the gross fee, which is shown on the Maximum Impact Fee Schedule.

A final calculation, shown in Table 43, is necessary in order to fairly distribute the portion of project costs that are attributable to residential growth, because they are assessed impact fees per housing unit rather than by person.

Table 43: Calculation of Net Housing Fee

| Factor | Data |
|--|-------------------------|
| Residential Population Increase (2021-2045) | 20,916 |
| ÷ Day/Night Population Increase (2021-2045) | 24,763 |
| = Residential Increase as % of Total Increase | 84.465% |
| Total Net Project Costs | \$ 24,697,773.11 |
| × Residential % of Total Day-Night Increase = | \$ 20,860,918.99 |
| ÷ New Housing Units (2021-2045) | 8,737 |
| = Net Impact Fee per Housing Unit | \$ 2,387.6523 |

The portion of project cost that is attributable to new residential growth is calculated 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 project cost figure to produce the cost attributable to new residential growth. Finally, this cost attributable to new residential growth is divided by the number of new housing units projected to 2045 to produce a 'net impact fee per housing unit'.

■ Maximum Impact Fee Schedule—Fire Protection

The maximum net impact fee that could be charged in Harris County for the Fire Protection category, based on the calculations carried out in this chapter, is shown on Table 43.

The following are added to the net impact fee to produce the total maximum impact fee on Table 44:

- A 3% administrative fee; and,
- A 1.5% fee to cover the cost of preparing the Capital Improvements Element (CIE).

The total impact fees on the following table are transferred to Maximum Impact Fee Schedule in the Introduction Chapter of this report.



Table 44: Maximum Impact Fee Schedule - Fire Protection Facilities

| ITE Code | Land Use | Employees | Unit of Measure | Net Fee per Unit | Administration (3%) | CIE Prep (1.5%) | Total Impact Fee |
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|

Net Cost per Day/Night Person (Employee): \$ 997.3626

Residential (200-299)

| | | | | | | | |
|-----|-----------------------------------|-----|--------------|---------------|------------|------------|---------------|
| 210 | Single-Family Detached Housing | n/a | per dwelling | \$ 2,387.6523 | \$ 71.6295 | \$ 35.8147 | \$ 2,495.0965 |
| 220 | Apartment | n/a | per dwelling | \$ 2,387.6523 | \$ 71.6295 | \$ 35.8147 | \$ 2,495.0965 |
| 230 | Residential Condominium/Townhouse | n/a | per dwelling | \$ 2,387.6523 | \$ 71.6295 | \$ 35.8147 | \$ 2,495.0965 |

Port and Terminal (000-099)

| | | | | | | | |
|-----|---------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 030 | Intermodal Truck Terminal | 0.001415 | per square foot | \$ 1.4111 | \$ 0.0423 | \$ 0.0211 | \$ 1.4745 |
|-----|---------------------------|----------|-----------------|-----------|-----------|-----------|-----------|

Industrial/Agricultural (100-199)

| | | | | | | | |
|-----|--------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 110 | General Light Industrial | 0.002308 | per square foot | \$ 2.3019 | \$ 0.0690 | \$ 0.0345 | \$ 2.4054 |
| 120 | General Heavy Industrial | 0.001829 | per square foot | \$ 1.8244 | \$ 0.0547 | \$ 0.0273 | \$ 1.9064 |
| 140 | Manufacturing | 0.001793 | per square foot | \$ 1.7887 | \$ 0.0536 | \$ 0.0268 | \$ 1.8691 |
| 150 | Warehousing | 0.000915 | per square foot | \$ 0.9128 | \$ 0.0273 | \$ 0.0136 | \$ 0.9537 |
| 151 | Mini-Warehouse | 0.000077 | per square foot | \$ 0.0768 | \$ 0.0023 | \$ 0.0011 | \$ 0.0802 |
| 152 | High-Cube Warehouse | 0.000076 | per square foot | \$ 0.0757 | \$ 0.0022 | \$ 0.0011 | \$ 0.0790 |

Lodging (300-399)

| | | | | | | | |
|-----|---------------------------|----------|----------|-------------|------------|-----------|-------------|
| 310 | Hotel or Conference Motel | 0.569735 | per room | \$ 568.2324 | \$ 17.0469 | \$ 8.5234 | \$ 593.8027 |
| 311 | All Suites Hotel | 0.500000 | per room | \$ 498.6813 | \$ 14.9604 | \$ 7.4802 | \$ 521.1219 |
| 320 | Motel | 0.439500 | per room | \$ 438.3413 | \$ 13.1502 | \$ 6.5751 | \$ 458.0666 |

Recreational (400-499)

| | | | | | | | |
|-----|-------------------------------|----------|-----------------|---------------|-------------|-------------|---------------|
| 430 | Golf Course | 0.245614 | per acre | \$ 244.9663 | \$ 7.3489 | \$ 3.6744 | \$ 255.9896 |
| 437 | Bowling Alley | 0.001000 | per square foot | \$ 0.9974 | \$ 0.0299 | \$ 0.0149 | \$ 1.0422 |
| 443 | Movie Theater | 0.001470 | per square foot | \$ 1.4656 | \$ 0.0439 | \$ 0.0219 | \$ 1.5314 |
| 460 | Arena | 3.333000 | per acre | \$ 3,324.2095 | \$ 99.7262 | \$ 49.8631 | \$ 3,473.7988 |
| 480 | Amusement Park | 9.094838 | per acre | \$ 9,070.8512 | \$ 272.1255 | \$ 136.0627 | \$ 9,479.0394 |
| 490 | Tennis Courts | 0.243888 | per acre | \$ 243.2446 | \$ 7.2973 | \$ 3.6486 | \$ 254.1905 |
| 491 | Racquet/Tennis Club | 0.000307 | per square foot | \$ 0.3061 | \$ 0.0091 | \$ 0.0045 | \$ 0.3197 |
| 492 | Health/Fitness Center | 0.000705 | per square foot | \$ 0.7031 | \$ 0.0210 | \$ 0.0105 | \$ 0.7346 |
| 495 | Recreational Community Center | 0.001241 | per square foot | \$ 1.2378 | \$ 0.0371 | \$ 0.0185 | \$ 1.2934 |

Methodology Report Fire Protection

| ITE Code | Land Use | Employees | Unit of Measure | Net Fee per Unit | Administration (3%) | CIE Prep (1.5%) | Total Impact Fee |
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|

Institutional (500-599)

| | | | | | | | |
|-----|---------------------------|----------|-----------------|------------|-----------|-----------|------------|
| 520 | Private Elementary School | 0.000982 | per square foot | \$ 0.9796 | \$ 0.0293 | \$ 0.0146 | \$ 1.0235 |
| 530 | Private High School | 0.000653 | per square foot | \$ 0.6513 | \$ 0.0195 | \$ 0.0097 | \$ 0.6805 |
| 560 | Church/Place of Worship | 0.000347 | per square foot | \$ 0.3463 | \$ 0.0103 | \$ 0.0051 | \$ 0.3617 |
| 565 | Day Care Center | 0.002818 | per square foot | \$ 2.8102 | \$ 0.0843 | \$ 0.0421 | \$ 2.9366 |
| 566 | Cemetery | 0.081425 | per acre | \$ 81.2106 | \$ 2.4363 | \$ 1.2181 | \$ 84.8650 |

Medical (600-699)

| | | | | | | | |
|-----|--------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 610 | Hospital | 0.002938 | per square foot | \$ 2.9300 | \$ 0.0879 | \$ 0.0439 | \$ 3.0618 |
| 620 | Nursing Home | 0.002331 | per square foot | \$ 2.3251 | \$ 0.0697 | \$ 0.0348 | \$ 2.4296 |
| 630 | Clinic | 0.003926 | per square foot | \$ 3.9160 | \$ 0.1174 | \$ 0.0587 | \$ 4.0921 |

Office (700-799)

| | | | | | | | |
|-----|---------------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 710 | General Office Building | 0.003322 | per square foot | \$ 3.3135 | \$ 0.0994 | \$ 0.0497 | \$ 3.4626 |
| 714 | Corporate Headquarters Building | 0.003425 | per square foot | \$ 3.4159 | \$ 0.1024 | \$ 0.0512 | \$ 3.5695 |
| 715 | Single-Tenant Office Building | 0.003149 | per square foot | \$ 3.1403 | \$ 0.0942 | \$ 0.0471 | \$ 3.2816 |
| 720 | Medical-Dental Office Building | 0.004055 | per square foot | \$ 4.0443 | \$ 0.1213 | \$ 0.0606 | \$ 4.2262 |
| 760 | Research and Development Center | 0.002928 | per square foot | \$ 2.9201 | \$ 0.0876 | \$ 0.0438 | \$ 3.0515 |
| 770 | Business Park | 0.003079 | per square foot | \$ 3.0711 | \$ 0.0921 | \$ 0.0460 | \$ 3.2092 |

Retail (800-899)

| | | | | | | | |
|-----|-------------------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 812 | Building Materials and Lumber Store | 0.001406 | per square foot | \$ 1.4023 | \$ 0.0420 | \$ 0.0210 | \$ 1.4653 |
| 813 | Free-Standing Discount Superstore | 0.000960 | per square foot | \$ 0.9575 | \$ 0.0287 | \$ 0.0143 | \$ 1.0005 |
| 814 | Variety Store | 0.000960 | per square foot | \$ 0.9575 | \$ 0.0287 | \$ 0.0143 | \$ 1.0005 |
| 815 | Free-Standing Discount Store | 0.001985 | per square foot | \$ 1.9795 | \$ 0.0593 | \$ 0.0296 | \$ 2.0684 |
| 816 | Hardware/Paint Store | 0.000964 | per square foot | \$ 0.9614 | \$ 0.0288 | \$ 0.0144 | \$ 1.0046 |
| 817 | Nursery (Garden Center) | 0.003120 | per square foot | \$ 3.1113 | \$ 0.0933 | \$ 0.0466 | \$ 3.2512 |
| 818 | Nursery (Wholesale) | 0.001667 | per square foot | \$ 1.6623 | \$ 0.0498 | \$ 0.0249 | \$ 1.7370 |
| 820 | Shopping Center | 0.001670 | per square foot | \$ 1.6656 | \$ 0.0499 | \$ 0.0249 | \$ 1.7404 |
| 823 | Factory Outlet Center | 0.001670 | per square foot | \$ 1.6656 | \$ 0.0499 | \$ 0.0249 | \$ 1.7404 |
| 826 | Specialty Retail Center | 0.001982 | per square foot | \$ 1.9769 | \$ 0.0593 | \$ 0.0296 | \$ 2.0658 |
| 841 | Automobile Sales | 0.001528 | per square foot | \$ 1.5239 | \$ 0.0457 | \$ 0.0228 | \$ 1.5924 |

Methodology Report Fire Protection

| ITE Code | Land Use | Employees | Unit of Measure | Net Fee per Unit | Administration (3%) | CIE Prep (1.5%) | Total Impact Fee |
|----------|--|-----------|-----------------|------------------|---------------------|-----------------|------------------|
| 843 | Auto Parts Store | 0.000960 | per square foot | \$ 0.9575 | \$ 0.0287 | \$ 0.0143 | \$ 1.0005 |
| 848 | Tire Store | 0.001280 | per square foot | \$ 1.2766 | \$ 0.0382 | \$ 0.0191 | \$ 1.3339 |
| 849 | Tire Superstore | 0.001280 | per square foot | \$ 1.2766 | \$ 0.0382 | \$ 0.0191 | \$ 1.3339 |
| 850 | Supermarket | 0.001164 | per square foot | \$ 1.1611 | \$ 0.0348 | \$ 0.0174 | \$ 1.2133 |
| 851 | Convenience Market (Open 24 Hours) | 0.001800 | per square foot | \$ 1.7953 | \$ 0.0538 | \$ 0.0269 | \$ 1.8760 |
| 853 | Convenience Market with Gasoline Pumps | 0.001800 | per square foot | \$ 1.7953 | \$ 0.0538 | \$ 0.0269 | \$ 1.8760 |
| 854 | Discount Supermarket | 0.002251 | per square foot | \$ 2.2453 | \$ 0.0673 | \$ 0.0336 | \$ 2.3462 |
| 860 | Wholesale Market | 0.000820 | per square foot | \$ 0.8176 | \$ 0.0245 | \$ 0.0122 | \$ 0.8543 |
| 861 | Discount Club | 0.001298 | per square foot | \$ 1.2943 | \$ 0.0388 | \$ 0.0194 | \$ 1.3525 |
| 862 | Home Improvement Superstore | 0.000960 | per square foot | \$ 0.9575 | \$ 0.0287 | \$ 0.0143 | \$ 1.0005 |
| 863 | Electronics Superstore | 0.000960 | per square foot | \$ 0.9575 | \$ 0.0287 | \$ 0.0143 | \$ 1.0005 |
| 870 | Apparel Store | 0.001670 | per square foot | \$ 1.6656 | \$ 0.0499 | \$ 0.0249 | \$ 1.7404 |
| 875 | Department Store | 0.001980 | per square foot | \$ 1.9748 | \$ 0.0592 | \$ 0.0296 | \$ 2.0636 |
| 880 | Pharmacy/Drugstore | 0.001670 | per square foot | \$ 1.6656 | \$ 0.0499 | \$ 0.0249 | \$ 1.7404 |
| 890 | Furniture Store | 0.000415 | per square foot | \$ 0.4140 | \$ 0.0124 | \$ 0.0062 | \$ 0.4326 |

Services (900-999)

| | | | | | | | |
|-----|---------------------------------------|----------|-----------------|---------------|------------|------------|---------------|
| 912 | Drive-in Bank | 0.004788 | per square foot | \$ 4.7757 | \$ 0.1432 | \$ 0.0716 | \$ 4.9905 |
| 931 | Quality Restaurant | 0.007460 | per square foot | \$ 7.4403 | \$ 0.2232 | \$ 0.1116 | \$ 7.7751 |
| 932 | High-Turnover (Sit-Down) Restauant | 0.007460 | per square foot | \$ 7.4403 | \$ 0.2232 | \$ 0.1116 | \$ 7.7751 |
| 934 | Fast-Food Restaurant | 0.010900 | per square foot | \$ 10.8713 | \$ 0.3261 | \$ 0.1630 | \$ 11.3604 |
| 941 | Quick Lubrication Vehicle Shop | 2.100000 | per service bay | \$ 2,094.4615 | \$ 62.8338 | \$ 31.4169 | \$ 2,188.7122 |
| 944 | Gasoline/Service Station | 0.160000 | per pump | \$ 159.5780 | \$ 4.7873 | \$ 2.3936 | \$ 166.7589 |
| 945 | Gasoline Station w/Convenience Market | 0.216000 | per pump | \$ 215.4303 | \$ 6.4629 | \$ 3.2314 | \$ 225.1246 |
| 947 | Self-Service Car Wash | 0.200000 | per stall | \$ 199.4725 | \$ 5.9841 | \$ 2.9920 | \$ 208.4486 |

Notes: ITE Code means the land use code assigned in the *Trip Generation* manual published by the Institute of Transportation Engineers, 9th Edition.
n/a - not applicable. Fee taken from the *Calculation of Housing Unit Fee* table.
"Square foot" means square foot of gross building floor area.

Emergency Medical Services

■ Introduction

Emergency medical services are provided by Harris County through its Emergency Medical Services (EMS) Department. The EMS Department provides advanced life support (ALS) ambulance service and maintains four EMS stations located throughout the county operating 24/7 with a fleet of ambulances and supporting equipment.



■ Service Area

Emergency medical services are provided countywide outside of the City of West Point, which has its own department and operates independently from the County EMS Department. For this reason, the entire county outside of West Point is considered a single service area for the provision of EMS services because all residents and employees within this area have equal access to the benefits of the service.

■ Level of Service

The Level of Service is determined by an inventory of the square footage, vehicles, and equipment currently used by the EMS Department and by the planned addition of building space in the form of expansions to two EMS stations and the addition of three new stations as well as the addition of five ambulances. These planned improvements have been identified to meet the needs of the County in 2045.

As shown in Table 45, the EMS Department currently provides service with a combined building square footage of 19,341 in its 4 stations, utilizing a variety of vehicles (that include seven ambulances) and related equipment.

Table 45 also shows two future building expansion projects and three new stations, which would add 17,800 square feet to the inventory of building area for a total of 37,141 square feet. In addition, five additional ambulances are shown as being added to the fleet in the future, resulting in a total of 12 ambulances.



Table 45: Inventory of EMS Facilities

| Description | Quantity |
|-------------|----------|
|-------------|----------|

Existing Building Floor Area (in square feet)

| | |
|----------------------------------|---------------|
| Station 1 EMS Hamilton | 6,750 |
| Station 2 EMS Mountain Hill | 7,200 |
| Station 3 EMS Waverly Hall | 3,500 |
| Station 4 EMS Pine Mountain | 1,891 |
| <i>Total Building Floor Area</i> | <i>19,341</i> |

Existing Vehicles & Equipment*

| | |
|-------------------------------|---|
| Ambulances | 7 |
| ATV Side x Sides | 2 |
| Emergency Response Boats | 1 |
| Trailers** | 2 |
| Field/Administrative Vehicles | 3 |

Planned Building Floor Area (in square feet)

| | |
|--|---------------|
| Station 1 Expansion | 1,400 |
| Station 2 Expansion | 1,400 |
| Station 5 (New) | 5,000 |
| Station 6 (New) | 5,000 |
| Station 7 (New) | 5,000 |
| <i>Total Planned Building Floor Area</i> | <i>17,800</i> |

Planned Vehicles

| | |
|------------|---|
| Ambulances | 5 |
|------------|---|

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

** Includes one utility trailer and one enclosed trailer.

Table 46 on the next page presents the calculation of Level of Service based on the inventory and planned improvements on the table above. Day-night population is used in calculating Level of Service and demand for future facilities due to the EMS Department serving both residences and businesses throughout the county on a 24-hour basis.

The Level of Service is measured in terms of the existing vehicles and equipment used by the EMS Department per 2021 day-night population in the county, with the exception that the Level of Service for ambulances is based on the total number (12) necessary to meet the needs of the County through 2045. This same looking-forward approach is used to calculate the Level of Service for building floor area. In this instance, a total of 37,141 square feet in building area is anticipated to serve future growth and development, based on current County EMS plans.

Table 46: Level of Service Calculations

| Level of Service | | | Future Demand | |
|---|----------------------------------|---|---------------------------------------|---|
| Facilities | Service Population | Level of Service | Future Population | New Growth Demand* |
| Existing and Planned Square Feet | 2045 Day-Night Population | Square Feet of Floor Area per Person | 2045 Day-Night Population | Net Square Feet of New Floor Area Needed |
| 37,141 | 68,412 | 0.542903 | 68,412 | 17,800 |
| Existing and Planned Ambulances | 2045 Day-Night Population | Ambulances per Person | 2045 Day-Night Population | Net New Ambulances Needed |
| 12 | 68,412 | 0.000175 | 68,412 | 5.00 |
| Existing ATVs | 2021 Day-Night Population | ATVs per Person | 2021-2045 Day-Night Population | Net New ATVs Needed |
| 2 | 43,649 | 0.000046 | 24,763 | 1.13 |
| Existing Boats | 2021 Day-Night Population | Boats per Person | 2021-2045 Day-Night Population | Net New Boats Needed |
| 1 | 43,649 | 0.000023 | 24,763 | 0.57 |
| Existing Trailers | 2021 Day-Night Population | Trailers per Person | 2021-2045 Day-Night Population | Net New Trailers Needed |
| 2 | 43,649 | 0.000046 | 24,763 | 1.13 |
| Existing Vehicles | 2021 Day-Night Population | Ambulance per Person | 2021-2045 Day-Night Population | Net New Vehicles Needed |
| 3 | 43,649 | 0.000069 | 24,763 | 1.70 |

* System improvements are 100% impact fee eligible to the whole number. One **ATV** is 100% impact eligible, a second is 13% impact fee eligible. One **boat** is impact fee eligible, at 57%. One **trailer** is 100% impact fee eligible, a second is 13% impact fee eligible. One **administrative vehicle** is 100% impact fee eligible, a second is 70% impact fee eligible.

■ Forecasts for Service Area

Future Demand

Table 46 also calculates the future demand for EMS facilities. For ATVs, boats, trailers, and vehicles (excluding ambulances), future demand is based on the LOS standards that are applied to the expected day-night population growth between 2021 and 2045. As shown on the table, 'new growth demand' technically only requires portions of some components. For example, 1.13 ATVs are required to serve future growth based on the Level of Service, resulting in one ATV being 100% impact fee eligible but only a portion (.13) of the second ATV is eligible because it is not fully needed for future growth. Since a whole second ATV is mathematically not required, only 13% of the cost of the second ATV is impact fee eligible.

For building floor area and ambulances, future demand is based on the EMS Department's plans for adding building space and ambulances to the existing system in order to serve future growth. This demand calculation is based on the forward-looking LOS calculation in the table, minus the existing building square footage and ambulances. Thus, the 'net new' square feet in floor area and ambulances in the 'New Growth Demand' column are those needed to fully meet the needs of the residents and businesses in the year 2045. Since this total space (due to expanded and new EMS stations) and fleet of ambulances are what is required to serve new growth, the projects are 100% impact fee eligible.

Future Costs

Current (2021) estimated costs for system improvements needed to meet future demand are provided in Table 47.

The Net Present Value of impact fee eligible project costs are shown in Table 48.

To calculate the Net Present Value (NPV) of the impact fee eligible cost estimate for the construction of future building floor area, the NPV is calculated by increasing the current (2021) estimated costs to the target implementation years (as shown in the table) using the Engineering News Record's (ENR) 10-year average building cost inflation (BCI) rate, and then discounting this future amount back to 2021 current dollars using the Net Discount Rate.

To calculate the NPV of the impact fee eligible cost estimates for ambulances, ATVs, boats, trailers, and field/administrative vehicles, the current estimated cost is inflated to the target years shown on Table 48 using the 10-year average Consumer Price Index (CPI) and then reduced using the Net Discount Rate to produce the 2021 Net Present Value.

Table 47: System Improvement Costs to Meet Future Demand

| Year | Buildings | | | Vehicles & Equipment | | |
|------|---------------------|-------------|------------------|----------------------|--------|------------------|
| | Project | Square Feet | 2021 Total Cost* | Type | Number | 2021 Total Cost* |
| 2022 | Station 1 Expansion | 1,440 | \$ 244,800.00 | Boat | 1 | \$ 25,000.00 |
| | Station 2 Expansion | 1,440 | \$ 244,800.00 | Admin. Vehicle | 1 | \$ 45,000.00 |
| 2023 | | | | | | |
| 2024 | | | | | | |
| 2025 | | | | | | |
| 2026 | Future Station 5 | 5,000 | \$ 850,000.00 | Ambulance | 2 | \$ 546,000.00 |
| | | | | ATV | 1 | \$ 15,000.00 |
| | | | | Trailer | 1 | \$ 5,000.00 |
| | | | | Admin. Vehicle | 1 | \$ 45,000.00 |
| 2027 | | | | | | |
| 2028 | | | | | | |
| 2029 | | | | | | |
| 2030 | | | | | | |
| 2032 | Future Station 6 | 5,000 | \$ 850,000.00 | Ambulance | 2 | \$546,000 |
| 2033 | | | | | | |
| 2034 | | | | | | |
| 2035 | | | | ATV | 1 | \$ 15,000.00 |
| | | | | Trailer | 1 | \$ 5,000.00 |
| 2036 | | | | | | |
| 2037 | | | | | | |
| 2038 | Future Station 7 | 5,000 | \$ 850,000.00 | Ambulance | 1 | \$ 273,000.00 |
| 2039 | | | | | | |
| 2040 | | | | | | |
| 2041 | | | | | | |
| 2042 | | | | | | |
| 2043 | | | | | | |
| 2044 | | | | | | |
| 2045 | | | | | | |

*Cost estimates provided by Harris County EMS Department.

Table 48: Impact Fee Cost Calculations

| Year | Costs in 2021 Dollars | | | | Net Present Value* |
|---------------|-----------------------|------------------------|-----------------------|------------------------|------------------------|
| | Project | Total Cost | % Impact Fee Eligible | New Growth Costs | |
| 2022 | Station 1 Expansion | \$ 244,800.00 | 100% | \$ 244,800.00 | \$ 249,944.35 |
| | Station 2 Expansion | \$ 244,800.00 | 100% | \$ 244,800.00 | \$ 249,944.35 |
| | Boat (1) | \$ 25,000.00 | 57% | \$ 14,250.00 | \$ 14,495.08 |
| | Admin. Vehicle (1) | \$ 45,000.00 | 100% | \$ 45,000.00 | \$ 45,773.95 |
| 2026 | Future Station 5 | \$ 850,000.00 | 100% | \$ 850,000.00 | \$ 943,144.97 |
| | Ambulance (2) | \$ 546,000.00 | 100% | \$ 546,000.00 | \$ 594,595.84 |
| | ATV (1) | \$ 15,000.00 | 100% | \$ 15,000.00 | \$ 16,335.05 |
| | Trailer (1) | \$ 5,000.00 | 100% | \$ 5,000.00 | \$ 5,445.02 |
| | Admin. Vehicle (1) | \$ 45,000.00 | 70% | \$ 31,500.00 | \$ 34,303.61 |
| 2032 | Future Station 6 | \$ 850,000.00 | 100% | \$ 850,000.00 | \$ 1,068,488.58 |
| | Ambulance (2) | \$ 546,000.00 | 100% | \$ 546,000.00 | \$ 658,653.38 |
| 2035 | ATV (1) | \$ 15,000.00 | 13% | \$ 1,950.00 | \$ 2,475.80 |
| | Trailer (1) | \$ 5,000.00 | 13% | \$ 650.00 | \$ 825.27 |
| 2038 | Future Station 7 | \$ 850,000.00 | 100% | \$ 850,000.00 | \$ 1,210,490.31 |
| | Ambulance (1) | \$ 273,000.00 | 100% | \$ 273,000.00 | \$ 364,806.02 |
| Totals | | \$ 4,559,600.00 | | \$ 4,517,950.00 | \$ 5,459,721.56 |

*2021 cost estimate inflated to target year using the BCI and CPI, reduced to NPV using the Discount Rate.

Since the new building area and the number of ambulances are exactly what is required to serve new growth, the projects are 100% impact fee eligible. As stated earlier with the ATV example, the other components are only partially impact fee eligible because only portions of each are technically 'demanded' by future growth.

Credit Calculation

Property Tax Credit

Credits against impact fees are applied when those being assessed the fee will also be contributing to the project’s cost through their property taxes, thus creating a double-taxation situation. For this calculation it is assumed the County will meet its financial obligations toward non-eligible project costs through general fund expenditures. For this reason, the credit calculated here is based on future property tax contributions into the general fund that will be generated by new growth and development to pay for the non-eligible costs.

The credit, or future contribution from new growth, is shown on Table 49: New Growth Contribution from Future Property Taxes.

Table 49: New Growth Contribution from Future Property Taxes

| Year | Ineligible Funding Required (NPV)* | Property Tax Credit** | Contribution from New Growth |
|--------------------------------------|------------------------------------|-----------------------|------------------------------|
| 2021 | | 0.00% | |
| 2022 | \$10,934.89 | 3.85% | \$ 421.24 |
| 2023 | | 7.49% | |
| 2024 | | 10.93% | |
| 2025 | | 14.17% | |
| 2026 | \$14,701.55 | 17.24% | \$ 2,535.00 |
| 2027 | | 20.16% | |
| 2028 | | 22.94% | |
| 2029 | | 25.57% | |
| 2030 | | 28.07% | |
| 2031 | | 30.47% | |
| 2032 | | 32.76% | |
| 2033 | | 34.93% | |
| 2034 | | 37.02% | |
| 2035 | \$22,091.80 | 39.01% | \$ 8,618.41 |
| 2036 | | 40.93% | |
| 2037 | | 42.75% | |
| 2038 | | 44.51% | |
| 2039 | | 46.19% | |
| 2040 | | 47.80% | |
| 2041 | | 49.37% | |
| 2042 | | 50.85% | |
| 2043 | | 52.30% | |
| 2044 | | 53.67% | |
| 2045 | | 55.01% | |
| Total New Growth Contribution | | | \$ 11,574.65 |

* Net Present Value of amount to be paid from property taxes to cover costs not eligible for impact fee funding.

** The percentage that new growth will generate in property taxes that would be applied to the ineligible portion of impact fee projects.

The 'Property Tax Credit' is the percentage of the total countywide tax base (i.e., population and businesses combined) that represents accumulated new growth for each designated year, taken from the Cost Adjustments and Credits chapter.

The 'Contribution from New Growth' column shows the cost of the non-impact fee portion of EMS projects, multiplied by the tax credit percentage for the target implementation years.

■ Net Impact Cost Calculation

EMS impact fees are collected from both residential and nonresidential development.

Table 50: Net Cost to Serve New Growth

| Description | Total |
|--|--------------------|
| Total Eligible Cost of EMS Projects | \$ 5,459,721.56 |
| minus credit for Tax Contributions | \$ (11,574.65) |
| = Net Eligible EMS Project Costs | \$ 5,448,146.91 |
| ÷ Day-Night Pop Increase (2021-2045) in Service Area | 24,763 |
| = Cost per Person | \$ 220.0108 |

Note that an administration fee and a fee for the preparation of the CIE is added to the net cost figure to produce the gross fee, which is shown on the Maximum Impact Fee Schedule.



In calculating the net impact cost on Table 50: Net Cost to Serve New Growth, the credit for future property tax contributions (from Table 49) is subtracted from the total impact fee eligible cost, as discussed above. Using the net eligible cost figure, the 'net impact cost per person' is calculated, based on the increase in day-night population between 2021 and 2045. This figure will be used to calculate impact fees for all nonresidential land uses.

A final calculation, shown in Table 51, is necessary in order to fairly distribute the portion of project costs that are attributable to residential growth, because they are assessed impact fees per housing unit rather than by person.

Table 51: Calculation of Net Housing Fee

| Factor | Data |
|---|--------------------|
| Residential Population Increase (2021-2045) | 20,916 |
| ÷ Day-Night Population Increase (2021-2045) | 24,763 |
| = Residential Increase as % of Total Increase | 84.465% |
| Net Eligible EMS Project Costs | \$ 5,448,146.91 |
| × Residential % of Total Day-Night Increase = | \$ 4,601,765.14 |
| ÷ New Housing Units (2021-2045) | 8,737 |
| = Net Impact Fee per Housing Unit | \$ 526.6985 |

The portion of project cost that is attributable to new residential growth is calculated 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 project cost figure to produce the cost attributable to new residential growth. Finally, this cost attributable to new residential growth is divided by the number of new housing units projected to 2045 to produce a 'net impact fee per housing unit'.

■ Maximum Impact Fee Schedule—EMS

The maximum net impact fee that could be charged in Harris County for the EMS category for nonresidential land uses, based on the calculations carried out in this chapter, is taken from Table 50. For residential uses, the 'per dwelling' fee is taken from Table 51.

The following are added to the net impact fee to produce the total maximum impact fee on Table 52:

- A 3% administrative fee; and,
- A 1.5% fee to cover the cost of preparing the Capital Improvements Element (CIE).

The total impact fees on the following table are transferred to Maximum Impact Fee Schedule in the Introduction Chapter of this report.

Table 52: Calculation of Maximum Impact Fee - EMS

| ITE Code | Land Use | Employees | Unit of Measure | Net Fee per Unit | Administration (3%) | CIE Prep (1.5%) | Total Impact Fee |
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|

Net Cost per Day/Night Person (Employee): **\$ 220.0108**

Residential (200-299)

| | | | | | | | |
|-----|-----------------------------------|-----|--------------|-------------|------------|-----------|-------------|
| 210 | Single-Family Detached Housing | n/a | per dwelling | \$ 526.6985 | \$ 15.8009 | \$ 7.9004 | \$ 550.3998 |
| 220 | Apartment | n/a | per dwelling | \$ 526.6985 | \$ 15.8009 | \$ 7.9004 | \$ 550.3998 |
| 230 | Residential Condominium/Townhouse | n/a | per dwelling | \$ 526.6985 | \$ 15.8009 | \$ 7.9004 | \$ 550.3998 |

Port and Terminal (000-099)

| | | | | | | | |
|----|---------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 30 | Intermodal Truck Terminal | 0.001415 | per square foot | \$ 0.3113 | \$ 0.0093 | \$ 0.0046 | \$ 0.3252 |
|----|---------------------------|----------|-----------------|-----------|-----------|-----------|-----------|

Industrial/Agricultural (100-199)

| | | | | | | | |
|-----|--------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 110 | General Light Industrial | 0.002308 | per square foot | \$ 0.5078 | \$ 0.0152 | \$ 0.0076 | \$ 0.5306 |
| 120 | General Heavy Industrial | 0.001829 | per square foot | \$ 0.4025 | \$ 0.0120 | \$ 0.0060 | \$ 0.4205 |
| 140 | Manufacturing | 0.001793 | per square foot | \$ 0.3946 | \$ 0.0118 | \$ 0.0059 | \$ 0.4123 |
| 150 | Warehousing | 0.000915 | per square foot | \$ 0.2013 | \$ 0.0060 | \$ 0.0030 | \$ 0.2103 |
| 151 | Mini-Warehouse | 0.000077 | per square foot | \$ 0.0169 | \$ 0.0005 | \$ 0.0002 | \$ 0.0176 |
| 152 | High-Cube Warehouse | 0.000076 | per square foot | \$ 0.0167 | \$ 0.0005 | \$ 0.0002 | \$ 0.0174 |

Lodging (300-399)

| | | | | | | | |
|-----|---------------------------|----------|----------|-------------|-----------|-----------|-------------|
| 310 | Hotel or Conference Motel | 0.569735 | per room | \$ 125.3479 | \$ 3.7604 | \$ 1.8802 | \$ 130.9885 |
| 311 | All Suites Hotel | 0.500000 | per room | \$ 110.0054 | \$ 3.3001 | \$ 1.6500 | \$ 114.9555 |
| 320 | Motel | 0.439500 | per room | \$ 96.6948 | \$ 2.9008 | \$ 1.4504 | \$ 101.0460 |

Recreational (400-499)

| | | | | | | | |
|-----|-------------------------------|----------|-----------------|---------------|------------|------------|---------------|
| 430 | Golf Course | 0.245614 | per acre | \$ 54.0377 | \$ 1.6211 | \$ 0.8105 | \$ 56.4693 |
| 437 | Bowling Alley | 0.001000 | per square foot | \$ 0.2200 | \$ 0.0066 | \$ 0.0033 | \$ 0.2299 |
| 443 | Movie Theater | 0.001470 | per square foot | \$ 0.3233 | \$ 0.0096 | \$ 0.0048 | \$ 0.3377 |
| 460 | Arena | 3.333000 | per acre | \$ 733.2960 | \$ 21.9988 | \$ 10.9994 | \$ 766.2942 |
| 480 | Amusement Park | 9.094838 | per acre | \$ 2,000.9626 | \$ 60.0288 | \$ 30.0144 | \$ 2,091.0058 |
| 490 | Tennis Courts | 0.243888 | per acre | \$ 53.6580 | \$ 1.6097 | \$ 0.8048 | \$ 56.0725 |
| 491 | Racquet/Tennis Club | 0.000307 | per square foot | \$ 0.0675 | \$ 0.0020 | \$ 0.0010 | \$ 0.0705 |
| 492 | Health/Fitness Center | 0.000705 | per square foot | \$ 0.1551 | \$ 0.0046 | \$ 0.0023 | \$ 0.1620 |
| 495 | Recreational Community Center | 0.001241 | per square foot | \$ 0.2731 | \$ 0.0081 | \$ 0.0040 | \$ 0.2852 |

| ITE Code | Land Use | Employees | Unit of Measure | Net Fee per Unit | Administration (3%) | CIE Prep (1.5%) | Total Impact Fee |
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|

Institutional (500-599)

| | | | | | | | |
|-----|---------------------------|----------|-----------------|------------|-----------|-----------|------------|
| 520 | Private Elementary School | 0.000982 | per square foot | \$ 0.2161 | \$ 0.0064 | \$ 0.0032 | \$ 0.2257 |
| 530 | Private High School | 0.000653 | per square foot | \$ 0.1437 | \$ 0.0043 | \$ 0.0021 | \$ 0.1501 |
| 560 | Church/Place of Worship | 0.000347 | per square foot | \$ 0.0764 | \$ 0.0022 | \$ 0.0011 | \$ 0.0797 |
| 565 | Day Care Center | 0.002818 | per square foot | \$ 0.6199 | \$ 0.0185 | \$ 0.0092 | \$ 0.6476 |
| 566 | Cemetery | 0.081425 | per acre | \$ 17.9145 | \$ 0.5374 | \$ 0.2687 | \$ 18.7206 |

Medical (600-699)

| | | | | | | | |
|-----|--------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 610 | Hospital | 0.002938 | per square foot | \$ 0.6463 | \$ 0.0193 | \$ 0.0096 | \$ 0.6752 |
| 620 | Nursing Home | 0.002331 | per square foot | \$ 0.5129 | \$ 0.0153 | \$ 0.0076 | \$ 0.5358 |
| 630 | Clinic | 0.003926 | per square foot | \$ 0.8638 | \$ 0.0259 | \$ 0.0129 | \$ 0.9026 |

Office (700-799)

| | | | | | | | |
|-----|---------------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 710 | General Office Building | 0.003322 | per square foot | \$ 0.7309 | \$ 0.0219 | \$ 0.0109 | \$ 0.7637 |
| 714 | Corporate Headquarters Building | 0.003425 | per square foot | \$ 0.7535 | \$ 0.0226 | \$ 0.0113 | \$ 0.7874 |
| 715 | Single-Tenant Office Building | 0.003149 | per square foot | \$ 0.6927 | \$ 0.0207 | \$ 0.0103 | \$ 0.7237 |
| 720 | Medical-Dental Office Building | 0.004055 | per square foot | \$ 0.8921 | \$ 0.0267 | \$ 0.0133 | \$ 0.9321 |
| 760 | Research and Development Center | 0.002928 | per square foot | \$ 0.6441 | \$ 0.0193 | \$ 0.0096 | \$ 0.6730 |
| 770 | Business Park | 0.003079 | per square foot | \$ 0.6775 | \$ 0.0203 | \$ 0.0101 | \$ 0.7079 |

Retail (800-899)

| | | | | | | | |
|-----|-------------------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 812 | Building Materials and Lumber Store | 0.001406 | per square foot | \$ 0.3093 | \$ 0.0092 | \$ 0.0046 | \$ 0.3231 |
| 813 | Free-Standing Discount Superstore | 0.000960 | per square foot | \$ 0.2112 | \$ 0.0063 | \$ 0.0031 | \$ 0.2206 |
| 814 | Variety Store | 0.000960 | per square foot | \$ 0.2112 | \$ 0.0063 | \$ 0.0031 | \$ 0.2206 |
| 815 | Free-Standing Discount Store | 0.001985 | per square foot | \$ 0.4367 | \$ 0.0131 | \$ 0.0065 | \$ 0.4563 |
| 816 | Hardware/Paint Store | 0.000964 | per square foot | \$ 0.2121 | \$ 0.0063 | \$ 0.0031 | \$ 0.2215 |
| 817 | Nursery (Garden Center) | 0.003120 | per square foot | \$ 0.6863 | \$ 0.0205 | \$ 0.0102 | \$ 0.7170 |
| 818 | Nursery (Wholesale) | 0.001667 | per square foot | \$ 0.3667 | \$ 0.0110 | \$ 0.0055 | \$ 0.3832 |
| 820 | Shopping Center | 0.001670 | per square foot | \$ 0.3674 | \$ 0.0110 | \$ 0.0055 | \$ 0.3839 |
| 823 | Factory Outlet Center | 0.001670 | per square foot | \$ 0.3674 | \$ 0.0110 | \$ 0.0055 | \$ 0.3839 |
| 826 | Specialty Retail Center | 0.001982 | per square foot | \$ 0.4361 | \$ 0.0130 | \$ 0.0065 | \$ 0.4556 |
| 841 | Automobile Sales | 0.001528 | per square foot | \$ 0.3362 | \$ 0.0100 | \$ 0.0050 | \$ 0.3512 |

| ITE Code | Land Use | Employees | Unit of Measure | Net Fee per Unit | Administration (3%) | CIE Prep (1.5%) | Total Impact Fee |
|----------|--|-----------|-----------------|------------------|---------------------|-----------------|------------------|
| 843 | Auto Parts Store | 0.000960 | per square foot | \$ 0.2112 | \$ 0.0063 | \$ 0.0031 | \$ 0.2206 |
| 848 | Tire Store | 0.001280 | per square foot | \$ 0.2816 | \$ 0.0084 | \$ 0.0042 | \$ 0.2942 |
| 849 | Tire Superstore | 0.001280 | per square foot | \$ 0.2816 | \$ 0.0084 | \$ 0.0042 | \$ 0.2942 |
| 850 | Supermarket | 0.001164 | per square foot | \$ 0.2561 | \$ 0.0076 | \$ 0.0038 | \$ 0.2675 |
| 851 | Convenience Market (Open 24 Hours) | 0.001800 | per square foot | \$ 0.3960 | \$ 0.0118 | \$ 0.0059 | \$ 0.4137 |
| 853 | Convenience Market with Gasoline Pumps | 0.001800 | per square foot | \$ 0.3960 | \$ 0.0118 | \$ 0.0059 | \$ 0.4137 |
| 854 | Discount Supermarket | 0.002251 | per square foot | \$ 0.4953 | \$ 0.0148 | \$ 0.0074 | \$ 0.5175 |
| 860 | Wholesale Market | 0.000820 | per square foot | \$ 0.1803 | \$ 0.0054 | \$ 0.0027 | \$ 0.1884 |
| 861 | Discount Club | 0.001298 | per square foot | \$ 0.2855 | \$ 0.0085 | \$ 0.0042 | \$ 0.2982 |
| 862 | Home Improvement Superstore | 0.000960 | per square foot | \$ 0.2112 | \$ 0.0063 | \$ 0.0031 | \$ 0.2206 |
| 863 | Electronics Superstore | 0.000960 | per square foot | \$ 0.2112 | \$ 0.0063 | \$ 0.0031 | \$ 0.2206 |
| 870 | Apparel Store | 0.001670 | per square foot | \$ 0.3674 | \$ 0.0110 | \$ 0.0055 | \$ 0.3839 |
| 875 | Department Store | 0.001980 | per square foot | \$ 0.4356 | \$ 0.0130 | \$ 0.0065 | \$ 0.4551 |
| 880 | Pharmacy/Drugstore | 0.001670 | per square foot | \$ 0.3674 | \$ 0.0110 | \$ 0.0055 | \$ 0.3839 |
| 890 | Furniture Store | 0.000415 | per square foot | \$ 0.0913 | \$ 0.0027 | \$ 0.0013 | \$ 0.0953 |

Services (900-999)

| | | | | | | | |
|-----|---------------------------------------|----------|-----------------|-------------|------------|-----------|-------------|
| 912 | Drive-in Bank | 0.004788 | per square foot | \$ 1.0535 | \$ 0.0316 | \$ 0.0158 | \$ 1.1009 |
| 931 | Quality Restaurant | 0.007460 | per square foot | \$ 1.6413 | \$ 0.0492 | \$ 0.0246 | \$ 1.7151 |
| 932 | High-Turnover (Sit-Down) Restaurant | 0.007460 | per square foot | \$ 1.6413 | \$ 0.0492 | \$ 0.0246 | \$ 1.7151 |
| 934 | Fast-Food Restaurant | 0.010900 | per square foot | \$ 2.3981 | \$ 0.0719 | \$ 0.0359 | \$ 2.5059 |
| 941 | Quick Lubrication Vehicle Shop | 2.100000 | per service bay | \$ 462.0227 | \$ 13.8606 | \$ 6.9303 | \$ 482.8136 |
| 944 | Gasoline/Service Station | 0.160000 | per pump | \$ 35.2017 | \$ 1.0560 | \$ 0.5280 | \$ 36.7857 |
| 945 | Gasoline Station w/Convenience Market | 0.216000 | per pump | \$ 47.5223 | \$ 1.4256 | \$ 0.7128 | \$ 49.6607 |
| 947 | Self-Service Car Wash | 0.200000 | per stall | \$ 44.0022 | \$ 1.3200 | \$ 0.6600 | \$ 45.9822 |

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

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

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

Emergency 911

■ Introduction

The Harris County E-911 Center provides emergency communications service throughout its service area. The department receives and process emergency and non-emergency telephone calls and dispatches emergency personnel from the Sheriff’s Office; Hamilton, Pine Mountain, Shiloh, and Waverly Hall police departments; county EMS, and ten volunteer fire departments, and assists many other county departments and state agencies with their various communication needs.

■ Service Area

E-911 services are provided countywide outside of the City of West Point, which has its own department and operates independently from the County E-911 Department. For this reason, the entire county outside of West Point is considered a single service area for the provision of E-911 services because all residents and employees within this area have equal access to the benefits of the service.

■ Level of Service

The Level of Service is determined by an inventory of communication towers, vehicles, and equipment currently used by the E-911 Department and by the total area in building space planned to meet the needs of the County in 2045.

Table 53: Inventory of E-911 Facilities

| Description | Quantity |
|---|----------|
| Existing Facilities | |
| <i>Building Floor Area (in square feet)</i> | |
| E-911 Department*, 9907 Ga. Hwy. | 3,300 |
| <i>Communication Towers</i> | |
| | 10 |
| <i>Heavy Vehicles*</i> | |
| E-911 Field Truck | 1 |
| EMA Field Truck | 1 |
| Mass Casualty Bus | 1 |
| <i>Total Existing Heavy Vehicles</i> | 3 |
| <i>Heavy Equipment</i> | |
| Emergency Utility Trailer | 1 |
| <i>Emergency Power System</i> | |
| | 1 |
| Planned System | |
| <i>Building Floor Area (in square feet)</i> | |
| E-911 Center, location TBD | 5,000 |

*Located in the Harris County Emergency Services Building.

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

This planned improvement has been identified to serve the needs of both existing and future growth to 2045. As shown in Table 53, the E-911 Department currently provides service from a 3,300 square foot space within the County Emergency Services Building and utilizes 10 communication towers and a variety of vehicles and equipment in fulfilling its duties.

Table 54 on the next page presents the calculation of Level of Service based on the inventory and planned improvements in Table 53. Day-night population is used in calculating Level of Service and demand for future facilities due to the E-911 Department serving both residences and businesses throughout the county on a 24-hour basis.

The Level of Service is measured in terms of all facilities (with the exception of building floor area) used by the E-911 Department per 2021 day-night population in the county. The LOS for

building floor area, however, is based on the total number (8,300 square feet) needed to fully serve residents and businesses in the year 2045.

Table 54: Level of Service Calculations

| Level of Service | | | Future Demand | |
|---|----------------------------------|---|---------------------------------------|-------------------------------------|
| Facilities | Service Population | Level of Service | Future Population | New Growth Demand |
| Existing and Planned Total Square Feet | 2045 Day-Night Population | Square Feet of Floor Area per Person | 2045 Day-Night Population | Net New Square Feet Needed |
| 8,300 | 68,412 | 0.1213 | 68,412 | 5,000 |
| Existing Towers | 2021 Day-Night Population | Towers per Person | 2021-2045 Day-Night Population | Net New Towers Needed |
| 10 | 43,649 | 0.000229 | 24,763 | 5.67 |
| Existing Heavy Vehicles | 2021 Day-Night Population | Vehicles per Person | 2021-2045 Day-Night Population | Net New Vehicles Needed |
| 3 | 43,649 | 0.000069 | 24,763 | 1.70 |
| Existing Utility Trailers | 2021 Day-Night Population | Trailers per Person | 2021-2045 Day-Night Population | Net New Trailers Needed |
| 1 | 43,649 | 0.000023 | 24,763 | 0.57 |
| Existing Power Systems | 2021 Day-Night Population | Power Systems per Person | 2021-2045 Day-Night Population | Net New Power Systems Needed |
| 1 | 43,649 | 0.000023 | 24,763 | 0.57 |

* System improvements are 100% impact fee eligible to the whole number. Five **communication towers** are 100% impact fee eligible, a sixth is 67% impact fee eligible. One **vehicle** is 100% impact fee eligible, a second is 70% impact fee eligible. One **trailer** and one **emergency power system** are partially impact fee eligible, at 57%.

■ Forecasts for Service Area

Future Demand

Table 54 also calculates the future demand for E-911 facilities. For communication towers, vehicles, equipment, and emergency power systems, future demand is based on the LOS standards that are applied to the expected day-night population growth between 2021 and 2045. As shown on the table, 'new growth demand' technically only requires portions of some components. For example, 1.70 heavy vehicles are required to serve future growth based on the Level of Service. This means one vehicle is fully impact fee eligible, while the second is only partially eligible because only a portion (.70) of it is needed for future growth. Since a whole second vehicle is mathematically not required, only 70% of the cost of the second vehicle is impact fee eligible.

For building floor area, future demand is based on the E-911 Department's plans to serve future growth. This demand calculation is based on the forward-looking LOS calculation in the table, minus the existing building area. Thus, the 'Net New Square Feet Needed' is the space needed to serve future growth in the county over the next two decades. Since the new building area is what is required to serve new growth, the projects are 100% fee eligible.

Future Costs

Both the current (2021) estimated costs and the Net Present Value of impact fee eligible project costs are shown in Table 55.

Projects are 100% impact fee eligible if their number is the lowest whole number that is required to serve new growth. As shown on the table, the whole number of communication towers (5) and heavy vehicles (1) are 100% impact fee eligible, while a sixth communication tower and a second vehicle are partially impact fee eligible. Both the trailer and emergency power system are only partially impact fee eligible, because only portions of each are technically 'demanded' by future growth.

To calculate the Net Present Value (NPV) of the impact fee eligible cost estimates for the construction of future building floor area and communication towers, the NPV is calculated by increasing the current (2021) estimated costs to the average target implementation year (2033) using the Engineering News Record's (ENR) 10-year average building cost inflation (BCI) rate, and then discounting this future amount back to 2021 using the Net Discount Rate.

To calculate the NPV of the impact fee eligible cost estimates for all other E-911 projects (vehicles, trailer, and emergency power systems), the current estimated cost is inflated to the same average target year shown on Table 55 using the 10-year average Consumer Price Index (CPI) and then reduced using the Net Discount Rate to produce the Net Present Value.

The year 2033 for all projects is used since the actual pace and timing of construction for the improvements to meet future demand has not been programmed – some will occur earlier than 2033 for less money, and some later at greater cost. All will average out.

Table 55: Project Costs to Meet Future Demand

| Description | Number | 2021 Total Cost* | Estimated Cost 2033 (NPV)** | % Impact Fee Eligible | Total Impact Fee Eligible Cost |
|----------------------------|--------|------------------|-----------------------------|-----------------------|--------------------------------|
| E-911 Center (square feet) | 5,000 | \$ 8,000,000.00 | \$ 10,267,692.43 | 100% | \$ 10,267,692.43 |
| Communication Tower | 5 | \$ 2,500,000.00 | \$ 3,208,653.88 | 100% | \$ 3,208,653.88 |
| Communication Tower | 1 | \$ 500,000.00 | \$ 641,730.78 | 57% | \$ 365,786.54 |
| Heavy Vehicle | 1 | \$ 70,000.00 | \$ 85,895.06 | 100% | \$ 85,895.06 |
| Heavy Vehicle | 1 | \$ 70,000.00 | \$ 85,895.06 | 70% | \$ 60,126.54 |
| Trailer | 1 | \$ 15,000.00 | \$ 18,406.08 | 57% | \$ 10,491.47 |
| Emergency Power System | 1 | \$ 85,000.00 | \$ 104,301.14 | 57% | \$ 59,451.65 |
| | | Totals | \$ 14,118,077.09 | | \$ 13,842,132.86 |

* Cost estimates provided by Harris County E-911 Department.

**2021 cost estimate inflated to target year (2033) using the CPI and BCI, reduced to NPV using the Discount Rate.

■ Credit Calculation

Property Tax Credit

Credits against impact fees are applied when those being assessed the fee will also be contributing to the project’s cost through their property taxes, thus creating a double-taxation situation. For this calculation it is assumed the County will meet its financial obligations toward non-eligible project costs through general fund expenditures. For this reason, the credit calculated here is based on future property tax contributions into the general fund that will be generated by new growth and development to pay for the non-eligible costs. The credit, or future contribution from new growth, is shown on Table 56.

Table 56: New Growth Contribution from Future Property Taxes

| Year | Ineligible Funding Required (NPV)* | Property Tax Credit** | Contribution from New Growth |
|--------------------------------------|------------------------------------|-----------------------|------------------------------|
| 2033 | \$ 354,476.86 | 34.93% | \$ 123,832.40 |
| Total New Growth Contribution | | | \$ 123,832.40 |

* Net Present Value of amount to be paid from property taxes to cover costs not eligible for impact fee funding.

** The percentage that new growth will generate in property taxes that would be applied to the ineligible portion of impact fee projects.

The 'Property Tax Credit' is the percentage of the total countywide tax base (i.e., population and businesses combined) base that represents accumulated new growth for each designated year, taken from the Cost Adjustments and Credits chapter.

The 'Contribution from New Growth' column shows the cost of the non-impact fee portion of E-911 projects, multiplied by the tax credit percentage for the 'average' implementation year (2033).

■ Net Impact Cost Calculation

E-911 impact fees are collected from both residential and nonresidential development.

Table 57: Net Cost to Serve New Growth

| Description | Total |
|---------------------------------------|--------------------|
| Total Eligible Cost of E-911 Projects | \$ 13,842,132.86 |
| minus credit for Tax Contributions | \$ (123,832.40) |
| = Net Eligible E-911 Project Costs | \$ 13,718,300.46 |
| ÷ Day-Night Pop Increase (2021-2045) | 24,763 |
| = Net Impact Cost per Person | \$ 553.9819 |

Note that an administration fee and a fee for the preparation of the CIE is added to the net cost figure to produce the gross fee, which is shown on the Maximum Impact Fee Schedule.

In calculating the net impact cost on Table 57, the credit for future property tax contributions (from Table 56) is subtracted from the total impact fee eligible cost, as discussed above. Using the net eligible cost figure, the net impact cost per housing unit is calculated, based on the increase in dwelling units between 2021 and 2045. This figure, divided by the future increase in day-night population, results in a 'net impact cost per person', which will be used to calculate impact fees for all nonresidential land uses.

A final calculation, shown in Table 58, is necessary in order to fairly distribute the portion of project costs that are attributable to residential growth, because they are assessed impact fees per housing unit rather than by person.

Table 58: Calculation of Net Housing Fee

| Factor | Data |
|---|----------------------|
| Residential Population Increase (2021-2045) | 20,916 |
| ÷ Day-Night Population Increase (2021-2045) | 24,763 |
| = Residential Increase as % of Total Increase | 84.465% |
| Total Net Eligible Public Safety Facilities Project Costs | \$ 13,718,300.46 |
| × Residential % of Total Day-Night Increase = | \$ 11,587,131.89 |
| ÷ New Housing Units (2021-2045) | 8,737 |
| = Net Impact Fee per Housing Unit | \$ 1,326.2140 |

The portion of project cost that is attributable to new residential growth is calculated 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 project cost figure to produce the cost attributable to new residential growth. Finally, this cost attributable to new residential growth is divided by the number of new housing units projected to 2045 to produce a 'net impact fee per housing unit'.

■ Maximum Impact Fee Schedule—E-911

The maximum net impact fee that could be charged in Harris County for the E-911 category, based on the calculations carried out in this chapter, is shown on Table 59.

The following are added to the net impact fee to produce the total maximum impact fee on Table 59:

- A 3% administrative fee; and,
- A 1.5% fee to cover the cost of preparing the Capital Improvements Element (CIE).

The total impact fees on the following table are transferred to Maximum Impact Fee Schedule in the Introduction Chapter of this report.

Table 59: Calculation of Maximum Impact Fee – E-911

| ITE Code | Land Use | Employees | Unit of Measure | Net Fee per Unit | Administration (3%) | CIE Prep (1.5%) | Total Impact Fee |
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|

Net Cost per Day/Night Person (Employee): \$ 553.9819

Residential (200-299)

| | | | | | | | |
|-----|-----------------------------------|-----|--------------|---------------|------------|------------|---------------|
| 210 | Single-Family Detached Housing | n/a | per dwelling | \$ 1,326.2140 | \$ 39.7864 | \$ 19.8932 | \$ 1,385.8936 |
| 220 | Apartment | n/a | per dwelling | \$ 1,326.2140 | \$ 39.7864 | \$ 19.8932 | \$ 1,385.8936 |
| 230 | Residential Condominium/Townhouse | n/a | per dwelling | \$ 1,326.2140 | \$ 39.7864 | \$ 19.8932 | \$ 1,385.8936 |

Port and Terminal (000-099)

| | | | | | | | |
|----|---------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 30 | Intermodal Truck Terminal | 0.001415 | per square foot | \$ 0.6282 | \$ 0.0188 | \$ 0.0094 | \$ 0.6564 |
|----|---------------------------|----------|-----------------|-----------|-----------|-----------|-----------|

Industrial/Agricultural (100-199)

| | | | | | | | |
|-----|--------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 110 | General Light Industrial | 0.002308 | per square foot | \$ 1.2786 | \$ 0.0383 | \$ 0.0191 | \$ 1.3360 |
| 120 | General Heavy Industrial | 0.001829 | per square foot | \$ 1.0134 | \$ 0.0304 | \$ 0.0152 | \$ 1.0590 |
| 140 | Manufacturing | 0.001793 | per square foot | \$ 0.9935 | \$ 0.0298 | \$ 0.0149 | \$ 1.0382 |
| 150 | Warehousing | 0.000915 | per square foot | \$ 0.5070 | \$ 0.0152 | \$ 0.0076 | \$ 0.5298 |
| 151 | Mini-Warehouse | 0.000077 | per square foot | \$ 0.0427 | \$ 0.0012 | \$ 0.0006 | \$ 0.0445 |
| 152 | High-Cube Warehouse | 0.000076 | per square foot | \$ 0.0420 | \$ 0.0012 | \$ 0.0006 | \$ 0.0438 |

Lodging (300-399)

| | | | | | | | |
|-----|---------------------------|----------|----------|-------------|-----------|-----------|-------------|
| 310 | Hotel or Conference Motel | 0.569735 | per room | \$ 315.6229 | \$ 9.4686 | \$ 4.7343 | \$ 329.8258 |
| 311 | All Suites Hotel | 0.500000 | per room | \$ 276.9910 | \$ 8.3097 | \$ 4.1548 | \$ 289.4555 |
| 320 | Motel | 0.439500 | per room | \$ 243.4753 | \$ 7.3042 | \$ 3.6521 | \$ 254.4316 |

Recreational (400-499)

| | | | | | | | |
|-----|-------------------------------|----------|-----------------|---------------|-------------|------------|---------------|
| 430 | Golf Course | 0.245614 | per acre | \$ 136.0657 | \$ 4.0819 | \$ 2.0409 | \$ 142.1885 |
| 437 | Bowling Alley | 0.001000 | per square foot | \$ 0.5540 | \$ 0.0166 | \$ 0.0083 | \$ 0.5789 |
| 443 | Movie Theater | 0.001470 | per square foot | \$ 0.8141 | \$ 0.0244 | \$ 0.0122 | \$ 0.8507 |
| 460 | Arena | 3.333000 | per acre | \$ 1,846.4217 | \$ 55.3926 | \$ 27.6963 | \$ 1,929.5106 |
| 480 | Amusement Park | 9.094838 | per acre | \$ 5,038.3756 | \$ 151.1512 | \$ 75.5756 | \$ 5,265.1024 |
| 490 | Tennis Courts | 0.243888 | per acre | \$ 135.1094 | \$ 4.0532 | \$ 2.0266 | \$ 141.1892 |
| 491 | Racquet/Tennis Club | 0.000307 | per square foot | \$ 0.1700 | \$ 0.0051 | \$ 0.0025 | \$ 0.1776 |
| 492 | Health/Fitness Center | 0.000705 | per square foot | \$ 0.3906 | \$ 0.0117 | \$ 0.0058 | \$ 0.4081 |
| 495 | Recreational Community Center | 0.001241 | per square foot | \$ 0.6875 | \$ 0.0206 | \$ 0.0103 | \$ 0.7184 |

| ITE Code | Land Use | Employees | Unit of Measure | Net Fee per Unit | Administration (3%) | CIE Prep (1.5%) | Total Impact Fee |
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|
|----------|----------|-----------|-----------------|------------------|---------------------|-----------------|------------------|

Institutional (500-599)

| | | | | | | | |
|-----|---------------------------|----------|-----------------|------------|-----------|-----------|------------|
| 520 | Private Elementary School | 0.000982 | per square foot | \$ 0.5441 | \$ 0.0163 | \$ 0.0081 | \$ 0.5685 |
| 530 | Private High School | 0.000653 | per square foot | \$ 0.3617 | \$ 0.0108 | \$ 0.0054 | \$ 0.3779 |
| 560 | Church/Place of Worship | 0.000347 | per square foot | \$ 0.1923 | \$ 0.0057 | \$ 0.0028 | \$ 0.2008 |
| 565 | Day Care Center | 0.002818 | per square foot | \$ 1.5609 | \$ 0.0468 | \$ 0.0234 | \$ 1.6311 |
| 566 | Cemetery | 0.081425 | per acre | \$ 45.1082 | \$ 1.3532 | \$ 0.6766 | \$ 47.1380 |

Medical (600-699)

| | | | | | | | |
|-----|--------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 610 | Hospital | 0.002938 | per square foot | \$ 1.6275 | \$ 0.0488 | \$ 0.0244 | \$ 1.7007 |
| 620 | Nursing Home | 0.002331 | per square foot | \$ 1.2915 | \$ 0.0387 | \$ 0.0193 | \$ 1.3495 |
| 630 | Clinic | 0.003926 | per square foot | \$ 2.1751 | \$ 0.0652 | \$ 0.0326 | \$ 2.2729 |

Office (700-799)

| | | | | | | | |
|-----|---------------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 710 | General Office Building | 0.003322 | per square foot | \$ 1.8405 | \$ 0.0552 | \$ 0.0276 | \$ 1.9233 |
| 714 | Corporate Headquarters Building | 0.003425 | per square foot | \$ 1.8973 | \$ 0.0569 | \$ 0.0284 | \$ 1.9826 |
| 715 | Single-Tenant Office Building | 0.003149 | per square foot | \$ 1.7443 | \$ 0.0523 | \$ 0.0261 | \$ 1.8227 |
| 720 | Medical-Dental Office Building | 0.004055 | per square foot | \$ 2.2464 | \$ 0.0673 | \$ 0.0336 | \$ 2.3473 |
| 760 | Research and Development Center | 0.002928 | per square foot | \$ 1.6219 | \$ 0.0486 | \$ 0.0243 | \$ 1.6948 |
| 770 | Business Park | 0.003079 | per square foot | \$ 1.7058 | \$ 0.0511 | \$ 0.0255 | \$ 1.7824 |

Retail (800-899)

| | | | | | | | |
|-----|-------------------------------------|----------|-----------------|-----------|-----------|-----------|-----------|
| 812 | Building Materials and Lumber Store | 0.001406 | per square foot | \$ 0.7789 | \$ 0.0233 | \$ 0.0116 | \$ 0.8138 |
| 813 | Free-Standing Discount Superstore | 0.000960 | per square foot | \$ 0.5318 | \$ 0.0159 | \$ 0.0079 | \$ 0.5556 |
| 814 | Variety Store | 0.000960 | per square foot | \$ 0.5318 | \$ 0.0159 | \$ 0.0079 | \$ 0.5556 |
| 815 | Free-Standing Discount Store | 0.001985 | per square foot | \$ 1.0995 | \$ 0.0329 | \$ 0.0164 | \$ 1.1488 |
| 816 | Hardware/Paint Store | 0.000964 | per square foot | \$ 0.5340 | \$ 0.0160 | \$ 0.0080 | \$ 0.5580 |
| 817 | Nursery (Garden Center) | 0.003120 | per square foot | \$ 1.7282 | \$ 0.0518 | \$ 0.0259 | \$ 1.8059 |
| 818 | Nursery (Wholesale) | 0.001667 | per square foot | \$ 0.9233 | \$ 0.0276 | \$ 0.0138 | \$ 0.9647 |
| 820 | Shopping Center | 0.001670 | per square foot | \$ 0.9251 | \$ 0.0277 | \$ 0.0138 | \$ 0.9666 |
| 823 | Factory Outlet Center | 0.001670 | per square foot | \$ 0.9251 | \$ 0.0277 | \$ 0.0138 | \$ 0.9666 |
| 826 | Specialty Retail Center | 0.001982 | per square foot | \$ 1.0981 | \$ 0.0329 | \$ 0.0164 | \$ 1.1474 |
| 841 | Automobile Sales | 0.001528 | per square foot | \$ 0.8464 | \$ 0.0253 | \$ 0.0126 | \$ 0.8843 |

| ITE Code | Land Use | Employees | Unit of Measure | Net Fee per Unit | Administration (3%) | CIE Prep (1.5%) | Total Impact Fee |
|----------|--|-----------|-----------------|------------------|---------------------|-----------------|------------------|
| 843 | Auto Parts Store | 0.000960 | per square foot | \$ 0.5318 | \$ 0.0159 | \$ 0.0079 | \$ 0.5556 |
| 848 | Tire Store | 0.001280 | per square foot | \$ 0.7091 | \$ 0.0212 | \$ 0.0106 | \$ 0.7409 |
| 849 | Tire Superstore | 0.001280 | per square foot | \$ 0.7091 | \$ 0.0212 | \$ 0.0106 | \$ 0.7409 |
| 850 | Supermarket | 0.001164 | per square foot | \$ 0.6449 | \$ 0.0193 | \$ 0.0096 | \$ 0.6738 |
| 851 | Convenience Market (Open 24 Hours) | 0.001800 | per square foot | \$ 0.9972 | \$ 0.0299 | \$ 0.0149 | \$ 1.0420 |
| 853 | Convenience Market with Gasoline Pumps | 0.001800 | per square foot | \$ 0.9972 | \$ 0.0299 | \$ 0.0149 | \$ 1.0420 |
| 854 | Discount Supermarket | 0.002251 | per square foot | \$ 1.2471 | \$ 0.0374 | \$ 0.0187 | \$ 1.3032 |
| 860 | Wholesale Market | 0.000820 | per square foot | \$ 0.4541 | \$ 0.0136 | \$ 0.0068 | \$ 0.4745 |
| 861 | Discount Club | 0.001298 | per square foot | \$ 0.7189 | \$ 0.0215 | \$ 0.0107 | \$ 0.7511 |
| 862 | Home Improvement Superstore | 0.000960 | per square foot | \$ 0.5318 | \$ 0.0159 | \$ 0.0079 | \$ 0.5556 |
| 863 | Electronics Superstore | 0.000960 | per square foot | \$ 0.5318 | \$ 0.0159 | \$ 0.0079 | \$ 0.5556 |
| 870 | Apparel Store | 0.001670 | per square foot | \$ 0.9251 | \$ 0.0277 | \$ 0.0138 | \$ 0.9666 |
| 875 | Department Store | 0.001980 | per square foot | \$ 1.0969 | \$ 0.0329 | \$ 0.0164 | \$ 1.1462 |
| 880 | Pharmacy/Drugstore | 0.001670 | per square foot | \$ 0.9251 | \$ 0.0277 | \$ 0.0138 | \$ 0.9666 |
| 890 | Furniture Store | 0.000415 | per square foot | \$ 0.2300 | \$ 0.0069 | \$ 0.0034 | \$ 0.2403 |

Services (900-999)

| | | | | | | | |
|-----|---------------------------------------|----------|-----------------|---------------|------------|------------|---------------|
| 912 | Drive-in Bank | 0.004788 | per square foot | \$ 2.6526 | \$ 0.0795 | \$ 0.0397 | \$ 2.7718 |
| 931 | Quality Restaurant | 0.007460 | per square foot | \$ 4.1327 | \$ 0.1239 | \$ 0.0619 | \$ 4.3185 |
| 932 | High-Turnover (Sit-Down) Restaurant | 0.007460 | per square foot | \$ 4.1327 | \$ 0.1239 | \$ 0.0619 | \$ 4.3185 |
| 934 | Fast-Food Restaurant | 0.010900 | per square foot | \$ 6.0384 | \$ 0.1811 | \$ 0.0905 | \$ 6.3100 |
| 941 | Quick Lubrication Vehicle Shop | 2.100000 | per service bay | \$ 1,163.3620 | \$ 34.9008 | \$ 17.4504 | \$ 1,215.7132 |
| 944 | Gasoline/Service Station | 0.160000 | per pump | \$ 88.6371 | \$ 2.6591 | \$ 1.3295 | \$ 92.6257 |
| 945 | Gasoline Station w/Convenience Market | 0.216000 | per pump | \$ 119.6601 | \$ 3.5898 | \$ 1.7949 | \$ 125.0448 |
| 947 | Self-Service Car Wash | 0.200000 | per stall | \$ 110.7964 | \$ 3.3238 | \$ 1.6619 | \$ 115.7821 |

Notes: ode means the land use code assigned in the *Trip Generation* manual published by the Institute of Transportation Engineers, 9th Ed.
 ot 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 this report. Generally, the definitions are taken directly from the Georgia 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) Wastewater 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) Stormwater 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 a 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 three 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."

Nonresidential Land Use Definitions

The following definitions below are the official definitions for interpretation in the County's impact fee program (but may differ from Zoning Ordinance definitions of allowable land uses). The definitions are derived from the Institute of Transportation Engineers' *Trip Generation Manual (9TH edition)*. In some cases, interpretation of the definition is required. This is the role of the Impact Fee Administrator, though the applicant can appeal the interpretation.

| Land Use Category | ITE Code* | Description |
|-------------------------------------|-----------|---|
| All Suites Hotel | 311 | Places of lodging that provide sleeping accommodations, a small restaurant and lounge, and a small amount of meeting space. Each suite includes a sitting room and separate bedroom, and limited kitchen facilities |
| Amusement Park | 480 | An outdoor facility that contains rides, entertainment, refreshment stands, and picnic areas. |
| Apparel Store | 876 | Individual store specializing in the sale of clothing. |
| Arena | 460 | Large indoor structure in which spectator events are held. These events vary from professional ice hockey and basketball to non-sporting events such as concerts, shows, or religious services. |
| Automobile Sales | 841 | Dealerships offering new or used cars for sale. Automobile services, parts sales and substantial used car sales may also be available. Some dealerships also include leasing options, truck sales and servicing. |
| Auto Parts Store | 843 | Facilities specializing in the sale of automobile parts for do-it-yourself maintenance and repair. Items sold at these facilities include items such as spark plugs, oil, batteries and a wide range of automobile parts. These facilities are not equipped for on-site vehicle repair. |
| Bowling Alley | 437 | A recreational facility that primarily provides lanes for bowling. A small lounge, restaurant and/or snack bar, video games, and pool tables may also be available as accessory uses. |
| Building Materials and Lumber Store | 812 | A free-standing building that sells hardware, building materials and lumber. The lumber may be stored in the main building or in a yard or storage sheds. (In contrast, see Hardware/Paint Store below.) |
| Business Park Building | 770 | A flex-type or incubator one- or two-story building served by a common roadway system. The tenant space is flexible and lends itself to a variety of uses; the rear side of the building is usually served by a garage door. Tenants may be start-up companies or small mature companies that require a variety of space. The space may include offices, retail and wholesale stores, restaurants, recreational areas and warehousing, manufacturing, light industrial, or scientific research functions. |
| Cemetery | 566 | A place for burying the deceased, possibly including buildings used for funeral services, a mausoleum, and a crematorium. |

| Land Use Category | ITE Code* | Description |
|--|-----------|---|
| Church/Place of Worship | 560 | Any building providing public religious worship facilities. A church, synagogue or any other religious facility generally houses an assembly hall or sanctuary, meeting rooms, classrooms, and occasionally, dining, catering or party facilities. |
| Clinic | 630 | Any facility that provides limited diagnostic and outpatient care but is unable to provide prolonged in-house medical and surgical care. Clinics often have lab facilities or a pharmacy. |
| Convenience Market (Open 24 Hours) | 851 | Open 24 hours per day. These stores sell convenience foods, newspapers, magazines, and often beer and wine; and they do not have gasoline pumps. |
| Convenience Market with Gasoline Pumps | 853 | These stores sell gasoline, convenience foods, newspapers, magazines, and often, beer and wine. This land use includes convenience markets with gasoline pumps where the primary business is the selling of convenience items, not the fueling of motor vehicles. (See Gas Station w/Convenience Market, below.) |
| Corporate Headquarters Building | 714 | A single tenant office building that houses the corporate headquarters of a company or organization, which generally consists of offices, meeting rooms, space for file storage and data processing, an employee restaurant or cafeteria, and other service functions. This category includes a regional headquarters building of a state-wide or national company. |
| Daycare Center | 565 | A facility that cares for preschool age children, normally during the daytime hours. The facility generally includes classrooms, offices, eating areas, and a playground. After-school care for school age children may also be provided. |
| Department Store | 875 | A free-standing facility that specializes in the sale of a wide range of products including apparel, footwear, home products, bedding and linens, luggage, jewelry and accessories. |
| Discount Club | 857 | A discount store or warehouse where shoppers pay a membership fee in order to take advantage of discounted prices on a wide variety of items such as food, clothing, tires and appliances; many items are sold in large quantities or bulk. |
| Discount Supermarket | 854 | A free-standing retail store selling a complete assortment of food (often in bulk), food preparation and wrapping materials, and household cleaning and servicing items at discounted prices. |
| Drive-in Bank | 912 | Contains banking facilities for both the motorist while in a vehicle, and someone who walks into the building. |

| Land Use Category | ITE Code* | Description |
|-----------------------------------|-----------|--|
| Electronics Superstore | 863 | A free-standing warehouse type facility, they specialize in the sale of home and vehicle electronic merchandise and generally offer a variety of customer services and centralized cashiering. They typically maintain long store hours seven days a week. Examples of items sold in these stores include televisions, audio and video players and recorders, cameras, software, telephones, computers, and general electronic accessories. Major home appliances may also be sold at these facilities. Electronics superstores are sometimes found as separate parcels within a retail complex with their own dedicated parking. |
| Factory Outlet Center | 823 | A shopping center that primarily houses factory outlet stores, attracting customers from a wide geographic area, very often even from a larger area than a regional shopping center. |
| Fast Food Restaurant | 934 | <p>This category includes restaurants with drive-through windows. This type of restaurant is characterized by a large drive-through clientele, long hours of service (some are open for breakfast, all are open for lunch and dinner, some are open late at night or 24 hours per day), and high turnover rates for eat-in customers. These limited-service eating establishments do not provide table service. Non-drive-through patrons generally order at a cash register, pay before they eat and pick up their meals at a counter.</p> <p>Examples include Burger King, Chick-fil-A, Captain D's, Kentucky Fried Chicken, McDonalds, Papa John's Pizza, Sonic Drive-in, Subway, Taco Bell, Wendy's, and all cafeterias.</p> |
| Free-Standing Discount Store | 815 | Similar to the Free-Standing Discount Superstore land use, but does not contain a full-service grocery department. Usually offers fewer services than a Department Store, has centralized cashiering and a wide range of products. Often the only store on a site, but again, one can find them in mutual operation with their own or other supermarkets, garden centers and service stations, or as part of community-sized shopping centers. Usually maintains long store hours, even on Sunday. |
| Free-Standing Discount Superstore | 813 | Similar to the Free-Standing Discount Store land use, with the exception that these also contain a full-service grocery department under the same roof that shares entrances and exits with the discount store area. These stores usually offer a variety of customer services, centralized cashiering, and a wide range of products. They typically maintain long store hours seven days a week. The stores included in this land use are often the only ones on the site, but they can also be found in mutual operation with a related or unrelated garden center and/or service station. |
| Furniture Store | 890 | A retail facility that specializes in the sale of furniture and often carpeting. The stores are generally large and include storage areas. |

| Land Use Category | ITE Code* | Description |
|----------------------------------|------------------|--|
| Gasoline/Service Station | 944 | A gasoline/service station where the primary business is the fueling of motor vehicles. These service stations may also have ancillary facilities for servicing and repairing motor vehicles. |
| Gas Station w/Convenience Market | 945 | This land use includes gasoline/service stations with convenience markets where the primary business is the fueling of motor vehicles. These service stations may also have ancillary facilities for servicing and repairing motor vehicles. Some commonly sold convenience items are newspapers, coffee or other beverages and snack items that are usually consumed in the car. |
| General Heavy Industrial | 120 | Unlike manufacturing facilities, which convert raw materials into products, heavy industrial uses generally involve the assembly of parts into finished products. |
| General Light Industrial | 110 | Free-standing facility devoted to a single industrial use, but having an emphasis other than manufacturing. Light industries typical of those included in this category are printing plants, material testing laboratories, and assemblers of data processing equipment. |
| General Office Building | 710 | Houses multiple tenants and is the location where affairs of a business, commercial or industrial organization, professional person or firm are conducted. The building is designed to contain a mixture of tenants including professional services, insurance companies, investment brokers, company headquarters, and services for the tenants such as a bank or savings and loan, a restaurant or cafeteria, and service retail facilities. |
| Golf Course | 430 | Includes 9-, 18-, 27- or 36-hole golf courses and may include a private country club. Some sites have driving ranges and clubhouses with a pro shop and/or restaurant, lounge or banquet facilities. |
| Hardware/Paint Store | 816 | Generally, a free-standing building where the primary business is the sale of hand tools and power tools for repairs, maintenance and construction work; and/or house paint, paint brushes and other painting accessories. |
| Health/Fitness Center | 492 | Health/fitness centers are privately-owned facilities that primarily focus on individual fitness or training. Typically, they provide exercise classes; weightlifting, fitness and gymnastics equipment; spas; locker rooms; and small restaurants or snack bars. This land use may also include ancillary facilities, such as swimming pools, whirlpools, saunas, tennis, racquetball and handball courts and limited retail. |
| High-Cube Warehouse | 152 | Highly mechanized facilities used for the storage of manufactured goods prior to their distribution to retail outlets, distribution centers or other warehouses. These facilities generally consist of large steel or masonry shell buildings, with a typical ceiling height of 24 feet or more. They are also characterized by a small employment count due to the high level of mechanization, may include an office component, and some limited assembly and repackaging may occur. |

| Land Use Category | ITE Code* | Description |
|-------------------------------------|-----------|---|
| High-Turnover (Sit-Down) Restaurant | 932 | <p>Sit-down, full service eating places (“sometimes called Family Restaurants”) where customers generally stay less than one hour. Restaurants in this group are usually moderately priced and frequently belong to chains. These restaurants generally serve lunch and dinner, sometimes breakfast, and are sometimes open 24 hours a day. Reservations are typically not taken. Patrons wait to be seated, are served by a waiter or waitress, order from a menu at the table and may pay at the table. The restaurant may include a bar as an accessory use.</p> <p>Examples include: Applebee’s, Huddle House, IHOP, Longhorn Steakhouse, Olive Garden, Ruby Tuesday, and Waffle House. For contrast, see also Fast Food Restaurant (ITE 934) and Quality Restaurant (ITE 931).</p> |
| Home Improvement Superstore | 862 | <p>A free-standing warehouse type facility, they specialize in the sale of home improvement merchandise and generally offer a variety of customer services and centralized cashiering. They typically maintain long store hours seven days a week. Examples of items sold in these stores include lumber, tools, paint, lighting, wallpaper and paneling, kitchen and bathroom fixtures, lawn equipment, and garden plants and accessories. Home improvement superstores are sometimes found as separate parcels within a retail complex with their own dedicated parking.</p> |
| Hospital | 610 | <p>Any institution where medical or surgical care and overnight accommodations is given to non-ambulatory and ambulatory patients.</p> |
| Hotel or Conference Hotel | 310 | <p>A place of lodging providing sleeping accommodations, and supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (pool, fitness room), and/or small retail and service shops.</p> |
| Intermodal Truck Terminal | 030 | <p>Facilities where goods are transferred between trucks, trucks and railroads, or trucks and ports. (See also High-Cube Warehouse.)</p> |
| Manufacturing | 140 | <p>Places where the primary activity is the conversion of raw materials or parts into finished products. Size and type of activity may vary substantially from one facility to another. In addition to actual production of goods, manufacturing facilities generally also have office, warehouse, research and assorted functions.</p> |
| Medical-Dental Office Building | 720 | <p>A facility that provides diagnoses and outpatient care on a routine basis but is unable to provide prolonged in-house medical or surgical care. Usually occupied by a single private physician or dentist, a group of doctors, or several independent physicians or dentists.</p> |
| Mini-Warehouse | 151 | <p>A building in which a storage unit or vault is rented for the storage of goods (sometimes called a “self-storage facility”). Each unit is physically separated from other units and access is usually provided through an overhead door.</p> |

| Land Use Category | ITE Code* | Description |
|--------------------------------|------------------|---|
| Motel | 320 | A place of lodging offering sleeping accommodations and possibly a restaurant or breakfast area. Little or no meeting space and few supporting facilities are provided. Access to rooms may be from an interior corridor or from outdoor landings. |
| Movie Theater | 443 | Consists of audience seating, one or more screens and auditoriums, and a lobby and refreshment stand. |
| Nursery (Garden Center) | 817 | A free-standing building with an outside storage area for planting or landscape stock. These nurseries primarily serve the general public. Some have large greenhouses and offer landscaping services, and may sell lawn care and maintenance supplies, trimmers or mowers. Most have office, storage, and shipping facilities. |
| Nursery (Wholesale) | 818 | A free-standing building with an outside storage area for planting or landscape stock. These nurseries primarily serve contractors and suppliers. Some have large greenhouses and offer landscaping services. Most have office, storage, and shipping facilities. |
| Nursing Home | 620 | Any facility whose primary function is to provide 24-hour per day care for persons unable to care for themselves. The term is applicable not only to rest homes, but also to chronic care and convalescent homes. Assisted living and continuing care retirement communities can be included in this category. |
| Pharmacy/Drugstore | 880 | A retail facility that primarily sells prescription and non-prescription drugs. These facilities may also sell cosmetics, toiletries, medications, stationary, personal care products, limited food products, and general merchandise. |
| Private Elementary School | 520 | A privately owned, state accredited school that serves students attending kindergarten through fifth or sixth grade. |
| Private High School | 530 | A privately owned, state accredited school that serves students in the ninth through twelfth grade; middle or junior high schools can also be included in this category. |
| Quality Restaurant | 931 | <p>A high quality, full service eating establishment with turnover rates generally of at least one hour or longer. Generally, a quality restaurant does not serve breakfast and may or may not serve lunch. Reservations are available and sometimes required. Patrons wait to be seated, are served by a waiter or waitress, and order from a menu at the table. Tables are generally pre-set with table cloths, silverware and napkins. The restaurant may include a lounge or bar as an accessory use.</p> <p>For comparison, see 'High-Turnover (Sit-Down) Restaurant' (ITE 932).</p> |
| Quick Lubrication Vehicle Shop | 941 | A business where the primary activity is to perform oil change services for vehicles. Other ancillary services may include preventive maintenance, such as fluid and filter changes. Automobile repair service is generally not provided. |

| Land Use Category | ITE Code* | Description |
|-------------------------------|-----------|---|
| Racquet/Tennis Club | 491 | An indoor or outdoor facility that primarily caters to racquet sports (tennis, racquetball, squash), and may include ancillary facilities such as swimming pools, whirlpools, saunas, weight rooms, snack bars and small retail stores. |
| Recreational Community Center | 495 | Facilities similar to and including YMCAs, often including classes and clubs for adults and children; a day care or nursery school; meeting rooms; swimming pools and whirlpools; saunas; tennis, racquetball, handball, basketball and volleyball courts; exercise classes; weightlifting and gymnastics equipment; locker rooms; and a restaurant or snack bar. |
| Research & Development Center | 760 | A facility devoted almost exclusively to research and development activities. While they may also contain offices and some light fabrication areas, the primary function is that of scientific research and product or business development. |
| Self-Service Car Wash | 945 | Facility that allows for the Manual cleaning of vehicles by providing stalls for the driver to park and wash the vehicle. |
| Shopping Center | 820 | <p>An integrated group of commercial establishments that is planned, developed, owned and managed as a unit. It is related to its market area in terms of size, location, and type of store.</p> <p><i>A single impact fee is charged when the shopping center is first issued a building permit. Individual stores, shops, movie theaters, eating establishments and other uses that locate within a shopping center building from time to time are not charged an impact fee because the initial shopping center fee already assumes a wide variety of uses that are commonly found in shopping centers.</i></p> |
| Single-Tenant Office Building | 715 | A free-standing building exclusively occupied by one business or company and generally contains its offices, meeting rooms, space for file storage and data processing, and possibly other service functions including an employee restaurant or cafeteria. |
| Specialty Retail Center | 826 | <p>A small strip shopping center that contains a variety of retail shops and specializes in quality apparel, hard goods, and services such as real estate offices, dance studios, florists, and small restaurants.</p> <p><i>A single impact fee is charged when the specialty retail center is first issued a building permit. Individual stores, shops and other uses that locate within a specialty retail center building from time to time are not charged an impact fee because the initial specialty retail center fee already assumes a wide variety of uses that are commonly found in specialty retail centers.</i></p> |

| Land Use Category | ITE Code* | Description |
|-------------------|-----------|---|
| Supermarket | 850 | Free-standing retail stores selling a complete assortment of food, food preparation and wrapping materials, and household cleaning items, and may also include automobile supplies, bakeries, snack areas, books and magazines, floral arrangements, greeting cards, cooking and other household items, and video sales or rentals. Limited-service banks, photo centers and pharmacies are often located within supermarkets. |
| Tennis Courts | 490 | Indoor or outdoor facilities specifically designed for playing tennis. Other on-site facilities may include limited spectator seating and a parking lot. (See also Racquet/Tennis Club above.) |
| Tire Store | 848 | Primary business is the sales and marketing of tires for automotive vehicles. Services offered by these stores usually include tire installation and repair, as well as other limited automotive maintenance or repair services as an accessory use. These stores generally do not contain large storage or warehouse areas. |
| Tire Superstore | 849 | A warehouse-like facility with the primary function of selling and installing tires for automobiles and small trucks. Other services provided may include automotive maintenance functions such as wheel alignment or shock and brake service. A tire display, customer waiting lounge and restroom facilities, staff office space, and significant storage area are also provided. General mechanical repairs and body work are usually not conducted at these facilities. |
| Variety Store | 814 | A retail store that sells a broad range of inexpensive items (once known as "five and dime stores"). Those that sell a single price are typically referred to as "dollar stores." Items sold at these stores typically include kitchen supplies, cleaning products, home office supplies, food products, household goods, decorations and toys. |
| Warehousing | 150 | Facility that is primarily devoted to the storage of materials, often in transit for distribution to retail outlets, distribution centers or other manufacturers. They may also include office and maintenance areas. |
| Wholesale Market | 860 | Facilities that generally include large storage and distribution areas for receiving goods and shipping those goods to places such as grocery stores and restaurants. Generally, these markets are characterized by little drive-in business, and truck deliveries and pick-ups at all hours of the day. |

*Institute of Transportation Engineers, *Trip Generation Manual*, land use code.