



# Palm Beach County Impact Fee Update Study

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**Final Report**  
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Prepared for:

**Palm Beach County**

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# Palm Beach County Impact Fee Update Study

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# I. Introduction

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With a population of 1.5 million, Palm Beach County is the third most populous county in Florida. The county continues to experience growth with a projected annual growth rate of 0.7 percent through 2050 as estimated by the University of Florida, Bureau of Business & Economic Research (BEBR), ranking in the mid-range of Florida counties (30<sup>th</sup> out of 67 counties). In terms of absolute growth, Palm Beach County is projected to add approximately 337,000 residents through 2050 and ranks fifth out of 67 counties. This high ranking is primarily due to having a large base population. Finally, the County ranked 7<sup>th</sup> for residential permitting over the past couple of years.

To address infrastructure needs due to new growth, Palm Beach County adopted impact fees in the following service areas:

- Public buildings
- Fire rescue
- Law enforcement
- Library facilities
- Parks & recreation
- School facilities
- Transportation

The most recent technical study for these fees was conducted during the 2014 to 2018 timeframe and was adopted in 2019. It is the policy of Palm Beach County to update the impact fee technical studies routinely to ensure the fees are based on most current and localized data.

Palm Beach County has retained Benesch (formerly Tindale Oliver) to prepare an update study to reflect changes to the cost, credit, and demand components since the last update study. The calculated fees represent the technically defensible level of impact fee that the County can charge; however, the Board of County Commission may choose to discount the fees as a policy decision.

## ***Methodology***

In developing the County's impact fee program, a consumption-based impact fee methodology is utilized, which is commonly used throughout Florida. A consumption-based impact fee charges new development based upon the burden placed on services from each land use (demand). The

demand component is measured in terms of population per unit in the case of all impact fee program areas with the exception of fire rescue, transportation and schools. In the case of fire rescue, incident data is utilized. For transportation, vehicle-miles of travel is used. For the school impact fee, student generation rates are used to measure demand from the residential land use.

A consumption-based impact fee charges new growth the proportionate share of the cost of providing additional infrastructure available for use by new growth. Unlike a “needs-based” approach, the consumption-based approach ensures that the impact fee is set at a rate that does not generate sufficient revenues to correct existing deficiencies. Given this, the County does not need to go through the process of estimating the portion of each capacity expansion project that may be related to existing deficiencies. In addition, per legal requirements, a credit is subtracted from the total cost to account for the value of future tax contributions of new development toward any capacity expansion projects to ensure that the new development is not charged twice for the same service.

### ***Legal Overview***

In Florida, legal requirements related to impact fees have primarily been established through case law since the 1980’s. Impact fees must comply with the “dual rational nexus” test, which requires that they:

- Be supported by a study demonstrating that the fees are proportionate in amount to the need created by new development paying the fee; and
- Be spent in a manner that directs a proportionate benefit to new development, typically accomplished through establishment of benefit districts (if needed) and a list of capacity-adding projects included in the County’s Capital Improvement Plan, Capital Improvement Element, or another planning document/Master Plan.

In 2006, the Florida legislature passed the “Florida Impact Fee Act,” which recognized impact fees as “an outgrowth of home rule power of a local government to provide certain services within its jurisdiction.” § 163.31801(2), Fla. Stat. The statute – concerned with mostly procedural and methodological limitations – did not expressly allow or disallow any particular public facility type from being funded with impact fees. The Act did specify procedural and methodological prerequisites, such as the requirement of the fee being based on most recent and localized data, a 90-day requirement for fee changes, and other similar requirements, most of which were common to the practice already.

More recent legislation further affected the impact fee framework in Florida, including the following:

- **HB 227 in 2009:** The Florida legislation statutorily clarified that in any action challenging an impact fee, the government has the burden of proving by a preponderance of the evidence that the imposition or amount of the fee meets the requirements of state legal precedent or the Impact Fee Act and that the court may not use a deferential standard.
- **SB 360 in 2009:** Allowed fees to be decreased without the 90-day notice period required to increase the fees and purported to change the standard of legal review associated with impact fees. SB 360 also required the Florida Department of Community Affairs (now the Department of Economic Opportunity) and Florida Department of Transportation (FDOT) to conduct studies on “mobility fees,” which were completed in 2010.
- **HB 7207 in 2011:** Required a dollar-for-dollar credit, for purposes of concurrency compliance, for impact fees paid and other concurrency mitigation required.
- **HB 319 in 2013:** Applied mostly to concurrency management authorities, but also encouraged local governments to adopt alternative mobility systems using a series of tools identified in section 163.3180(5)(f), Florida Statutes, including:
  1. Adoption of long-term strategies to facilitate development patterns that support multi-modal solutions, including urban design, and appropriate land use mixes, including intensity and density.
  2. Adoption of an area-wide level of service not dependent on any single road segment function.
  3. Exempting or discounting impacts of locally desired development, such as development in urban areas, redevelopment, job creation, and mixed use on the transportation system.
  4. Assigning secondary priority to vehicle mobility and primary priority to ensuring a safe, comfortable, and attractive pedestrian environment, with convenient interconnection to transit.
  5. Establishing multi-modal level of service standards that rely primarily on non-vehicular modes of transportation where existing or planned community design will provide adequate level of mobility.
  6. Reducing impact fees or local access fees to promote development within urban areas, multi-modal transportation districts, and a balance of mixed-use development in certain areas or districts, or for affordable or workforce housing.

Also, under HB 319, a mobility fee funding system expressly must comply with the dual rational nexus test applicable to traditional impact fees. Furthermore, any mobility fee

revenues collected must be used to implement the local government’s plan, which serves as the basis to demonstrate the need for the fee. Finally, under HB 319, an alternative mobility system, that is not mobility fee-based, must not impose upon new development any responsibility for funding an existing transportation deficiency.

- **HB 207 in 2019:** Included the following changes to the Impact Fee Act along with additional clarifying language:
  1. Impact fees cannot be collected prior to building permit issuance; and
  2. Impact fee revenues cannot be used to pay debt service for previously approved projects unless the expenditure is reasonably connected to, or has a rational nexus with, the increased impact generated by the new residential and commercial construction.
- **HB 7103 in 2019:** Addressed multiple issues related to affordable housing/linkage fees, impact fees, and building services fees. In terms of impact fees, the bill required that when local governments increase their impact fees, the outstanding impact fee credits for developer contributions should also be increased. This requirement was to operate prospectively; however, HB 337 that was signed in 2021 deleted this clause and making all outstanding credits eligible for this adjustment. This bill also allowed local governments to waive/reduce impact fees for affordable housing projects without having to offset the associated revenue loss.
- **SB 1066 in 2020:** Added language allowing impact fee credits to be assignable and transferable at any time after establishment from one development or parcel to another that is within the same impact fee zone or impact fee district or that is within an adjoining impact fee zone or district within the same local government jurisdiction. In addition, added language indicating any new/increased impact fee not being applicable to current or pending permit applications submitted prior to the effective date of an ordinance or resolution imposing new/increased fees.
- **HB 1339 in 2020:** Requires reporting of various impact fee related data items within the annual financial audit report submitted to the Department of Financial Services.
- **HB 337 in 2021:** Placed limits on the amount and frequency of fee increases, but also included a clause to exceed these restrictions if the local governments can demonstrate extraordinary circumstances, hold two public workshops discussing these circumstances and the increases are approved by two-thirds of the governing body. This act is retroactive to January 1, 2021.

The following paragraphs provide further detail on the generally applicable legal standards related to impact fees.



### Impact Fee Definition

- An impact fee is a one-time capital charge levied against new development.
- An impact fee is designed to cover the portion of the capital costs of infrastructure capacity consumed by new development.
- The principal purpose of an impact fee is to assist in funding the implementation of projects identified in the Capital Improvements Element (CIE) and other capital improvement programs for the respective facility/service categories.

### Impact Fee vs. Tax

- An impact fee is generally regarded as a regulatory function established based upon the specific benefit to the user related to a given infrastructure type and is not established for the primary purpose of generating revenue for the general benefit of the community, as are taxes.
- Impact fee expenditures must convey a proportional benefit to the fee payer. This is accomplished through the establishment of benefit districts as needed, where fees collected in a benefit district are spent in the same benefit district.
- An impact fee must be tied to a proportional need for new infrastructure capacity created by new development.

This technical report has been prepared to support legal compliance with existing case law and statutory requirements and documents the methodology used for impact fee calculations for each fee in the following sections, including a review and analysis of the inventory, service area, level of service (LOS), cost, credit, and demand components.

### ***Land Use Changes/Additions***

As part of this update study, the following land uses were revised/added to the Palm Beach County impact fee schedules to reflect the most recent data on demand variables:

- Multi-Family Low-Rise, Mid-Rise, High-Rise – Based on ITE 11<sup>th</sup> Edition, the apartment and condo/townhouse land uses were combined into a single “multi-family” category that is tiered based on the number of floors (charged per dwelling unit). These two tiers replace the current “multi-family” land use.
- Senior Adult Housing – new land use added to the impact fee schedule and charged per dwelling unit.

- Public Park – new land use added to the schedule and charged per acre.
- Funeral Home – this land use was removed from the impact fee schedule due to lack of data.
- General Office – land use square footage tiering was removed. ITE 11<sup>th</sup> Edition revisions resulted in minimal variation among different tiers.
- Retail/Shopping Center – previous land use square footage tiering was removed. ITE 11<sup>th</sup> Edition split retail into three separate land uses based on square footage. The current tiering was replaced with this ITE version of tiering.
- Medical-Dental Office Building – land use added to the schedule (charged per 1,000 sq ft).
- Marijuana Dispensary – new land use added to the impact fee schedule and charged per 1,000 square feet.
- Convenience Store – land use was removed as it overlaps with another land use. Though only called “convenience store” in the impact fee schedule, the demand variables for this land use corresponded to the “convenience store with gas pumps” land use. This is very similar to the “Gas Station w/Convenience Market” land uses that are also included in the schedule. Therefore, this land use was removed to avoid confusion.
- Convenience Market – land use was added to the schedule. As opposed to the “convenience store” land use that was in the previous schedule, this land use does not include gas pumps and the demand variables reflect this difference.
- Gas Station w/Convenience Market – land use tiered based on ITE 11<sup>th</sup> Edition re-alignment, charged per fuel position:
  - Gas Station w/Convenience Market <2,000 sq ft
  - Gas Station w/Convenience Market 2,000 to 5,499 sq ft
  - Gas Station w/Convenience Market 5,500+ sq ft.
- Carpet Store – this land use was removed from the impact fee schedule due to lack of data.
- Rental Car Agency – this land use was removed from the impact fee schedule due to lack of data.

## II. Public Buildings

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This section provides the results of the public building impact fee analysis. Several elements addressed in this section include:

- Facility Inventory
- Service Area, Benefit Districts and Demand Component
- Level of Service
- Cost Component
- Credit Component
- Net Impact Cost
- Calculated Impact Fee Schedule
- Public Buildings Impact Fee Schedule Comparison

These elements are summarized in the remainder of this section.

### ***Facility Inventory***

The public facilities inventory includes law enforcement and correctional facilities as well as other public facilities that are primarily for the provision of essential county services and do not include any of the buildings included in the calculation of other impact fees.

Palm Beach County owns and operates approximately 6.5 million square feet of public facilities on 620 acres throughout the county. These 6.5 million square feet include the square footage of both primary and industrial support buildings, which are not included in any of the other impact fee inventories. Support facilities are defined as trailers, parking garages, facilities without air-conditioning, lands used for staging, storage or other functions that are integral to a particular government facility or facilities that are unlikely to be occupied by personnel.

Table II-1 shows a summary of the public buildings inventory and the current value of buildings and land. As presented, the inventory includes 2.1 million square feet of office and administrative square feet, 954,000 courthouse square feet, 1.3 million jail square feet, 464,000 industrial square feet, and 1.7 million square feet of industrial support square feet. Additional detail regarding this inventory is provided in Appendix D.

Cost estimates for buildings are based primarily on changes in building costs since 2014, insurance values, the County's cost estimates for upcoming expansion projects, cost information from other Florida jurisdictions and discussions with the County representatives. This analysis resulted in an estimated cost ranging from \$55 per square foot for industrial support buildings to \$400 per square foot for primary courthouse square footage. Appendix C provides additional information.

Land values are based on a review of current value of land where existing facilities are located, increase in vacant land values since the most recent technical study as well as vacant land sales and values of similarly sized and located parcels based on information obtained from the Palm Beach County Property Appraiser. This analysis resulted in an average land value of \$200,000 per acre. Appendix C provides additional information.

These unit cost estimates result in a total building and land value of approximately \$1.76 billion, of which \$1.64 billion is for buildings and other structures and the remaining \$124.3 million is for land. A more detailed explanation of building and land value estimates is included in Appendix C.

**Table II-1  
Building and Land Inventory**

Building Type	Land	Total Square Feet <sup>(1)</sup>	Building Value per Square Foot <sup>(2)</sup>	Total Asset Value <sup>(3)</sup>
Primary Building - Office/Administrative		2,051,231	\$300	\$615,369,300
Primary Building - Court		953,711	\$400	\$381,484,400
Primary Building - Jail		1,307,947	\$325	\$425,082,775
Primary Building - Industrial		463,684	\$220	\$102,010,480
Industrial Support		1,742,219	\$55	\$95,822,045
<b>Total - All Buildings</b>		<b>6,518,792</b>	-	<b>\$1,619,769,000</b>
Other Structures <sup>(4)</sup>				N/A
Total Allocated Acreage <sup>(5)</sup>	621.68			
Land Value per Acre <sup>(6)</sup>	\$200,000			
Total Land Value <sup>(7)</sup>				\$124,336,000
Weighted Building Cost per Square Foot <sup>(8)</sup>			\$248	
<b>Total Building, Other Structures and Land Value<sup>(9)</sup></b>				<b>\$1,763,661,354</b>

- 1) Source: Appendix D, Table D-1
- 2) Source: Appendix C
- 3) Total square feet (Item 1) multiplied by building value per square foot (Item 2)
- 4) Source: Palm Beach County, represents the construction cost of communication towers, fuel islands, and other similar structures
- 5) Source: Appendix D, Table D-2
- 6) Source: Appendix C
- 7) Total allocated acreage (Item 5) multiplied by the land value per acre (Item 6)
- 8) Total building value (Item 3) divided by total square feet (Item 1)
- 9) Sum of total building value (Item 3), value of other structures (Item 4), and total land value (Item 7)

### ***Service Area, Benefit Districts and Demand Component***

Palm Beach County provides public buildings services throughout all of Palm Beach County. As such, the proper benefit district is the entire county, excluding the Glades Area where impact fee are not collected. In this technical study, the current 2021 weighted and functional population estimates are used to measure the level of service and demand component. Because simply using weighted (permanent, plus weighted seasonal) population estimates does not fully address all benefactors of public buildings services, the “functional” weekly 24-hour population approach is used to establish a common unit of demand across different land uses. Functional population accounts for residents, visitors, and workers traveling in and out of the county throughout the day and calculates the presence of population at the different land uses during the day, which represents the demand component of the impact fee equation. Appendix A provides further detail on the population analysis conducted.

### ***Level of Service***

Table II-2 provides the current achieved LOS for public buildings in terms of square feet per resident. The LOS is provided both in terms of weighted seasonal population and functional population. In terms of functional residents, the County’s achieved LOS is 4.16 square feet per functional resident. Use of this LOS in the impact fee calculations assumes that the County will continue to provide this LOS for public buildings in the future.

**Table II-2  
Current Level of Service (2021)**

Component	Year 2021	
	Weighted Population	Functional Population
Population <sup>(1)</sup>	1,598,324	1,567,886
Public Buildings Square Footage <sup>(2)</sup>	6,518,792	6,518,792
Achieved LOS (Square Foot per Resident) <sup>(3)</sup>	<b>4.08</b>	<b>4.16</b>

1) Source: Appendix A, Tables A-1 and A-10

2) Source: Table II-1

3) Total square footage (Item 2) divided by the countywide population (Item 1)

### ***Cost Component***

The cost component of the study evaluates the cost of all capital assets, including buildings and land. Table II-3 provides a summary of all capital costs, which amounts to approximately \$1.8

billion. Table II-3 also presents the cost per resident for the impact fee analysis. This cost is calculated by multiplying the total building and land value per square foot by the current achieved LOS of 4.16 square feet per functional resident. As shown, these calculations result in \$1,125 per functional resident for public buildings capital assets.

**Table II-3  
Total Capital Asset Value per Functional Resident**

<b>Cost Component</b>	<b>Figure</b>	<b>Percent of Total Value<sup>(8)</sup></b>
Total Building/Structure Value <sup>(1)</sup>	\$1,639,325,354	93%
Total Land Value <sup>(2)</sup>	\$124,336,000	7%
Total Building/Structure and Land Value <sup>(3)</sup>	\$1,763,661,354	100%
Primary Building Square Footage <sup>(4)</sup>	6,518,792	
Total Building/Structure and Land Value per Square Foot <sup>(5)</sup>	\$270.55	
Achieved LOS - Building Square Foot per Functional Resident <sup>(6)</sup>	4.16	
<b>Total Impact Cost per Functional Resident<sup>(7)</sup></b>	<b>\$1,125.49</b>	

- 1) Source: Table II-1
- 2) Source: Table II-1
- 3) Sum of building value (Item 1) and land value (Item 2)
- 4) Table II-2
- 5) Total building and land value (Item 3) divided by primary building square footage (Item 4)
- 6) Source: Table II-2
- 7) Building and land value per square foot (Item 5) multiplied by building square footage per functional resident (Item 6)
- 8) Percentage distribution of building value and land value in relation to the combined building and land value

***Credit Component***

To avoid overcharging new development for the public buildings impact fee, a review of the capital funding program for public buildings services was completed. The purpose of this review was to determine any potential revenue credits generated by new development that are being used for expansion of capital facilities for the County’s public buildings program. It should be noted that the credit component does not include any capital renovation, maintenance, or operations expenses, as these types of expenditures cannot be funded with impact fee revenue.

Capital Expansion Credit

To calculate the capital expansion credit per functional resident, funding sources used for historical capacity projects were reviewed. From 2015 through 2020, the County allocated an average annual non-impact fee funding of \$7.8 million towards the expansion of public buildings,

utilizing funds from ad valorem tax revenues, sales tax revenues, and grants. The annual capital expansion expenditures were divided by the average annual functional residents for the same period to calculate the average annual capital expansion credit per functional resident. As presented in Table II-4, the result is approximately \$5.20 per functional resident per year.

Once the revenue credit per population is calculated, a credit adjustment is needed for the portion of the revenue credit funded with ad valorem tax revenues. This adjustment accounts for the fact that new homes tend to pay higher property taxes per dwelling unit than older homes and was estimated based on a comparison of the average taxable value of newer homes to that of all homes. As presented, the adjusted revenue credit per population amounts to \$5.49 per year.

**Table II-4  
Capital Expansion Project Funding per Functional Resident**

Expenditure <sup>(1)</sup>	FY 2015-2020
<b>Ad Valorem:</b>	
PBSO Forensic Sciences and Technology Facility	\$1,200,000
Land for Non-Congregate Shelter	\$25,000
Supervisor of Elections Administration & Production Facility	\$795,000
Courthouse Build-Out and Renovations	<u>\$1,700,000</u>
<b>Subtotal -- Expenditures Funded with Ad Valorem</b>	<b>\$3,720,000</b>
<b>Sales Tax</b>	
PBSO Forensic Sciences and Technology Facility	\$21,336,540
Animal Care and Control (ACC) Belvedere Expansion	\$6,760,000
Non-Congregate Shelter Building Improvements	\$1,000,000
Central County Housing Resource Center	<u>\$5,700,000</u>
<b>Subtotal--Expenditures Funded with Sales Tax</b>	<b>\$34,796,540</b>
<b>Grants/Other</b>	
PBSO District 1 Substation and Marine Unit	\$2,000,000
Non-Congregate Shelter Building Improvements	\$5,000,000
Central County Housing Resource Center	<u>\$1,425,000</u>
<b>Subtotal -- Expenditures Funded with Grants/Other</b>	<b>\$8,425,000</b>
<b>Total Capital Expansion Expenditures</b>	<b>\$46,941,540</b>
<b>Average Annual Capital Expansion Expenditures<sup>(2)</sup></b>	<b>\$7,823,590</b>
<b>Average Annual Functional Population<sup>(3)</sup></b>	<b>1,505,368</b>
<b>Capital Expansion Expenditures per Functional Resident<sup>(4)</sup></b>	<b>\$5.20</b>
<b>Portion of Capital Expansion Projects Funded with Ad Valorem Tax Revenues<sup>(5)</sup></b>	<b>8%</b>
<b>Portion Funded with Ad-Valorem Tax Revenues<sup>(6)</sup></b>	<b>\$0.42</b>
<b>Residential Land Uses Credit Adjustment Factor<sup>(7)</sup></b>	<b>1.70</b>
<b>Residential Land Uses: Adjusted Capital Expansion Expenditures per Resident<sup>(8)</sup></b>	<b>\$0.71</b>
<b>Portion Funded with Other Revenue Sources<sup>(9)</sup></b>	<b>\$4.78</b>
<b>Residential Land Uses: Total Capital Expansion Credit per Resident<sup>(10)</sup></b>	<b>\$5.49</b>



- 1) Source: Palm Beach County
- 2) Total capital expansion expenditures divided by 6 to calculate the average annual expenditures
- 3) Source: Appendix A, Table A-10, average annual functional population during the same time period
- 4) Average annual capital expansion expenditures (Item 2) divided by the average functional population (Item 3)
- 5) Portion of total capital expansion expenditures funded with ad valorem tax revenue
- 6) Capital expansion expenditures per functional resident (Item 4) multiplied by the portion of capital expansion projects funded with ad valorem tax revenues (Item 5)
- 7) Adjustment factor to reflect higher ad valorem taxes paid by new homes
- 8) Portion funded with ad-valorem tax revenues (Item 6) multiplied by the residential land uses credit adjustment factor (Item 7)
- 9) Capital expansion expenditures per functional resident (Item 4) less portion funded with ad-valorem tax revenues (Item 6)
- 10) Adjusted capital expansion expenditures per resident (Item 8) plus the portion funded with other revenue sources (Item 9)

### Debt Service Credit

Any outstanding bond issues with outstanding debt service payments related to the public buildings capacity expansion projects will result in a credit to the impact fee. Palm Beach County used bond proceeds for Four Points and other general government buildings. Table II-5 summarizes the outstanding debt service related to public buildings capital expansion projects. The debt service payments are divided by the population during the same period to determine the debt service credit per resident. As shown in Table II-5, the resulting debt service credit is approximately \$59 per functional resident.

**Table II-5  
Debt Service Credit**

Description	Funding Source	Total Number of Fiscal Years of Debt Issue <sup>(1)</sup>	Fiscal Years Remaining <sup>(1)</sup>	Remaining Public Bldgs Debt Service (Capacity Expansion) <sup>(1)</sup>	Present Value of Payments Remaining (Capacity Expansion) <sup>(2)</sup>	Avg Annual Functional Population During Remaining Bond Issue Period <sup>(3)</sup>	Credit per Resident <sup>(4)</sup>
Refunding Bonds, Series 2012 - Four Points & Other General Government Buildings	Non-Ad Valorem	16	6	\$7,366,243	\$6,842,613	1,629,179	\$4.20
Public Improvement Rev Refunding Bonds, Series 2015, (Parking Garage and Airport Center Projects)	Non-Ad Valorem	21	15	\$60,410,237	\$46,771,531	1,694,872	\$27.60
Public Improvement Revenue Bonds, Series 2021A, Supervisor of Elections Project	Non-Ad Valorem	20	19	\$72,024,300	\$46,763,828	1,719,543	\$27.20
<b>Total Debt Service Credit per Functional Resident</b>							<b>\$59.00</b>

- 1) Source: Palm Beach County
- 2) Source: Present value of remaining payments in 2021 dollars
- 3) Source: Appendix A, Table A-10
- 4) Source: Present value of payments remaining (Item 2) divided by average annual population (Item 3)

**Net Impact Cost**

Table II-6 summarizes the net impact cost per functional resident, which is the difference between the cost component and the credit component. The resulting net impact cost is \$964 per resident for residential land uses and \$970 per resident for non-residential land uses.

**Table II-6  
Net Impact Cost**

Impact Cost/Credit Element	Figure
<b>Impact Cost</b>	
Total Impact Cost per Functional Resident <sup>(1)</sup>	<b>\$1,125.49</b>
<b>Revenue Credit</b>	
Annual Capital Improvement Credit per Functional Resident <sup>(2)</sup>	
- Residential Land Uses	\$5.49
- Non-residential Land Uses	\$5.20
Capitalization Rate	2.4%
Capitalization Period (in years)	25
Total Capital Improvement Credit per Functional Resident <sup>(3)</sup>	
- Residential Land Uses	\$102.32
- Non-residential Land Uses	\$96.91
Debt Service Credit per Functional Resident <sup>(4)</sup>	
	\$59.00
<b>Net Impact Cost</b>	
Net Impact Cost per Functional Resident <sup>(5)</sup> :	
- Residential Land Uses	<b>\$964.17</b>
- Non-residential Land Uses	<b>\$969.58</b>

- 1) Source: Table II-3
- 2) Source: Table II-4
- 3) Average annual capital improvement credit per functional resident (Item 2) with a capitalization rate of 2.4% for 25 years. The capitalization rate estimate was provided by Palm Beach County.
- 4) Source: Table II-5
- 5) Total impact cost per functional resident (Item 1) less the total capital improvement credit per functional resident (Item 3) less the debt service credit per functional resident (Item 4)

**Calculated Impact Fee Schedule**

Table II-7 presents the calculated public buildings impact fee schedule for Palm Beach County for both residential and non-residential land uses, based on the net impact cost per functional

resident previously presented in Table II-6. Also presented is a comparison to the County's current adopted fee and percent change from the current fee. Compared to the 2014-2018 study, changes to the cost and credit component resulted in an increase of almost 20 percent. Additional changes to each land use are due to the changes to the demand component. **It is important to note that the County did not adopt the 2014-2018 study calculated fees, and the basis of the current adopted fees is the 2012 study, which was adopted at 27 percent.**

**Table II-7  
Public Buildings Impact Fee Schedule**

ITE LUC	Land Use	Impact Unit	Functional Residents per Unit <sup>(1)</sup>	Calculated Impact Fee <sup>(2)</sup>	Current Adopted Fee <sup>(3)</sup>	Percent Change <sup>(4)</sup>
<b>RESIDENTIAL:</b>						
<b>Residential</b>						
210/220/ 230/240	800 & Under	du	0.95	\$916	\$141	550%
	801 -1,399	du	1.31	\$1,263	\$171	639%
	1,400 - 1,999	du	1.49	\$1,437	\$195	637%
	2,000 - 3,599	du	1.63	\$1,572	\$223	605%
	3,600 & Over	du	1.75	\$1,687	\$245	589%
<b>Senior Adult Housing</b>						
251/252	800 & Under	du	0.73	\$704	\$141	399%
	801 -1,399	du	1.00	\$964	\$171	464%
	1,400 - 1,999	du	1.14	\$1,099	\$195	464%
	2,000 - 3,599	du	1.25	\$1,205	\$223	440%
	3,600 & Over	du	1.35	\$1,302	\$245	431%
<b>TRANSIENT, ASSISTED, GROUP:</b>						
310/320	Hotel/Motel	room	0.84	\$814	\$57	1328%
254/620	Nursing Home/Congregate Living Facility	bed	0.84	\$814	\$57	1328%
<b>RECREATIONAL:</b>						
411	Public Park	acre	0.05	\$48	N/A	N/A
430	Golf Course	hole	0.84	\$814	\$846	-4%
445	Movie Theater	screen	5.19	\$5,032	\$4,682	8%
491	Racquet/Tennis Club	court	1.81	\$1,755	\$254	591%
<b>INSTITUTIONS:</b>						
520	Elementary School (Private)	student	0.10	\$97	\$47	106%
522	Middle/Junior School (Private)	student	0.09	\$87	\$55	58%
525	High School (Private)	student	0.08	\$78	\$63	24%
560	Church/Synagogue	1,000 sf	0.41	\$398	\$61	553%
565	Day Care Center	1,000 sf	0.81	\$785	\$299	163%
566	Cemetery	acre	0.15	\$145	\$69	110%
<b>MEDICAL:</b>						
610	Hospital	1,000 sf	1.30	\$1,260	\$239	427%
640	Animal Hospital/Veterinary Clinic	1,000 sf	1.41	\$1,367	\$761	80%
<b>OFFICE &amp; FINANCIAL:</b>						
710	General Office	1,000 sf	0.98	\$950	\$131	625%
720	Medical Office (less than 10,000 sf)	1,000 sf	1.20	\$1,163	\$278	318%
720	Medical Office (10,000 sf and greater)	1,000 sf	1.72	\$1,668	\$278	500%
<b>RETAIL:</b>						
817	Nursery (Garden Center)	acre	5.52	\$5,352	N/A	N/A
822	Retail/Shopping Center less than 40,000 sf gla	1,000 sf gla	2.08	\$2,017	\$336	500%
821	Retail/Shopping Center 40,000 to 150,000 sf gla	1,000 sf gla	2.58	\$2,502	\$327	665%
820	Retail/Shopping Center greater than 150,000 sf gla	1,000 sf gla	1.41	\$1,367	\$356	284%
840/841	New/Used Car Sales	1,000 sf	1.57	\$1,522	\$165	822%
848	Tire Store	1,000 sf	1.54	\$1,493	\$775	93%
851	Convenience Market	1,000 sf	6.41	\$6,215	\$769	708%
880/881	Pharmacy with and w/o Drive-Thru	1,000 sf	1.84	\$1,784	\$330	441%
882	Marijuana Dispensary	1,000 sf	3.19	\$3,093	N/A	N/A
890	Furniture Store	1,000 sf	0.32	\$310	\$181	71%

**Table II-7 (Continued)**  
**Public Buildings Impact Fee Schedule**

ITE LUC	Land Use	Impact Unit	Functional Residents per Unit <sup>(1)</sup>	Calculated Impact Fee <sup>(2)</sup>	Current Adopted Fee <sup>(3)</sup>	Percent Change <sup>(4)</sup>
<b>SERVICES:</b>						
912	Bank/Savings w/Drive-In	1,000 sf	1.48	\$1,435	\$382	276%
931	Fine Dining/Quality Restaurant	1,000 sf	5.76	\$5,585	\$364	1434%
932	High-Turnover Restaurant	1,000 sf	5.42	\$5,255	\$397	1224%
934	Fast Food Rest. w/Drive-Thru	1,000 sf	9.71	\$9,415	\$604	1459%
941	Quick Lubrication Vehicle Shop	bay	1.60	\$1,551	\$508	205%
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	1.46	\$1,416	\$84	1580%
945	Gas Station w/Convenience Store 2,000 to 5,499 sq ft	fuel pos.	2.30	\$2,230	\$84	2546%
	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	3.00	\$2,909	\$84	3351%
947	Car Wash	bay	0.96	\$931	\$580	61%
<b>INDUSTRIAL:</b>						
110	General Light Industrial	1,000 sf	0.48	\$465	\$74	528%
150	Warehousing	1,000 sf	0.11	\$107	\$36	197%
151	Mini-Warehouse	1,000 sf	0.04	\$39	\$16	144%

- 1) Source: Appendix A, Table A-11 for residential land uses and A-13 for non-residential land uses
  - 2) Source: Net impact cost per resident from Table II-6 multiplied by the functional residents per unit (Item 1)
  - 3) Source: Palm Beach County
  - 4) Percent change from the current adopted fee (Item 3) to the calculated impact fee (Item 2)
- N/A - Land use is not specifically identified in the County's current fee schedule or there has been a unit change.

**Public Buildings Impact Fee Schedule Comparison**

As part of the work effort in developing the Palm Beach County public buildings impact fee schedule, the County's calculated and adopted impact fee schedules were compared to the adopted fee schedules of other select Florida counties. Table II-8 presents this comparison. It is important to note in many cases, law enforcement and correctional facilities are captured in separate impact fee programs. Including these facilities as part of the public buildings impact fee results in higher fees in the case of Palm Beach County compared to other jurisdictions.

**Table II-8  
Public Buildings Impact Fee Schedule Comparison**

Land Use	Unit <sup>(2)</sup>	Palm Beach County		Collier County <sup>(5)</sup>	Martin County <sup>(6)</sup>	St. Lucie County <sup>(7)</sup>
		Calculated <sup>(3)</sup>	Existing <sup>(4)</sup>			
Date of Last Update		2021	2012	2016	2012	2017
Assessed Portion of Calculated <sup>(1)</sup>		N/A	27%	100%	100%	100%
<b>Residential:</b>						
Single Family (2,000 sq ft)	du	\$1,572	\$223	\$934	\$646	\$365
Multi-Family (1,300 sq ft)	du	\$1,263	\$171	\$444	\$646	\$327
<b>Non-Residential:</b>						
Light Industrial	1,000 sf	\$465	\$74	\$359	\$182	\$74
Office (50,000 sq ft)	1,000 sf	\$950	\$131	\$620	\$316	\$323
Retail (125,000 sq ft)	1,000 sf	\$2,502	\$327	\$1,275	\$551	\$547
Bank w/Drive-In	1,000 sf	\$1,435	\$382	\$1,187	\$554	\$476
Fast Food w/Drive-Thru	1,000 sf	\$9,415	\$604	\$4,633	\$2,482	\$476

- 1) Represents the portion of the maximum calculated fee for each respective county that is actually charged. Fee may have been lowered/increased through annual indexing or policy discounts. Does not account for moratorium/suspensions.
- 2) du = dwelling unit
- 3) Source: Table II-7
- 4) Source: Palm Beach County
- 5) Source: Collier County Impact Fee Administration Department
- 6) Source: Martin County Growth Management. The County is in the process of updating their impact fees.
- 7) Source: St. Lucie County Permitting/Zoning Department

### III. Fire Rescue

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This section provides the results of the fire rescue impact fee analysis. Palm Beach County provides fire rescue services to the unincorporated county and 19 municipalities. Several elements addressed in this section include:

- Facility Inventory
- Service Area and Benefit Districts
- Level of Service
- Cost Component
- Credit Component
- Net Impact Cost
- Demand Component
- Calculated Impact Fee Schedule
- Fire Rescue Impact Fee Schedule Comparison

These elements are summarized in the remainder of this section.

#### ***Facility Inventory***

Table III-1 presents the County-owned stations, buildings and land inventory associated with the fire rescue services in Palm Beach County, which includes approximately 297,100 square feet of building space and approximately 178 acres of land. Stations that are operated but not owned by Palm Beach County are excluded from the inventory for impact fee calculation purposes.

The cost estimate for buildings is based primarily on cost associated with recent and on-going projects, estimates for upcoming construction, insurance values, information from other jurisdictions, and discussions with the County representatives. Land values are based on a review of recent purchases, appraisals/estimates for upcoming purchases, current value of land where existing facilities are located, land cost increases observed since the most recent technical study as well as vacant land sales and values of similarly sized and located parcels based on information obtained from the Palm Beach County Property Appraiser.

Based on this review and analysis, the building value is estimated at \$525 per square foot and the land value is estimated at \$325,000 per acre. These unit cost estimates result in a total building and land value of approximately \$185 million, of which \$156 million is for buildings and the remaining \$29 million is for land. A more detailed explanation of building and land value estimates is included in Appendix C.

**Table III-1  
Building and Land Inventory**

Facility Description <sup>(1)</sup>	Location <sup>(1)</sup>	Year Acquired/ Built <sup>(1)</sup>	Number of Bays <sup>(1)</sup>	Square Feet <sup>(2)</sup>	Acres <sup>(3)</sup>	Total Square Feet on Site <sup>(4)</sup>	Allocated Acres <sup>(5)</sup>	Building Value <sup>(6)</sup>	Land Value <sup>(7)</sup>	Total Building and Land Value <sup>(8)</sup>
Fire Station 14	12015 Indiantown Road	2010	2	6,446	2.50	6,446	2.50	\$3,384,150	\$812,500	\$4,196,650
Fire Station 15	12870 S US Highway 1	1977	5	7,759	0.85	7,759	0.85	\$4,073,475	\$276,250	\$4,349,725
Fire Station 16	3550 Military Trail	2003	2	5,428	1.43	5,428	1.43	\$2,849,700	\$464,750	\$3,314,450
Fire Station 17	8130 N Jog Road	1990	0	5,445	6.00	20,434	1.60	\$2,858,625	\$520,000	\$3,378,625
Fire Station 18	777 N Highway 1	2002	2	6,773	N/A <sup>(9)</sup>	6,773	N/A <sup>(9)</sup>	\$3,555,825	N/A <sup>(9)</sup>	\$3,555,825
Fire Station 19 HQ	322 N Central Blvd.	1998	3	8,866	1.34	8,866	1.34	\$4,654,650	\$435,500	\$5,090,150
Fire Station 20	1000 Greenview Shores	2003	2	5,388	2.03	5,388	2.03	\$2,828,700	\$659,750	\$3,488,450
Fire Station 21	14200 Okeechobee Blvd.	1985	3	6,435	3.32	6,435	3.32	\$3,378,375	\$1,079,000	\$4,457,375
Fire Station 22	16650 Town Center Pkwy S	2019	4	13,204	4.41	13,204	4.41	\$6,932,100	\$1,433,250	\$8,365,350
Fire Station 23 HQ	5471 Okeechobee Blvd.	2006	3	10,221	3.75	10,221	3.75	\$5,366,025	\$1,218,750	\$6,584,775
Fire Station 24	1734 Seminole Blvd.	1960	3	2,460	0.33	2,460	0.33	\$1,291,500	\$107,250	\$1,398,750
Fire Station 25	1060 Wellington Trace	1979	3	6,923	1.80	6,923	1.80	\$3,634,575	\$585,000	\$4,219,575
Fire Station 26	6085 Avocado Blvd.	1997	2	5,118	2.64	5,118	2.64	\$2,686,950	\$858,000	\$3,544,950
Fire Station 27	3411 South Shore Blvd.	2000	2	5,388	1.00	5,388	1.00	\$2,828,700	\$325,000	\$3,153,700
Fire Station 28	1040 Royal Palm Beach Blvd.	1976	4	10,527	1.35	22,397	0.63	\$5,526,675	\$204,750	\$5,731,425
Fire Station 29	10055 Belvedere Rd.	1993	2	5,447	1.81	5,447	1.81	\$2,859,675	\$588,250	\$3,447,925
Fire Station 30	9610 Stribling Way	2006	2	6,802	2.76	6,802	2.76	\$3,571,050	\$897,000	\$4,468,050
Fire Station 31	3439 Lake Worth Rd	2012	2	6,012	1.22	6,012	1.22	\$3,156,300	\$396,500	\$3,552,800
Fire Station 32	4022 Charleston Street	2010	2	7,417	0.98	7,417	0.98	\$3,893,925	\$318,500	\$4,212,425
Fire Station 33	830 Kirk Road	1988	3	7,743	1.99	7,743	1.99	\$4,065,075	\$646,750	\$4,711,825
Fire Station 34 HQ	231 S Benoist Farms Road	1991	3	9,116	5.61	9,116	5.61	\$4,785,900	\$1,823,250	\$6,609,150
Fire Station 35 <sup>(10)</sup>	2501 Lantana Road	1963	4	4,242	8.99	4,242	3.00	\$2,227,050	\$975,000	\$3,202,050
Fire Station 36	5395 Purdy Lane	2007	2	5,468	1.60	5,468	1.60	\$2,870,700	\$520,000	\$3,390,700
Fire Station 41	5105 Woolbright Road	2006	2	5,595	2.43	5,595	2.43	\$2,937,375	\$789,750	\$3,727,125
Fire Station 42 HQ <sup>(11)</sup>	14276 Hagen Ranch Road	1984	5	18,511	5.00	23,044	4.02	\$9,718,275	\$1,306,500	\$11,024,775
Fire Station 43	5970 S. Military Trail	1960	2	2,505	0.83	2,505	0.83	\$1,315,125	\$269,750	\$1,584,875
Fire Station 44 <sup>(10)</sup>	6670 Flavor Pict Road	2008	2	5,522	47.45	5,522	3.00	\$2,899,050	\$975,000	\$3,874,050
Fire Station 45	15450 S Jog Road	1999	2	5,388	2.00	5,388	2.00	\$2,828,700	\$650,000	\$3,478,700
Fire Station 46	7550 S Jog Road	1997	2	5,118	1.72	5,118	1.72	\$2,686,950	\$559,000	\$3,245,950
Fire Station 47	7950 Enterprise Center Cir	2001	2	5,260	1.74	5,260	1.74	\$2,761,500	\$565,500	\$3,327,000
Fire Station 48 <sup>(10)</sup>	8560 Hypoluxo Road	2007	2	6,144	33.63	6,144	3.00	\$3,225,600	\$975,000	\$4,200,600
Fire Station 51	10050 Judge Winikoff Road	1976	3	5,781	1.39	5,781	1.39	\$3,035,025	\$451,750	\$3,486,775
Fire Station 52	4659 Pheasant Way	1977	2	4,616	0.76	4,694	0.75	\$2,423,400	\$243,750	\$2,667,150
Fire Station 53	19950 Lyons Road	2003	2	5,348	3.90	7,983	2.61	\$2,807,700	\$848,250	\$3,655,950



**Table III-1 (Continued)**  
**Building and Land Inventory**

Facility Description <sup>(1)</sup>	Location <sup>(1)</sup>	Year Acquired/ Built <sup>(1)</sup>	Number of Bays <sup>(1)</sup>	Square Feet <sup>(2)</sup>	Acres <sup>(3)</sup>	Total Square Feet on Site <sup>(4)</sup>	Allocated Acres <sup>(5)</sup>	Building Value <sup>(6)</sup>	Land Value <sup>(7)</sup>	Total Building and Land Value <sup>(8)</sup>
Fire Station 54	18501 S State Road 7	1985	3	5,802	1.31	5,802	1.31	\$3,046,050	\$425,750	\$3,471,800
Fire Station 55	6787 Palmetto Circle N	1979	3	6,381	2.36	6,381	2.36	\$3,350,025	\$767,000	\$4,117,025
Fire Station 56	6250 SW 18th Street	2009	2	5,511	1.86	5,511	1.86	\$2,893,275	\$604,500	\$3,497,775
Fire Station 57 HQ	9030 Vista Del Lago	2002	3	9,330	2.50	9,330	2.50	\$4,898,250	\$812,500	\$5,710,750
Fire Station 58	12245 Glades Road	2002	2	5,400	3.00	5,400	3.00	\$2,835,000	\$975,000	\$3,810,000
Fire Station 68	1000 Park Avenue	2000	2	10,752	0.91	10,752	0.91	\$5,644,800	\$295,750	\$5,940,550
Fire Station 72	615 S Lake Avenue	2012	3	7,690	2.53	7,690	2.53	\$4,037,250	\$822,250	\$4,859,500
Fire Station 73	525 SW 2nd Street	unknown	5	10,157	1.75	17,799	1.00	\$5,332,425	\$325,000	\$5,657,425
Fire Station 74	530 US Highway 27 N	2013	3	7,690	3.00	7,690	3.00	\$4,037,250	\$975,000	\$5,012,250
<b>Total</b>				<b>297,129</b>	<b>177.78</b>	<b>338,876</b>	<b>88.56</b>	<b>\$155,992,725</b>	<b>\$28,782,000</b>	<b>\$184,774,725</b>
<b>Building Value per Square Foot <sup>(12)</sup></b>								<b>\$525</b>		
<b>Land Value per Acre <sup>(13)</sup></b>									<b>\$325,000</b>	

- 1) Source: Palm Beach County
- 2) Source: Palm Beach County
- 3) Source: Palm Beach County
- 4) Source: Palm Beach County, Building Inventory, Sum of all buildings on site.
- 5) Square feet (Item 2) divided by total square feet on site (Item 4) multiplied by acres (Item 3)
- 6) Square feet (Item 2) multiplied by the estimated building value per square foot of \$525 (Item 12)
- 7) Allocated acres (Item 5) multiplied by land value per acre (Item 13)
- 8) Sum of building value (Item 6) and land value (Item 7)
- 9) Located at Burt Reynolds Park. Acreage included under the parks impact fee.
- 10) Allocated acreage is estimated by Palm Beach County during the 2018 study
- 11) Square footage includes vehicle maintenance area used by the Fire Department
- 12) Source: Appendix C
- 13) Source: Appendix C

In addition to land and buildings, the Palm Beach County fire rescue impact fee inventory includes the necessary vehicles and equipment required to perform its services. As presented in Table III-2, the total vehicle and equipment value is approximately \$130 million.

**Table III-2  
Vehicle and Equipment Inventory**

Description <sup>(1)</sup>	Units <sup>(1)</sup>	Vehicle Unit Cost <sup>(1)</sup>	Equipment Unit Cost <sup>(1)</sup>	Total Unit Cost <sup>(1)</sup>	Total Value <sup>(1)</sup>
<b>Firefighting Apparatus</b>					
Aerial Ladder (Quint)	9	\$1,299,081	\$60,000	\$1,359,081	\$12,231,729
Brush Truck	29	\$292,276	\$35,000	\$327,276	\$9,491,004
Pumper/Engine	68	\$613,377	\$60,000	\$673,377	\$45,789,636
Squad Pumper	2	\$731,081	\$75,000	\$806,081	\$1,612,162
Haz Mat Vehicle	2	\$595,000	\$500,000	\$1,095,000	\$2,190,000
Tanker/Tender	7	\$455,540	\$35,000	\$490,540	\$3,433,780
Air and Light Truck	2	\$277,282	\$15,000	\$292,282	\$584,564
Trench Rescue Truck	1	\$234,529	\$1,500	\$236,029	\$236,029
High Water Rescue Vehicle 4x4	2	\$260,000	\$25,000	\$285,000	\$570,000
Tactical Command Unit	<u>1</u>	\$380,846	\$75,000	\$455,846	<u>\$455,846</u>
Mobile Command Unit	<u>1</u>	\$944,926	\$250,000	\$1,194,926	<u>\$1,194,926</u>
ARFF Crash Truck (ST81 PBI A)	<u>5</u>	\$1,119,895	\$90,000	\$1,209,895	<u>\$6,049,475</u>
<b>Subtotal:</b>	<b>129</b>				<b>\$83,839,151</b>
<b>Rescue Apparatus</b>					
Rescue Pumper (Station 81 PBI A)	1	\$244,109	\$113,091	\$357,200	\$357,200
ALS Rescue	79	\$399,052	\$60,000	\$459,052	\$36,265,108
EMS Capt Vehicle (Truck / SUV)	<u>10</u>	\$62,045	\$30,390	\$92,435	<u>\$924,350</u>
<b>Subtotal:</b>	<b>90</b>				<b>\$37,546,658</b>
<b>Staff Vehicles</b>					
Staff Vehicle Non-Emergency	34	\$25,062	\$0	\$25,062	\$852,108
Sedans	35	\$28,062	\$1,220	\$29,282	\$1,024,870
Sports Utility Non-Emergency	26	\$22,472	\$0	\$22,472	\$584,272
Sports Utility	27	\$38,163	\$15,090	\$53,253	\$1,437,831
Pick up trucks	63	\$27,372	\$0	\$27,372	\$1,724,436
Fleet Road Repair Trucks	8	\$81,052	\$52,000	\$133,052	\$1,064,416
Utility Truck	11	\$45,003	\$0	\$45,003	\$495,033
16' Box Truck w/lift gate	1	\$45,000	\$0	\$45,000	\$45,000
26' Box truck w/lift gate	1	\$88,605	\$0	\$88,605	\$88,605
26' Box truck w/lift gate (DECON)	1	\$88,605	\$200,000	\$288,605	\$288,605
Cargo Van	7	\$21,963	\$0	\$21,963	\$153,741
Passenger Van	2	\$19,769	\$0	\$19,769	\$39,538
Mini Van	15	\$17,592	\$0	\$17,592	\$263,880

**Table III-2  
Vehicle and Equipment Inventory (continued)**

Description <sup>(1)</sup>	Units <sup>(1)</sup>	Vehicle Unit Cost <sup>(1)</sup>	Equipment Unit Cost <sup>(1)</sup>	Total Unit Cost <sup>(1)</sup>	Total Value <sup>(1)</sup>
<b>Staff Vehicles</b>					
Step Vans	4	\$35,000	\$0	\$35,000	\$140,000
Special Event Cart	2	\$18,180	\$1,500	\$19,680	\$39,360
Training Buses	<u>2</u>	\$10,000	\$0	\$10,000	<u>\$20,000</u>
<b>Subtotal:</b>	<b>239</b>				<b>\$8,261,695</b>
<b>Water Rescue</b>					
Boat	1	\$25,000	\$15,000	\$40,000	\$40,000
Air Boat	2	\$70,000	\$15,000	\$85,000	\$170,000
Jet Ski	<u>4</u>	\$18,000	\$7,500	\$25,500	<u>\$102,000</u>
<b>Subtotal:</b>	<b>7</b>				<b>\$312,000</b>
<b>Grand Total:</b>	<b>458</b>				<b>\$129,959,504</b>

14) Source: Palm Beach County

***Service Area and Benefit Districts***

As mentioned previously, Palm Beach County provides fire rescue services in the unincorporated county and 19 cities throughout the county. These additional cities are shown in Appendix A, Table A-17. As such, the proper benefit district for fire rescue services is the unincorporated county plus the 19 cities. The demand component of the fire rescue impact fee is measured in terms of incidents by land use in the service area, which is discussed further later in this section.

***Level of Service***

For impact fee purposes, level of service (LOS) for fire rescue is expressed in terms of incidents per station. Palm Beach County Fire Rescue Division responded to 131,746 incidents in 2021. These calls are divided by the total number of stations to determine the achieved level of service, which amounts to 3,064 incidents per station.

**Table III-3  
Current Level of Service (2021)**

Variable	Figure
Number of Stations <sup>(1)</sup>	43
Total Number of Incidents (2021) <sup>(2)</sup>	131,746
<b>LOS (Incidents per Station)<sup>(3)</sup></b>	<b>3,064</b>

- 1) Source: Table III-1
- 2) Source: Palm Beach County Fire Rescue. Figure represents the total number of fire rescue related calls in 2021.
- 3) Total number of incidents (Item 2) divided by number of stations (Item 1)

Table III-4 presents a comparison between Palm Beach County and other Florida counties in terms of population per station. This comparison is displayed in terms of permanent population for all jurisdictions because incident data was not available for all these entities. As presented, Palm Beach County Fire Rescue stations handle a larger population, reflecting higher density levels of the county.

**Table III-4  
Comparison of Population per Station (2020)**

Jurisdiction	Service Area Population (2020) <sup>(1)</sup>	Number of Stations <sup>(2)</sup>	Residents per Station <sup>(3)</sup>	Stations per 1,000 Residents <sup>(4)</sup>
Miami-Dade County	1,936,695	71	27,277	0.037
Hillsborough County	1,019,128	43	23,701	0.042
<b>Palm Beach County</b>	<b>933,088</b>	<b>43</b>	<b>21,700</b>	<b>0.046</b>
Orange County	910,302	43	21,170	0.047
St. Lucie County	322,265	17	18,957	0.053
Broward County	272,112	21	12,958	0.077
Okeechobee County	36,424	3	12,141	0.082
Martin County	142,381	12	11,865	0.084
Hendry County	27,781	3	9,260	0.108
Highlands County	82,425	13	6,340	0.158
Glades County	13,609	5	2,722	0.367

- 1) Source: University of Florida, Bureau of Economic & Business Research (BEBR) April 1, 2020 Final Population Estimates
- 2) Source: County websites
- 3) Service area population (Item 1) divided by the number of stations (Item 2)
- 4) Number of stations (Item 2) divided by the service area population (Item 1) divided by 1,000

### Cost Component

The cost component of the study evaluates the cost of all capital assets, including buildings, land, vehicles and equipment. Table III-5 provides a summary of all capital costs, amounting to approximately \$315 million.

Table III-5 also presents the total impact cost per incident for fire rescue facilities in Palm Beach County, which is calculated by dividing the total asset value by the number of fire rescue related incidents in 2021. As shown, this calculation amounts to \$2,389 per incident.

**Table III-5**  
**Total Impact Cost per Incident**

Description	Figure	Percent of Total Value <sup>(7)</sup>
Building Value <sup>(1)</sup>	\$155,992,725	50%
Land Value <sup>(2)</sup>	\$28,782,000	9%
Vehicle and Equipment Value <sup>(3)</sup>	\$129,959,504	41%
Total Asset Value <sup>(4)</sup>	\$314,734,229	100%
Total Number of Incidents (2021) <sup>(5)</sup>	131,746	
<b>Total Impact Cost per Incident<sup>(6)</sup></b>	<b>\$2,388.95</b>	

1) Source: Table III-1

2) Source: Table III-1

3) Source: Table III-2

4) Sum of building value (Item 1), land value (Item 2), and vehicle and equipment value (Item 3)

5) Source: Table III-3

6) Total asset value (Item 4) divided by the number of incidents (Item 5)

7) Distribution of building, land, vehicle, and equipment values

### Credit Component

To avoid overcharging new development for the fire rescue impact fee, a review of the capital funding program for fire rescue services was completed. The purpose of this review was to determine any potential revenue credits generated by new development that are being used for expansion of capital facilities, land, vehicles, and equipment included in the inventory. It should be noted that the credit component does not include any capital renovation, maintenance, or operations expenses, as these types of expenditures cannot be funded with impact fee revenue.

### Capital Expansion Credit

To calculate the capital expansion credit per incident, funding sources used for historical capacity projects were reviewed. From 2017 through 2021, the County has allocated an average annual non-impact fee funding of approximately \$640,000 towards fire rescue capital facilities. The annual capital expansion expenditures for fire rescue were divided by the average number of fire rescue incidents from 2017 through 2021 (most recent five-year period available). As presented in Table III-6, the result is a capital expansion expenditure credit of approximately \$5.16 per incident.

Once the capital expansion credit per incident is calculated, because the fire rescue capacity projects were funded with ad valorem revenues; an adjustment was made to account for the fact that new homes tend to pay higher taxes per dwelling unit. This adjustment factor was estimated based on a comparison of the average taxable value of new homes to that of all homes. As presented in Table III-6, the adjusted capital expansion credit is \$8.77 per incident.

**Table III-6  
Capital Expansion Credit**

<b>Expenditure<sup>(1)</sup></b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Total</b>
<b>Ad Valorem:</b>						
Station 22 - West Acreage (16211)	-	-	\$967,437	\$1,813,369	\$125,460	\$2,906,266
Station 24 Replacement (Westgate) (11577)	-	-	-	-	\$330	\$330
Station 40 (F/K/A 41 North) (16214)	-	\$10,614	-	-	-	\$10,614
Agriculture Reserve South	-	\$135,852	-	-	-	\$135,852
Fire Station 45 Bunkroom Expansion	-	\$71	\$10,046	\$407	\$2,135	\$12,659
Headquarters Backup Generator	-	-	-	\$31,240	\$25,880	\$57,120
Emergency Portable 125KW Backup Generator	-	-	-	-	\$89,824	\$89,824
<b>Subtotal -- Expenditures Funded with Ad Valorem</b>	<b>\$0</b>	<b>\$146,537</b>	<b>\$977,483</b>	<b>\$1,845,016</b>	<b>\$243,629</b>	<b>\$3,212,665</b>
<b>Total Capital Expansion Expenditures</b>						<b>\$3,212,665</b>
<b>Average Annual Capital Expansion Expenditures<sup>(2)</sup></b>						<b>\$642,533</b>
<b>Average Annual Incidents<sup>(3)</sup></b>						<b>124,431</b>
<b>Capital Expansion Expenditures per Incident<sup>(4)</sup></b>						<b>\$5.16</b>
<b>Residential Land Uses Credit Adjustment Factor<sup>(5)</sup></b>						<b>1.70</b>
<b>Residential Land Uses: Adjusted Capital Expansion Expenditures per Incident<sup>(6)</sup></b>						<b>\$8.77</b>

- 1) Source: Palm Beach County
- 2) Total capital expansion expenditures divided by 5 to calculate the average annual expenditures
- 3) Source: Palm Beach County. Average annual incidents from 2017 through 2021, most recent five-year period available.
- 4) Average annual capital expansion expenditures (Item 2) divided by the average number of incidents (Item 3)
- 5) Adjustment factor to reflect higher ad valorem taxes paid by new homes
- 6) Capital expansion expenditures per incident (Item 4) multiplied by the credit adjustment factor (Item 5)

## Net Impact Cost

Table III-7 summarizes the net impact cost per incident, which is the difference between the cost component and the credit component. The resulting net impact cost is \$2,226 per incident for residential land uses and \$2,293 per incident for non-residential land uses.

**Table III-7**  
**Net Impact Cost**

Impact Cost / Credit Element	Figure
<b>Impact Cost</b>	
Total Impact Cost per Incident <sup>(1)</sup>	<b>\$2,388.95</b>
<b>Revenue Credit</b>	
Capital Improvement Credit per Incident <sup>(2)</sup> :	
- Residential Land Uses	\$8.77
- Non-residential Land Uses	\$5.16
Capitalization Rate	2.4%
Capitalization Period (in years)	25
Total Capital Improvement Credit per Incident <sup>(3)</sup> :	
- Residential Land Uses	\$163.45
- Non-residential Land Uses	\$96.17
<b>Net Impact Cost</b>	
Net Impact Cost per Incident <sup>(4)</sup> :	
- Residential Land Uses	<b>\$2,225.50</b>
- Non-residential Land Uses	<b>\$2,292.78</b>

1) Source: Table III-5

2) Source: Table III-6

3) Average annual capital improvement credit per incident (Item 2) over a capitalization rate of 2.4% for 25 years. The capitalization rate estimate was provided by Palm Beach County.

4) Total impact cost per incident (Item 1) less total revenue credit per incident (Item 3)

## Demand Component

Consistent with the County's current methodology, the fire rescue impact fee demand component was based on incident data. Similar to the methodology utilized in the most recent technical study, the updated impact fee demand for the fire rescue impact fee is determined by a review of annual incidents and property unit data obtained from the Palm Beach County Property Appraiser. Specifically, the following steps were completed.



- 1) Incident data (2017-2019 and 2021) provided by the Palm Beach County Fire Recue Department was reviewed to determine the average annual number of calls by residential and non-residential land uses. The use of multiple years results in a more reliable average figure. The year 2020 was excluded due to the anomalous impact of the pandemic on the fire rescue service calls.
- 2) A review of property units was conducted to determine the number of residential dwelling units, hotel/motel rooms (determined through the average size of a hotel/motel room), and non-residential square footage.
- 3) Demand coefficients were calculated by dividing each land use category's average annual incidents (2017-2019 and 2021) by the total associated property units, which are presented in Table III-8.

### ***Calculated Impact Fee Schedule***

Table III-8 presents the calculated fire rescue impact fee schedule for Palm Beach County for both residential and non-residential land uses, based on the net impact cost per incident previously presented in Table II-7. Also presented is a comparison to the County's current adopted fee and percent change from the current adopted fee.

Due to significant cost increases experienced in the construction of fire stations, although the credit per resident increased, the effect of changes to the cost and credit components accounted for doubling of the fees. Other changes are due the fluctuations in the incident data by land use in relation to the property units.

**Table III-8  
Fire Rescue Impact Fee Schedule**

Land Use type (Unit)	Unit	Calls for Service Coefficient <sup>(1)</sup>	Calculated Impact Fee <sup>(2)</sup>	Current Adopted Fee <sup>(3)</sup>	% Change from Adopted <sup>(4)</sup>
<b>RESIDENTIAL:</b>					
Single Family (attached/detached/mobile home)	du	0.2821	\$628	\$276	128%
Multi-Family	du	0.1717	\$382	\$185	106%
<b>TRANSIENT, ASSISTED, GROUP:</b>					
Hotel/Motel <sup>(5)</sup>	room	0.1435	\$329	\$229	44%
<b>OFFICE:</b>					
General Office	1,000 sf	0.0370	\$85	\$50	70%
<b>MEDICAL BUILDINGS:</b>					
Medical Office	1,000 sf	0.0370	\$85	\$50	70%
Hospitals	1,000 sf	2.2629	\$5,188	\$3,096	68%
Nursing Home	1,000 sf	2.2629	\$5,188	\$3,096	68%
<b>INDUSTRIAL BUILDINGS:</b>					
Warehouse	1,000 sf	0.0276	\$63	\$27	133%
General Industrial <sup>(6)</sup>	1,000 sf	0.0673	\$154	\$80	93%
Mini-Warehouse	1,000 sf	0.0276	\$63	\$50	26%
<b>OTHER NON-RESIDENTIAL USES:</b>					
Church/Synagogue	1,000 sf	0.0515	\$118	\$51	131%
Day Care Centers	1,000 sf	0.0737	\$169	\$89	90%
Drive-In Bank	1,000 sf	0.0370	\$85	\$50	70%
Private School (elementary, middle, high)	1,000 sf	0.0737	\$169	\$50	238%
Funeral Home	1,000 sf	0.0515	\$118	\$51	131%
Furniture Store	1,000 sf	0.0749	\$172	\$121	42%
Movie Theater	1,000 sf	0.0515	\$118	\$51	131%
Racquet Club	1,000 sf	0.0515	\$118	\$51	131%
Veterinary Clinic	1,000 sf	0.0749	\$172	\$121	42%
<b>RETAIL:</b>					
General Retail	1,000 sf	0.0749	\$172	\$121	42%
Service Station	1,000 sf	0.0749	\$172	\$121	42%

- 1) Source: Calculated as the total number of fire related calls per unit by each land use type based on average fire rescue incidents (2016-2019 & 2021) and 2020 Palm Beach County Property Appraiser's Database.
- 2) Net impact cost per incident (Table V-8) multiplied by the estimated calls for service coefficient (Item 1)
- 3) Palm Beach County Administration Division
- 4) Percent change from the adopted impact fee (Item 3) to the calculated impact fee (Item 2)
- 5) Hotel/Motel count of units are based on 400 square feet per room (for incident demand calculation)
- 6) The general industrial land use utilized a weighted average calls for service coefficient by combining the number of calls and square footage of the industrial and manufacturing categories.

**Fire Rescue Impact Fee Schedule Comparison**

As part of the work effort in developing the Palm Beach County fire rescue impact fee schedule, the County’s calculated and adopted impact fee schedules were compared to the adopted fee schedules of other select Florida counties. Table III-9 presents this comparison.

**Table III-9  
Fire Rescue Impact Fee Schedule Comparison**

Land Use	Unit <sup>(2)</sup>	Palm Beach County		Hillsborough County <sup>(5)</sup>	Martin County <sup>(6)</sup>	Miami-Dade County <sup>(7)</sup>	Orange County <sup>(8)</sup>	St. Lucie County <sup>(9)</sup>
		Calculated <sup>(3)</sup>	Existing <sup>(4)</sup>					
Date of Last Update		2021	2014-2018	2018	2012	N/A	2017	2016
Adoption Percentage <sup>(1)</sup>		N/A	95%	100%	100%	N/A	100%	100%
<b>Residential:</b>								
Single Family (2,000 sq ft)	du	\$628	\$276	\$335	\$599	\$447	\$346	\$667
Multi-Family (1,300 sq ft)	du	\$382	\$185	\$249	\$599	\$447	\$237	\$436
<b>Non-Residential:</b>								
Light Industrial	1,000 sf	\$154	\$80	\$57	\$12	\$1,448	\$86	\$76
Office (50,000 sq ft)	1,000 sf	\$85	\$50	\$158	\$80	\$355	\$274	\$668
Retail (125,000 sq ft)	1,000 sf	\$172	\$121	\$313	\$319	\$478	\$307	\$536
Bank w/Drive-In	1,000 sf	\$85	\$50	\$313	\$80	\$478	\$307	\$536
Fast Food w/Drive-Thru	1,000 sf	\$172	\$121	\$313	\$575	\$478	\$307	\$536

- 1) Represents the portion of the maximum calculated fee for each respective county that is actually charged. Fee may have been lowered/increased through annual indexing or policy discounts. Does not account for moratorium/suspensions.
- 2) du = dwelling unit
- 3) Source: Table III-8
- 4) Source: Palm Beach County Administration Division
- 5) Source: Hillsborough County Development Services Department. No fee for EMS.
- 6) Source: Martin County Growth Management Department. The County is in the process of updating their impact fees.
- 7) Source: Miami-Dade County Department Of Regulatory And Economic Resources. No fee for EMS.
- 8) Source: Orange County Planning & Development Department
- 9) Source: St. Lucie County planning & Development Services Department

## IV. Law Enforcement

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This section discusses the analysis used in developing the law enforcement impact fee. Several elements addressed in this section include:

- Service Area, Benefit Districts and Demand Component
- Level of Service
- Cost Component
- Credit Component
- Calculated Impact Fee Schedule
- Law Enforcement Impact Fee Schedule Comparison

These elements are summarized throughout this section.

### ***Service Area, Benefit Districts and Demand Component***

Palm Beach County provides law enforcement services to the unincorporated areas of the county and 17 municipalities. These municipalities are listed in Appendix A, Table A-17. The other municipalities within the county have their own police departments or contract with other entities. Given that the officers can move and provide service throughout the service area, the appropriate benefit district is the entire service area, excluding the Glades Area, where impact fees are not collected.

In this technical study, the current 2021 weighted and functional population estimates are used. Because simply using weighted (permanent plus weighted seasonal) population estimates does not fully address all benefactors of law enforcement services, the “functional” weekly 24-hour population approach is used to establish a common unit of demand across different land uses. Functional population accounts for residents, visitors and workers traveling in and out of the county throughout the day and calculates the presence of population at different land uses during the day, which represents the demand component of the impact fee equation. Appendix A provides further explanation of the population analysis conducted.

### ***Level of Service***

Based on sworn officer counts provided by the Palm Beach County Sheriff’s Office, as well as, population estimates produced in Appendix A, the 2021 level of service (LOS) is calculated at 1.77

sworn officers per 1,000 weighted seasonal residents. Table IV-1 presents the calculation of the existing LOS.

While the LOS is 1.77 sworn officers per 1,000 weighted seasonal residents, to calculate the law enforcement impact fee, the LOS needs to be calculated in terms functional residents. As shown, the current LOS of law enforcement services is 2.09 sworn officers per 1,000 functional residents which is utilized in calculating the law enforcement impact fee for Palm Beach County.

**Table IV-1  
Current Level of Service (2021)**

Component	Year 2021	
	Weighted Population	Functional Population
Population <sup>(1)</sup>	943,870	802,190
Number of Officers <sup>(2)</sup>	1,675	1,675
<b>LOS (officers per 1,000 residents)<sup>(3)</sup></b>	<b>1.77</b>	<b>2.09</b>

- 1) Source: Appendix A, Table A-1 for weighted population and Appendix A, Table A-10 for functional population
- 2) Source: Palm Beach County Sheriff's Office, includes officers for court services
- 3) Number of officers (Item 2) divided by the population (Item 1) divided by 1,000

Table IV-2 summarizes a LOS comparison between Palm Beach County and other Florida counties. The LOS is displayed in terms of permanent population for all jurisdictions because a functional population analysis has not been completed for these entities. As presented in this table, Palm Beach County's LOS is in the mid-range of the communities reviewed.

**Table IV-2  
Level of Service Comparison (2020)**

Jurisdiction	Service Area Population (2020) <sup>(1)</sup>	Number of Officers <sup>(2)</sup>	LOS (Officers per 1,000 Residents) <sup>(3)</sup>
Hillsborough County	1,019,128	1,427	1.40
Collier County	348,792	637	1.83
Orange County	893,339	1,653	1.85
Highlands County	90,786	171	1.88
Indian River County	106,261	213	2.00
<b>Palm Beach County</b>	<b>873,584</b>	<b>1,843</b>	<b>2.11</b>
Martin County	141,534	307	2.17
Okeechobee County	36,424	101	2.77
Hendry County	32,932	104	3.16
Glades County	13,609	47	3.45
St. Lucie County	74,875	375	5.01

1) Source: Florida Department of Law Enforcement (FDLE) Criminal Justice Agency Profile Report, 2020

2) Source: FDLE Criminal Justice Agency Profile Report, 2020 - the counts include law enforcement and concurrent officers

3) Number of officers (Item 2) divided by the service area population (Item 1) multiplied by 1,000

**Cost Component**

The cost component of the study evaluates the cost of vehicles and equipment only. For this effort, Palm Beach County Sheriff’s Office provided the cost to outfit an officer. As shown in Table IV-3, the estimated cost to outfit a new deputy is \$67,793.

**Table IV-3  
Estimated Cost to Outfit New Deputy**

Item	Cost
Utility Vehicle including build and lighting requirements	\$46,685
In-Car Video Equipment	\$5,700
Radios (mobile and portable)	\$11,738
Weapon and Taser	\$3,670
<b>Total</b>	<b>\$67,793</b>

Source: Palm Beach County Sheriff's Office

Table IV-4 presents the cost per functional resident for the impact fee analysis. This cost was calculated as the estimated capital cost of \$67,793 per officer multiplied by the LOS of 2.09 officers per 1,000 functional residents divided by 1,000. As shown in the following table, the total impact cost is approximately \$142 per resident for law enforcement facilities.

**Table IV-4**  
**Total Impact per Functional Resident**

Component	Cost
Vehicle and Equipment Value per Officer <sup>(1)</sup>	\$67,793
LOS (Officers/1,000 Functional Residents) <sup>(2)</sup>	2.09
<b>Cost per Functional Resident<sup>(3)</sup></b>	<b>\$141.69</b>

- 1) Source: Table IV-3
- 2) Source: Table IV-1
- 3) Vehicle and equipment value per officer (Item 1) multiplied by the LOS (Item 2) divided by 1,000

***Credit Component***

As discussed previously, to avoid overcharging new development, a review of the capital funding allocation for law enforcement is needed to determine any potential revenues generated by future development that is likely to be used for expansion of law enforcement services. Revenue credits are then applied against the total impact cost per functional resident so that new development is not charged twice for capital revenue contributions used to expand the law enforcement vehicles and equipment.

Based on a comparison of officer counts used in the previous technical study (1,492 in 2014) and this study (1,675), the PBSO added approximately 23 officers per year. With a cost of \$67,793 per officer, capacity expansion expenditures are estimated at approximately \$1.6 million per year. To calculate the capital expenditure per resident, the average annual capital expansion expenditures are divided by the 2022 functional population. As shown in Table IV-5, the average annual expenditure amounts to approximately \$36.16 per resident.

Table IV-5 also summarizes the net impact cost per resident, which is the difference between the cost component and the credit component. The resulting net impact cost is \$106 per resident.

**Table IV-5  
Net Impact Cost**

Impact Cost / Credit Element	Figure
<b><i>Impact Cost</i></b>	
Total Impact Cost per Resident <sup>(1)</sup>	<b>\$141.69</b>
<b><i>Revenue Credit</i></b>	
Annual Capacity Purchases <sup>(2)</sup> :	\$1,559,239
Functional Population <sup>(3)</sup>	802,190
Annual Capacity Purchases per Resident <sup>(4)</sup>	\$1.94
Capitalization Rate	2.4%
Capitalization Period (in years)	25
Total Capital Improvement Credit per Incident <sup>(5)</sup> :	\$36.16
<b><i>Net Impact Cost</i></b>	
<b>Net Impact Cost per Incident<sup>(6)</sup>:</b>	<b>\$105.53</b>

- 1) Source: Table IV-4
- 2) Source: Palm Beach County
- 3) Source: Appendix A, Table A-1
- 4) Annual capacity purchases (Item 2) divided by functional population (Item 3)
- 5) Annual capacity purchases per resident (Item 4) over a capitalization rate of 2.4% for 25 years. The capitalization rate estimate was provided by Palm Beach County.
- 6) Total impact cost per resident (Item 1) less total capital improvement credit per resident (Item 5)

***Calculated Impact Fee Schedule***

Table IV-6 presents the calculated law enforcement impact fee schedule for Palm Beach County for both residential and non-residential land uses, based on the net impact cost per functional resident previously presented in Table IV-5. Also presented is a comparison to the County’s current adopted fee and percent change from the current fee, if applicable.

Changes to the cost component resulted in an increase of 10 percent while the remaining fee increases or decreases are due to the changes to the demand component. **It is important to note that the County did not adopt the 2014-2018 study calculated fees, and the basis of the current adopted fees is the 2012 study, which was adopted at 95 percent.**



**Table IV-6  
Law Enforcement Impact Fee Schedule**

ITE LUC	Land Use	Impact Unit	Functional Residents per Unit <sup>(1)</sup>	Total Impact Fee <sup>(2)</sup>	Current Adopted Fee <sup>(3)</sup>	Percent Change <sup>(4)</sup>
<b>RESIDENTIAL:</b>						
210/230	Single Family (detached/attached)	du	1.88	\$198	\$128	55%
220	Multi-Family	du	1.13	\$119	\$70	70%
240	Mobile Home	du	1.89	\$199	\$70	184%
251	Senior Adult Housing (Detached)	du	1.43	\$151	\$128	18%
252	Senior Adult Housing (Attached)	du	0.86	\$91	\$70	30%
<b>TRANSIENT, ASSISTED, GROUP:</b>						
310	Hotel/Motel	room	0.84	\$89	\$82	9%
254/620	Nursing Home/Congregate Living Facility	bed	0.84	\$89	\$82	9%
<b>RECREATIONAL:</b>						
411	Public Park	acre	0.05	\$5	N/A	N/A
430	Golf Course	hole	0.84	\$89	\$109	-18%
445	Movie Theater	screen	5.19	\$548	\$605	-9%
491	Racquet/Tennis Club	court	1.81	\$191	\$57	233%
<b>INSTITUTIONS:</b>						
520	Elementary School (Private)	student	0.10	\$11	\$6	83%
522	Middle/Junior High School (Private)	student	0.09	\$9	\$7	29%
525	High School (Private)	student	0.08	\$8	\$9	-11%
560	Church/Synagogue	1,000 sf	0.41	\$43	\$51	-16%
565	Day Care Center	1,000 sf	0.81	\$85	\$57	49%
566	Cemetery	acre	0.15	\$16	\$12	33%
<b>MEDICAL:</b>						
610	Hospital	1,000 sf	1.30	\$137	\$10	1209%
640	Animal Hospital/Veterinary Clinic	1,000 sf	1.41	\$149	\$57	161%
<b>OFFICE &amp; FINANCIAL:</b>						
710	General Office	1,000 sf	0.98	\$103	\$10	884%
720	Medical Office (less than 10,000 sf)	1,000 sf	1.20	\$127	\$10	1113%
720	Medical Office (10,000 sf and greater)	1,000 sf	1.72	\$182	\$10	1638%
<b>RETAIL:</b>						
817	Nursery (Garden Center)	acre	5.52	\$583	N/A	N/A
822	Retail/Shopping Center less than 40,000 sfgla	1,000 sfgla	2.08	\$220	\$57	286%
821	Retail/Shopping Center 40,000 to 150,000 sfgla	1,000 sfgla	2.58	\$272	\$57	377%
820	Retail/Shopping Center greater than 150,000 sfgla	1,000 sfgla	1.41	\$149	\$57	161%
840/841	New/Used Car Sales	1,000 sf	1.57	\$166	\$57	191%
848	Tire Store	1,000 sf	1.54	\$163	\$57	186%
851	Convenience Market	1,000 sf	6.41	\$676	\$57	1086%
880/881	Pharmacy with and w/o Drive-Thru	1,000 sf	1.84	\$194	\$57	240%
882	Marijuana Dispensary	1,000 sf	3.19	\$337	\$57	491%
890	Furniture Store	1,000 sf	0.32	\$34	\$23	48%
<b>SERVICES:</b>						
912	Bank/Savings w/Drive-In	1,000 sf	1.48	\$156	\$10	1390%
931	Fine Dining/Quality Restaurant	1,000 sf	5.76	\$608	\$57	967%
932	High-Turnover Restaurant	1,000 sf	5.42	\$572	\$57	904%
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	9.71	\$1,025	\$57	1698%

**Table IV-6 (Continued)**  
**Law Enforcement Impact Fee Schedule**

ITE LUC	Land Use	Impact Unit	Functional Residents per Unit <sup>(1)</sup>	Total Impact Fee <sup>(2)</sup>	Current Adopted Fee <sup>(3)</sup>	Percent Change <sup>(4)</sup>
<b>SERVICES:</b>						
941	Quick Lubrication Vehicle Shop	bay	1.60	\$169	N/A	N/A
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	1.46	\$154	\$57	170%
945	Gas Station w/Convenience Store 2,000 to 5,499 sq ft	fuel pos.	2.30	\$243	\$57	326%
	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	3.00	\$317	\$57	456%
947	Car Wash	bay	0.96	\$101	N/A	N/A
<b>INDUSTRIAL:</b>						
110	General Light Industrial	1,000 sf	0.48	\$51	\$7	592%
150	Warehousing	1,000 sf	0.11	\$12	\$21	-42%
151	Mini-Warehouse	1,000 sf	0.04	\$4	\$6	-33%

- 1) Source: Appendix A, Table A-12 for residential and transient land uses. Table A-13 for non-residential land uses
- 2) Source: Net impact cost per functional resident from Table IV-4 multiplied by the functional residents per unit (Item 1)
- 3) Source: Palm Beach County Administration Division
- 4) Percent change from the current adopted fee (Item 3) to the total impact fee (Item 2)  
N/A - Land use is not specifically identified in the County's current fee schedule or there is a unit change

***Law Enforcement Impact Fee Schedule Comparison***

As part of the work effort in updating Palm Beach County’s law enforcement impact fee schedule, the County’s calculated and adopted impact fees for select land uses were compared to the adopted fee schedules of several Florida counties. Table IV-7 presents this comparison. It is important to note that while some jurisdictions include law enforcement building and land inventory in the law enforcement impact fees, others include only the vehicles and equipment. This difference in the inventory levels is one of the reasons for the difference in fee amounts.

**Table IV-7  
Law Enforcement Impact Fee Schedule Comparison**

Land Use	Unit <sup>(2)</sup>	Palm Beach County		Collier County <sup>(5)</sup>	Martin County <sup>(6)</sup>	Miami-Dade County <sup>(7)</sup>	Orange County <sup>(8)</sup>	St. Lucie County <sup>(9)</sup>
		Calculated <sup>(3)</sup>	Existing <sup>(4)</sup>					
Date of Last Update		2021	2012	2016	2012	N/A	2017	2016 / 2022
Assessed Portion of Calculated <sup>(1)</sup>		N/A	95%	100%	100%	N/A	100%	100%
<b>Residential:</b>								
Single Family (2,000 sq ft)	du	\$198	\$128	\$587	\$760	\$583	\$510	\$246
Multi-Family (1,300 sq ft)	du	\$119	\$70	\$297	\$760	\$583	\$197	\$171
<b>Non-Residential:</b>								
Light Industrial	1,000 sf	\$51	\$7	\$215	\$158	\$405	\$148	\$54
Office (50,000 sq ft)	1,000 sf	\$103	\$10	\$372	\$274	\$405	\$269	\$173
Retail (125,000 sq ft)	1,000 sf	\$272	\$57	\$765	\$742	\$405	\$799	\$325
Bank w/Drive-In	1,000 sf	\$156	\$10	\$712	\$481	\$405	\$799	\$262
Fast Food w/Drive-Thru	1,000 sf	\$1,025	\$57	\$2,779	\$2,757	\$405	\$799	\$262

- 1) Represents the portion of the maximum calculated fee for each respective county that is actually charged. Fee may have been lowered/increased through annual indexing or policy discounts. Does not account for moratorium/suspensions.
- 2) du = dwelling unit
- 3) Source: Table IV-6
- 4) Source: Palm Beach County
- 5) Source: Collier County Impact Fee Administration Department
- 6) Source: Martin County Growth Management Department. The County is in the process of updating their impact fees.
- 7) Source: Miami-Dade County Department of Regulatory and Economic Resources
- 8) Source: Orange County Planning and Development Department
- 9) Source: St. Lucie County Planning & Development Services. Office fee was updated according to 2022 calculated rates.

## V. Library Facilities

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This section discusses the analysis used in developing the library facilities impact fee. Several elements addressed in this section include:

- Facility Inventory
- Service Area, Benefit Districts and Demand Component
- Level of Service
- Cost Component
- Credit Component
- Net Impact Cost
- Calculated Impact Fee Schedule
- Library Facilities Impact Fee Schedule Comparison

These elements are summarized throughout this section.

### ***Facility Inventory***

Palm Beach County owns and operates 18 library facilities throughout the county, including one warehouse facility. According to the information provided by the County, the library facility inventory includes approximately 405,700 square feet of buildings and 85 acres of land.

As shown in Table V-1, the total value of library facilities is estimated at \$165.2 million, of which \$156.8 million is buildings and the remaining \$8.4 million is land. The building value for library branches is estimated at \$400 per square foot based on the estimates for upcoming construction, insurance values of existing facilities, cost estimates obtained from other Florida jurisdictions and discussions with the representatives from Palm Beach County. The cost of the Library Annex (warehouse facility) is estimated at \$212 based on the actual construction cost of this facility in 2015, indexed using the Engineering News Record Building Cost Index. The land value estimate is primarily based on the value of land in future development areas provided by the Palm Beach County Library System. Land value for library facilities is estimated at \$100,000 per acre based on vacant land sales in these areas over the past five years. Appendix C provides additional information.

**Table V-1  
Library Facilities Building and Land Inventory**

Facility Description	Address	Year Built <sup>(1)</sup>	Square Footage <sup>(2)</sup>	Acres <sup>(3)</sup>	Building Value <sup>(4)</sup>	Land Value <sup>(5)</sup>	Total Building and Land Value <sup>(6)</sup>
<b>Central Area:</b>							
Palm Beach County Library Main Branch	3650 Summit Boulevard	1972	46,480	10.30	\$18,592,000	\$1,030,000	\$19,622,000
Library Annex <sup>(7)</sup>	4289 Cherry Road	2015	29,164	2.03	\$6,182,768	\$203,000	\$6,385,768
<b>North Area:</b>							
Gardens Branch Library	11303 Campus Drive	1996	40,000	6.60	\$16,000,000	\$660,000	\$16,660,000
Wellington Branch Library	1951 Royal Fern Drive	1997	30,000	4.13	\$12,000,000	\$413,000	\$12,413,000
Tequesta Branch Library	461 Old Dixie Highway North	1995	4,000	N/A <sup>(8)</sup>	\$1,600,000	N/A	\$1,600,000
Royal Palm Beach Branch Library	500 Civic Center Way	1994	20,000	3.53	\$8,000,000	\$353,000	\$8,353,000
Okeechobee Boulevard Branch Library	5689 Okeechobee Boulevard	1992	17,000	2.73	\$6,800,000	\$273,000	\$7,073,000
Jupiter Branch Library	705 North Military Trail	1992	22,000	3.72	\$8,800,000	\$372,000	\$9,172,000
<b>South Area:</b>							
Glades Road Branch Library	20701 95th Avenue South	1991	24,000	4.01	\$9,600,000	\$401,000	\$10,001,000
Greenacres Branch Library	3750 Jog Road	1992	17,000	1.70	\$6,800,000	\$170,000	\$6,970,000
Boynton Beach Branch Library	9451 Jog Road	1994	17,538	2.29	\$7,015,200	\$229,000	\$7,244,200
Hagen Ranch Road	14350 Hagen Ranch Road	2008	34,000	15.03	\$13,600,000	\$1,503,000	\$15,103,000
Lantana Road Branch	4020 Lantana Road	2009	29,000	5.94	\$11,600,000	\$594,000	\$12,194,000
West Boca Branch	18685 State Road 7	2009	20,000	20.62	\$8,000,000	\$2,062,000	\$10,062,000
<b>West Area:</b>							
Clarence E. Anthony Library (South Bay)	375 South West 2nd Avenue	1992	4,000	0.59	\$1,600,000	\$59,000	\$1,659,000
Loula V. York Library (Pahokee)	525 Bacom Point Road	1967	4,565	0.44	\$1,826,000	\$44,000	\$1,870,000
Belle Glade Library	725 NW 4th Street	2013	17,000	N/A <sup>(9)</sup>	\$6,800,000	N/A	\$6,800,000
Acreage Library	15801 Orange Blvd.	2012	30,000	N/A <sup>(8)</sup>	\$12,000,000	N/A	\$12,000,000
<b>Total</b>			<b>405,747</b>	<b>83.66</b>	<b>\$156,815,968</b>	<b>\$8,366,000</b>	<b>\$165,181,968</b>
Building Value per Square Foot <sup>(10)</sup>					\$386		
Land Value per Acre <sup>(11)</sup>						\$100,000	

- 1) Source: Palm Beach County
- 2) Source: Palm Beach County
- 3) Source: Palm Beach County
- 4) Square footage (Item 2) multiplied by \$400 per square foot for libraries and the indexed cost of construction for Library Annex
- 5) Acres (Item 3) multiplied by land value per acre (Item 11)
- 6) Sum of land value and building value (Items 4 and 5)
- 7) Library Annex was built in 2015 and building cost reflects the indexed construction cost. This facility is not a library branch, but it's a warehouse facility where all library materials are ordered, received and processed before going out to the branches. The library system's outreach services are also located in this building, which include youth services, talking books, and books by mail and the bookmobile.
- 8) Land is leased.
- 9) Land is owned by the City of Belle Glade.
- 10) Total building value divided by building square footage. See Appendix C for further detail on the estimated cost for library buildings.
- 11) Source: Appendix C

In addition to buildings and land, the Palm Beach County Public Library System houses library materials that are owned by the County and are available to the public. Table V-2 presents the inventory of library materials with an estimated value of \$27.9 million or \$18 per item.

**Table V-2**  
**Library Facilities Material Inventory**

Description	Units <sup>(1)</sup>	Unit Cost <sup>(2)</sup>	Total Value <sup>(3)</sup>
Books and Publications	1,247,462	\$17	\$21,526,906
Compact Discs/Books on CD	57,922	\$20	\$1,172,538
Digital Video Discs	243,585	\$21	\$5,185,975
Video Cassette	<u>1</u>	\$14	\$14
<b>Total - All Library Materials</b>	<b>1,548,970</b>		<b>\$27,885,433</b>
<b>Total Value per Item<sup>(3)</sup></b>			<b>\$18</b>

- 1) Source: Palm Beach County
- 2) Total value (Item 3) divided by number of units (Item 1)
- 3) Source: Palm Beach County

The Palm Beach County Library System also owns a variety of equipment, both for public use and for its own operations. Table V-3 presents the inventory of library equipment with an estimated value of approximately \$5.1 million.

**Table V-3  
Library Facilities Equipment Inventory**

<b>Equipment</b>	<b>Units <sup>(1)</sup></b>	<b>Unit Cost<sup>(2)</sup></b>	<b>Total Value<sup>(3)</sup></b>
Alarn System	1	\$1,310	\$1,310
Aluminum cart	1	\$3,060	\$3,060
Assistive Listening Apparatus	1	\$1,229	\$1,229
Audio Recorder	1	\$1,026	\$1,026
Barcode Label Printer	1	\$3,401	\$3,401
Battery Charging Station	1	\$1,339	\$1,339
Belt Sorter System<\$25,000	6	\$6,703	\$40,215
Belt Sorter System	14	\$202,174	\$2,830,431
Book Cart	16	\$2,207	\$35,319
Book Return / Drop / Chute	16	\$2,616	\$41,858
Burster Machine	1	\$5,800	\$5,800
Camcorder	2	\$2,278	\$4,555
Camera	1	\$1,422	\$1,422
Canopy	2	\$9,481	\$18,961
CD/DVD Apparatus	5	\$1,660	\$8,299
Computer <sup>(4)</sup>	82	\$1,588	\$130,253
Computer Networking	2	\$4,225	\$8,450
Detection System	12	\$16,567	\$198,806
Digital Library Assistant	3	\$6,877	\$20,631
Digital Reader	1	\$9,568	\$9,568
Disc Dispensing Systems	2	\$20,597	\$41,194
Disc Repair Machine	2	\$1,015	\$2,030
Display Board	3	\$1,143	\$3,430
Document Station	1	\$5,016	\$5,016
External Drive	2	\$2,158	\$4,316
Flare Display	1	\$2,669	\$2,669
Flat Surface Cleaner	1	\$1,091	\$1,091
Fork Truck	1	\$16,035	\$16,035
Hardware	2	\$71,507	\$143,013
Ladder	1	\$2,957	\$2,957
Laminator	5	\$1,561	\$7,807
Lan Station Racks	1	\$1,164	\$1,164
Laser Barcode	1	\$1,569	\$1,569
Mailbox/ Sorter	5	\$1,620	\$8,100
Marker Board	1	\$1,508	\$1,508
Mcafee	2	\$10,179	\$20,357

**Table V-3 (Continued)**  
**Library Facilities Equipment Inventory**

<b>Equipment</b>	<b>Units <sup>(1)</sup></b>	<b>Unit Cost <sup>(2)</sup></b>	<b>Total Value <sup>(3)</sup></b>
Microfiche Cabinet	1	\$1,295	\$1,295
Microfiche Table	2	\$1,211	\$2,423
Microfilm/Fiche Scanning System	1	\$5,101	\$5,101
Microfilm/Film Cabinet	11	\$1,707	\$18,775
Microform Reader/Printer	2	\$1,404	\$2,808
Monitor	5	\$1,757	\$8,785
Phone System<\$10,000	2	\$6,833	\$13,667
Phone System	12	\$39,137	\$469,639
Pitch Litter (Receptacle)	7	\$1,209	\$8,460
Portable Radio	45	\$1,277	\$57,455
Pressure Washer	3	\$1,858	\$5,575
Printer	13	\$3,391	\$44,088
Projection Screen	9	\$1,792	\$16,129
Projector	14	\$2,428	\$33,994
PSC Laser Barcode	1	\$1,443	\$1,443
Refrigerator	2	\$1,550	\$3,100
RFID Security System Software	36	\$1,459	\$52,518
Safe	2	\$1,117	\$2,234
Security Cabinet	4	\$1,492	\$5,969
Security Cart	10	\$1,362	\$13,622
Security Gates	2	\$15,085	\$30,170
Server	21	\$5,842	\$122,673
Shredder	3	\$1,571	\$4,713
Smart Board	1	\$25,557	\$25,557
Sorter Machine	1	\$111,135	\$111,135
Sun server	2	\$42,210	\$84,420
TV	6	\$1,564	\$9,383
Uninterruptible Power Supply	2	\$10,575	\$21,150
Vehicle	4	\$71,927	\$287,707
Wand#C-125 Recognition	2	\$1,802	\$3,604
<b>Total - All Items</b>	<b>426</b>	<b>\$11,962</b>	<b>\$5,095,782</b>

- 1) Source: Palm Beach County
- 2) Total value (Item 3) divided by number of units (Item 1).
- 3) Source: Palm Beach County
- 4) Only computers classified as capital assets are included.



## Service Area, Benefit Districts and Demand Component

Palm Beach County provides library facilities and services to the unincorporated county and 24 municipalities. A list of these municipalities is included in Appendix A, Table A-17. Given this, the proper benefit district is the unincorporated areas and the 24 municipalities, excluding the Glades Area that is a no-fee zone. Appendix A, Table A-1 provides the estimated population for 2021 and the projected population through 2040 for the library service area. Library facilities impact fees are charged only to residential land uses. As such, the weighted seasonal population per housing unit is used to measure demand from each residential land use, which is also presented in Appendix A.

### Level of Service

Table V-4 provides a summary of the current LOS as well as the adopted LOS standards for library buildings and materials in Palm Beach County. As presented, the County's current LOS is below the adopted LOS standards for both library buildings and materials. While the achieved LOS measures the investment made into the library infrastructure, the adopted LOS standard indicates intended/goal investment levels in the future. For impact fee calculations, the lower of the two measures is used to ensure new development is not overcharged. In the case of library facilities, this measure is the current achieved LOS.

**Table V-4**  
**Current Level of Service (2021)**

Variable	2021			
	Square Footage/Count <sup>(1)</sup>	Service Area Population <sup>(2)</sup>	Achieved LOS <sup>(3)</sup>	Adopted LOS Standard <sup>(4)</sup>
Library Buildings (sq. ft.)	405,747	1,034,445	0.39	0.60
Library Materials (items)	1,548,970		1.50	2.50
Other Library Equipment (items)	426		0.0004	N/A

- 1) Source: Table V-1, Table V-2 and Table V-3. Computers with a value below the fixed asset threshold are excluded.
- 2) Source: Appendix A, Table A-1
- 3) Square footage/count (Item 1) divided by population (Item 2)
- 4) Source: Palm Beach County 1989 Comprehensive Plan Ordinance 2012-12, Library Services Element

Table V-5 provides a comparison of Palm Beach County LOS, the adopted LOS standard, the LOS of the other Florida counties, and state standards. The comparison includes counties with a population greater than 750,000 and is based on information obtained from the Library Directory

with Statistics, published by the Department of State, Division of Library and Information Services (2017-2018). State standards are obtained from the Florida Library Association.

**Table V-5  
Comparison of LOS and LOS Standards (2018)**

Category	2018				Average of Other FL Counties per Capita <sup>(5)</sup>	FLA Public Library Standards per Capita <sup>(6)</sup>		
	Square Footage/Count <sup>(1)</sup>	Service Area Population <sup>(2)</sup>	Achieved Level of Service <sup>(3)</sup>	Adopted Level of Service Standard <sup>(4)</sup>		Essential	Enhanced	Exemplary
Library Buildings (sq. ft.)	405,747	940,164	0.43	0.60	0.55	0.60	0.65	0.85
Library Materials (items)	1,841,442	940,164	1.96	2.50	1.41	2.00	2.50	3.00
Library Computers (Public)	1,109	940,164	0.0012	N/A	0.0009	0.0003	0.0005	0.0010

1) Source: Florida Department of State (Department), Division of Library and Information Services 2017-2018 Public Library Statistics

2) Source: Florida Department of State (Department), Division of Library and Information Services 2017-2018 Public Library Statistics

3) Square footage/count (Item 1) divided by population (Item 2)

4) Source: Palm Beach County 1989 Comprehensive Plan Ordinance 2012-12, Library Services Element

5) Source: Florida Department of State (Department), Division of Library and Information Services 2017-2018 Public Library Statistics. Includes counties in the service population level of over 750,000 but excludes Palm Beach County.

6) Source: Florida Library Association Standards for Florida Public Libraries 2004, 2006 Revision. Standards show Standard 77 and Standard 90 for jurisdictions with a population of 750,001 and up.

### ***Cost Component***

The cost component of the study evaluates the value of capital items, including buildings, land, materials and equipment. Table V-6 provides a summary of all capital costs, which amounts to approximately \$198.2 million.

Table V-6 also presents the cost per resident for the impact fee analysis. This cost is calculated by multiplying the total building and land value per square foot, total material value per unit, and total equipment value per unit by their current LOS. As shown, these calculations result in \$159 per resident for buildings and land, \$27 per resident for materials and \$5 per resident for equipment totaling approximately \$191 per resident for all library assets considered in the impact fee calculations.

**Table V-6  
Total Capital Asset Value per Resident**

Variable	Figure	Percent of Total
Building Value <sup>(1)</sup>	\$156,815,968	79%
Land Value <sup>(1)</sup>	\$8,366,000	4%
Materials Value <sup>(2)</sup>	\$27,885,433	14%
Equipment Value <sup>(3)</sup>	\$5,095,782	3%
<b>Total Capital Asset Value</b>	<b>\$198,163,183</b>	<b>100%</b>
<b>Total Building and Land Value per Resident</b>		
Total Building and Land Value <sup>(4)</sup>	\$165,181,968	
Total Building Square Footage <sup>(5)</sup>	405,747	
Total Building and Land Value per Square Foot <sup>(6)</sup>	\$407.11	
Achieved Level of Service (Sq. Ft. per Resident) <sup>(7)</sup>	0.39	
<b>Total Building and Land Value per Resident<sup>(8)</sup></b>	<b>\$158.77</b>	
<b>Materials Value per Weighted Resident</b>		
Library Materials Value	\$27,885,433	
Total Materials Count <sup>(9)</sup>	1,548,970	
Total Materials Value per Unit <sup>(10)</sup>	\$18.00	
Achieved Level of Service <sup>(11)</sup>	1.50	
<b>Total Materials/Equipment Value per Weighted Resident<sup>(12)</sup></b>	<b>\$27.00</b>	
<b>Equipment Value per Weighted Resident</b>		
Equipment Value	\$5,095,782	
Total Equipment Count <sup>(13)</sup>	426	
Total Equipment Value per Unit <sup>(14)</sup>	\$11,962	
Achieved Level of Service <sup>(15)</sup>	0.0004	
<b>Total Equipment Value per Weighted Resident<sup>(16)</sup></b>	<b>\$4.78</b>	
<b>Total Capital Asset Value</b>		
<b>Total Impact Cost per Resident<sup>(17)</sup></b>	<b>\$190.55</b>	

- 1) Source: Table V-1
- 2) Source: Table V-2
- 3) Source: Table V-3
- 4) Sum of building and land value (Items 1 and 2)
- 5) Source: Table V-1
- 6) Total building and land value (Item 4) divided by total square footage (Item 5)
- 7) Source: Table V-4
- 8) Building and land value per square foot (Item 6) multiplied by the achieved level of service (Item 7)
- 9) Source: Table V-2
- 10) Total materials value (Item 2) divided by total materials count (Item 9)
- 11) Source: Table V-4
- 12) Total materials value per unit (Item 10) multiplied by the achieved level of service (Item 11)
- 13) Source: Table V-3
- 14) Source: Total equipment value (Item 3) divided by total equipment count (Item 13)
- 15) Source: Table V-4
- 16) Total equipment value per unit (Item 14) multiplied by the achieved level of service (Item 15)
- 17) Sum of building and land value, material and equipment value per resident (Items 8, 12 and 16)

### ***Credit Component***

To avoid overcharging new development, a review of funding for library capital expansion projects over the past five years and those programmed for the next five years was completed. The purpose of this review was to determine any potential revenues generated by new development, other than impact fees, that are being used or will be used to fund the expansion of capital facilities, land, and materials for the County's libraries program. As mentioned previously, the credit component does not include any capital renovation, maintenance, or operations expenses, as these types of expenditures do not add capacity and should not be considered for impact fee credit.

#### **Capital Expansion "Cash" Credit**

Capital expansion expenditure credits per resident were calculated based on non-impact fee revenue funding for capital expansion projects over the past five years and programmed for the next five years. To calculate the capital expenditure per resident, the average annual capital expansion expenditures are divided by average annual population for the same period. As shown in Table V-7, the average annual expenditure over this ten-year period amounts to approximately \$1.7 million or \$1.67 per resident per year.

Once the revenue credit per resident is calculated, a credit adjustment is necessary to account for the expenditures being funded through ad valorem tax revenues. This adjustment accounts for the fact that new homes tend to pay higher property taxes per dwelling unit than older homes and was estimated based on a comparison of the average taxable value of newer homes to that of all homes. As presented, the adjusted revenue credit per population amounts \$2.84 per year.

**Table V-7  
Capital Expansion Credit per Resident**

Description	FY 2016-2025
<b><i>Ad Valorem</i></b>	
Canyon Branch	\$17,130,000
<b>Average Annual Capital Expansion Expenditures<sup>(2)</sup></b>	
	\$1,713,000
<b>Average Annual Population<sup>(3)</sup></b>	
	1,028,697
<b>Annual Capital Expansion Credit per Resident<sup>(4)</sup></b>	
	<b>\$1.67</b>
<b>Credit Adjustment Factor<sup>(5)</sup></b>	
	1.70
<b>Adjusted Capital Expansion Expenditures per Resident<sup>(6)</sup></b>	
	<b>\$2.84</b>

- 1) Source: Palm Beach County
- 2) Average annual capital expenditures over the 10-year period
- 3) Source: Appendix A, Table A-1. Average annual population over the 10-year period
- 4) Average annual capital expansion expenditures (Item 2) divided by average annual population (Item 3)
- 5) Adjustment factor to reflect higher ad valorem taxes paid by newer homes
- 6) Adjusted annual capital expansion expenditures per resident.

Debt Service Credit

Any outstanding bond issues related to the library facilities will result in a credit to the impact fee. Palm Beach County used bond proceeds for library expansion projects. Table V-8 summarizes the outstanding debt service related to library capital expansion projects. To calculate the credit of the current debt obligations, the present value of the total remaining payments is calculated and then divided by the average annual population estimated over the remaining life of the bond issue. As shown in Table V-8, the resulting credit for library facilities-related debt is approximately \$9 per resident.

Similar to the capital expansion credit per resident, because the library debt service is being retired using ad valorem tax revenues, an adjustment of the credit per resident is also necessary. As shown, the adjusted debt service credit amounts to approximately \$16 per resident.

**Table V-8  
Debt Service Credit**

Description	Funding Source	Number of Fiscal Years of Debt Issue <sup>(1)</sup>	Number of Remaining Payments <sup>(1)</sup>	Remaining Library Debt Service (Capacity Expansion) <sup>(1)</sup>	Present Value of Payments Remaining (Capacity Expansion) <sup>(2)</sup>	Avg Annual Population During Remaining Bond Issue Period <sup>(3)</sup>	Credit per Resident <sup>(4)</sup>
19.5M General Obligation Refunding Bonds, Series 2010	Ad Valorem Tax Dollars	13	2	\$4,306,300	\$4,120,000	1,052,045	\$3.92
11.9M Refunding Bonds, Series 2014 (Library Facilities)	Ad Valorem Tax Dollars	11	4	\$6,437,400	\$5,899,714	1,063,989	\$5.54
<b>Total Debt Service Credit per Resident</b>							<b>\$9.46</b>
<b>Credit Adjustment Factor<sup>(5)</sup></b>							<b>1.70</b>
<b>Adjusted Debt Service Credit per Resident<sup>(6)</sup></b>							<b>\$16.08</b>

- 1) Source: Palm Beach County
- 2) Present value of remaining payments in 2021 dollars
- 3) Source: Appendix A, Table A-1
- 4) Present value of payments remaining (Item 2) divided by average annual population (Item 3)
- 5) Adjustment factor to reflect higher ad valorem taxes paid by new homes
- 6) Credit per resident (\$9.54) multiplied by the credit adjustment factor (Item 5)

**Net Impact Cost**

The net library facilities impact cost per resident is the difference between the cost component and the credit component. Table V-9 summarizes the calculation of the net library facilities impact cost per resident. As presented, the net impact cost per resident amounts to approximately \$122.



**Table V-9  
Net Impact Cost**

Variable	Impact Cost	Revenue Credits
<b>Impact Cost</b>		
Total Impact Cost per Resident <sup>(1)</sup>	\$190.55	
<b>Impact Credit</b>		
Average Annual Capital Improvement Credit <sup>(2)</sup>		\$2.84
Capitalization Rate		2.4%
Capitalization Period (in years)		25
Capital Improvement Credit per Resident <sup>(3)</sup>		\$52.93
Debt Service Credit per Resident <sup>(4)</sup>		\$16.08
Total Credit per Resident <sup>(5)</sup>		\$69.01
<b>Net Impact Cost</b>		
Net Impact Cost per Resident <sup>(4)</sup>	<b>\$121.54</b>	

- 1) Source: Table V-6
- 2) Source: Table V-7
- 3) Present value of annual credit per resident (Item 2) over a 25-year period with a capitalization rate of 2.4%. The capitalization rate estimate was provided by Palm Beach County.
- 4) Source: Table V-8
- 5) Sum of capital improvement credit per resident (Item 3) and debt service credit per resident (Item 4)
- 6) Total impact cost per resident (Item 1) less total credit per resident (Item 5)

***Calculated Impact Fee Schedule***

Table V-10 presents the calculated library facilities impact fee schedule for Palm Beach County for residential land uses, based on the net impact cost per resident previously presented in Table V-9. Also presented is a comparison to the County’s current adopted fee and percent change from the current fee.

Changes to the cost and credit components resulted in an increase of almost 10 percent compared to the 2014-2018 study. The remaining changes are due to the fluctuations in the demand component. **It is important to note that the County did not adopt the 2014-2018 study calculated fees, and the basis of the current adopted fees is the 2012 study, which was adopted at 75 percent.**

**Table V-10  
Library Facilities Impact Fee Schedule**

ITE LUC	Residential Land Use	Impact Unit	Residents per Unit <sup>(1)</sup>	Calculated Impact Fee <sup>(2)</sup>	Current Adopted Fee <sup>(3)</sup>	% Change from Adopted <sup>(4)</sup>
<b>RESIDENTIAL:</b>						
<b>Residential</b>						
210/220/230/240	800 & Under	du	1.49	<b>\$181</b>	\$125	45%
	801 - 1,399	du	2.05	<b>\$249</b>	\$186	34%
	1,400 - 1,999	du	2.33	<b>\$283</b>	\$212	34%
	2,000 - 3,599	du	2.56	<b>\$311</b>	\$243	28%
	3,600 & Over	du	2.75	<b>\$334</b>	\$267	25%
<b>Senior Adult Housing</b>						
251 / 252	800 & Under	du	1.14	<b>\$139</b>	\$125	11%
	801 - 1,399	du	1.57	<b>\$191</b>	\$186	3%
	1,400 - 1,999	du	1.78	<b>\$216</b>	\$212	2%
	2,000 - 3,599	du	1.96	<b>\$238</b>	\$243	-2%
	3,600 & Over	du	2.10	<b>\$255</b>	\$267	-5%

- 1) Source: Appendix A, Table A-4
- 2) Net impact cost per resident from Table V-9 multiplied by residents per unit (Item 1) for each land use
- 3) Source: Palm Beach County, adopted at 75%
- 4) Percent change from the adopted impact fee (Item 3) to the calculated impact fee (Item 2)

***Library Facilities Impact Fee Schedule Comparison***

As part of the work effort in updating Palm Beach County’s library facilities impact fee program, a comparison of the County’s calculated and adopted library facilities impact fee schedules to fees schedules of other select Florida counties was completed. Table V-11 presents this comparison.

**Table V-11**  
**Library Facilities Impact Fee Comparison**

Land Use	Unit <sup>(2)</sup>	Palm Beach County		Collier County <sup>(5)</sup>	Martin County <sup>(6)</sup>	St. Lucie County <sup>(7)</sup>
		Calculated <sup>(3)</sup>	Existing <sup>(4)</sup>			
Date of Last Update		2021	2012	2016	2012	2017
Assessed Portion of Calculated <sup>(1)</sup>		N/A	75%	100%	100%	100%
<b>Residential:</b>						
Single Family (2,000 sq ft)	du	\$311	\$243	\$336	\$537	\$276
Multi-Family (1,300 sq ft)	du	\$249	\$186	\$160	\$537	\$192
Mobile Home (1,300 sq ft)	du	\$249	\$186	\$270	\$537	\$174

- 1) Represents the portion of the maximum calculated fee for each respective county that is actually charged. Fee may have been lowered/increased through annual indexing or policy discounts. Does not account for moratorium/suspensions.
- 2) du = dwelling unit
- 3) Source: Table V-10
- 4) Source: Palm Beach County Administration Division
- 5) Source: Collier County Impact Fee Administration Department
- 6) Source: Source: Martin County Growth Management. The County is in the process of updating their impact fees.
- 7) Source: Source: St. Lucie County Planning & Development Services Department

## VI. Parks & Recreation Facilities

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This section addresses the analysis used in developing the parks & recreation impact fee. Several elements addressed in the section include:

- Service Area and Demand Component
- Level of Service
- Cost Component
- Credit Component
- Net Impact Cost
- Calculated Impact Fee Schedule
- Parks & Recreation Facilities Impact Fee Schedule Comparison
- Parks & Recreation Facilities Impact Fee Benefit Districts

These elements are summarized throughout this section.

### ***Service Area and Demand Component***

Based on a review of the park type definitions included in the County's Comprehensive Plan and amenities included at each park, it was determined that the service area of all parks included in the impact fee inventory is countywide. Appendix A, Table A-1, provides the estimated population for 2021 and the projected population through 2040. Parks and recreation impact fees are charged only to residential land uses, and therefore, the weighted seasonal population per housing unit is used to measure demand from each residential land use, which is also presented in Appendix A.

### ***Level of Service***

The current LOS for all County-owned and maintained parks is presented in Table VI-1. To determine the current LOS, the total acreage of each park type is divided by the countywide population for 2021 and multiplied by 1,000. This achieved LOS is compared to the adopted LOS standard. While the achieved LOS represents the investment made into the park land, the adopted LOS standard indicates the intended LOS going forward. For impact fee purposes, the lower of the two measures is used not to overcharge new development. As shown, the adopted LOS standard of 4.82 total acres per 1,000 weighted seasonal residents is utilized in the calculation of the parks and recreation facilities impact fee.

**Table VI-1  
Current Level of Service (2021)**

Park Classification	Acres <sup>(1)</sup>	Achieved LOS <sup>(2)</sup>	Adopted LOS Standard <sup>(3)</sup>
	<b>Total Acres</b>		
Regional	5,516.31	3.45	3.31
Beach	471.77	0.30	0.29
District	<u>2,049.22</u>	<u>1.28</u>	<u>1.22</u>
<b>Total</b>	<b>8,037.30</b>	<b>5.03</b>	<b>4.82</b>
	<b>Developed Acres</b>		
Regional	4,197.24	2.63	2.43
Beach	296.14	0.19	0.18
District	<u>1,385.19</u>	<u>0.87</u>	<u>0.82</u>
<b>Total</b>	<b>5,878.57</b>	<b>3.69</b>	<b>3.43</b>
2021 Countywide Service Area Population <sup>(4)</sup>		1,598,324	

1) Source: Palm Beach County

2) Acres for each park type (Item 1) divided by 2021 population (Item 4) multiplied by 1,000

3) Source: Palm Beach County 2030 Comprehensive Plan, Recreation and Open Space Element

4) Source: Appendix A, Table A-1

Table VI-2 presents a comparison of the parks and recreation adopted LOS standards of other select Florida counties to Palm Beach County’s adopted LOS in terms of acreage per population. As shown, the County’s adopted LOS is in the mid-range of the adopted LOS standards of the other counties reviewed.

**Table VI-2  
Adopted Level of Service Comparison**

Jurisdiction	LOS Standard (Acres per 1,000 Residents)
Glades County <sup>(1)</sup>	1.80
Miami - Dade County <sup>(2)</sup>	2.75
Martin County <sup>(3)</sup>	3.00
Collier County <sup>(4)</sup>	3.90
Hendry County <sup>(5)</sup>	4.00
<b>Palm Beach County<sup>(6)</sup></b>	<b>4.82</b>
Okeechobee County <sup>(7)</sup>	5.50
Broward County <sup>(8)</sup>	6.00
Orange County <sup>(9)</sup>	7.50
Highlands County <sup>(10)</sup>	10.00
Hillsborough County <sup>(11)</sup>	26.80
St. Lucie County <sup>(12)</sup>	28.70

- 1) Source: Glades County Comprehensive Plan, Recreation and Open Space Element, Policy VI-1.1F; Mini Parks 1 acre per 2,500 persons, Neighborhood Parks 2 acres per 5,000 persons, Community Parks 5 acres per 5,000 persons
- 2) Source: Miami Dade County Comprehensive Development Master Plan (CDMP), Recreation and Open Space Element, Policy ROS-2A; 2.75 acres of local recreation open space
- 3) Source: Martin County FY 2019 Capital Improvement Plan, Level of Service Analysis-Active Parkland-FY19; 3.0 acres for developed active parkland
- 4) Source: Collier County Growth Management Plan, Capital Improvement Plan, Policy 1.5G; 2.7 acres for regional parks and 1.2 acres for community parks (unincorporated)
- 5) Source: Hendry County Comprehensive Plan, Recreation and Open Space Element, Policy 4.1.3; No less than 2.0 acres for community parks per 1,000 of the County population and 2.0 acres per 1,000 of the urban population count
- 6) Source: Palm Beach County Comprehensive Plan, Recreation and Open Space Element, Policy 1.2a
- 7) Source: Okeechobee County Comprehensive Plan, Section 7 Recreation and Open Space Element, Policy R1.1; 5.5 acres of recreational land for each 1,000 residents
- 8) Source: Broward County Comprehensive Plan, Recreation and Open Space Element, Policy R3.2; 3.0 acres for local parks in Broward Municipal Service District only and 3.0 acres for regional parks
- 9) Source: Orange County Parks and Recreation Master Plan; 1.5 acres for activity-based parkland and trails and 6.0 acres for publicly owned resource-based parkland
- 10) Source: Highlands County 2030 Comprehensive Plan; 10 acres per 1,000 population
- 11) Source: Comprehensive Plan for Unincorporated Hillsborough County Florida; 1.6 acre for neighborhood parks, 1.8 acres for district parks, 20 acres for regional parks, and 3.4 acres for local parks
- 12) Source: St. Lucie County Comprehensive Plan, Recreation Element, Policy 7.1.1.1; 5.0 acres for community parks, 2.5 acres for regional parks, and 21.2 acres for resource-based parks

## ***Cost Component***

The capital cost associated with parks and recreation facilities consists of two components: the cost of purchasing the land and the cost of site preparation/development and recreational facilities located at each park. During the previous technical study, park land value was not included in the calculations because the County did not expect to purchase any park land. Over the next several years, the County is likely to purchase land for regional and district parks, and therefore, the land value of these park types is incorporated into the calculations. Because the County does not expect to purchase additional land for beach parks, this component is not included. The following paragraphs address park land value, as well as site development and facility value estimates.

### Land Cost

Park land value per acre for the County's park inventory is calculated based on recent park land purchases, value of current park land by type, vacant land sales of similar size parcels, and value of similar size vacant parcels based on information obtained from the Palm Beach County Property Appraiser's database, and discussions with Palm Beach County representatives. This analysis resulted in an estimated average land value of \$80,000 per acre for regional parks and \$70,000 per acre for district parks as presented in Table VI-3. Appendix C provides further detail regarding the calculation of the land value.

### Park Site Development and Facility Value

The second step in calculating the total cost for parks and recreation services in Palm Beach County involves estimating the site development and recreational facility costs. The cost of land for parks and recreation facilities includes more than just the purchase cost of the land. Landscaping/site improvement and utilities/paving costs are also considered. These costs can vary greatly, depending on the type of services offered at each park. In addition, recreational facility costs tend to vary depending on the facility characteristics, size and scope.

Based on historical data provided by the County's Parks and Recreation Department, park site development and recreational facility costs were estimated at \$100,000 per acre for regional parks, \$800,000 per acre for beach parks and \$300,000 per acre for district parks. Appendix C provides further detail on these estimates.

As presented in Table III-3, the park facility value is approximately \$420 million for regional parks, \$237 million for beach parks and \$416 million for district parks, for a total of \$1.1 billion.

Total park land and facility value is estimated at \$1.7 billion, which results in an overall value of approximately \$206,000 per acre or \$995 per resident. This estimate includes land, site development, facilities, equipment, and architecture and engineering (A&E) costs, and excludes costs associated with beach land.

**Table VI-3  
Park Land and Recreational Facility Value per Resident**

Variable/Calculation Step	Park Type			
	Regional	Beach	District	Total/ Weighted Average
<b>Land Value</b>				
Land Purchase Cost per Acre <sup>(1)</sup>	\$80,000	N/A	\$70,000	\$72,755
Total Acres <sup>(2)</sup>	5,516.31	471.77	2,049.22	8,037.30
Total Land Value <sup>(3)</sup>	\$441,304,800	N/A	\$143,445,400	\$584,750,200
<b>Park Development and Facility Value</b>				
Park Development and Facility Value per Developed Acre <sup>(4)</sup>	\$100,000	\$800,000	\$300,000	\$182,390
Developed Acres <sup>(5)</sup>	4,197.24	296.14	1,385.19	5,878.57
Total Park Development & Facility Value <sup>(6)</sup>	\$419,724,000	\$236,912,000	\$415,557,000	\$1,072,193,000
Total Land and Facility Value <sup>(7)</sup>	\$861,028,800	\$236,912,000	\$559,002,400	\$1,656,943,200
Total Facility Value per Acre <sup>(8)</sup>	\$156,088	\$502,177	\$272,788	\$206,157
Adopted LOS Standard <sup>(9)</sup>	3.31	0.29	1.22	-
<b>Total Land and Facility Value per Resident<sup>(10)</sup></b>	<b>\$516.65</b>	<b>\$145.63</b>	<b>\$332.80</b>	<b>\$995.08</b>

- 1) Source: Appendix C
- 2) Source: Table VI-1
- 3) Land purchase cost per acre (Item 1) multiplied by total acres (Item 2)
- 4) Source: Appendix C
- 5) Source: Table VI-1
- 6) Park development and facility value per developed acre (Item 4) multiplied by developed acres (Item 5)
- 7) Sum of total land value (Item 3) and total facility value (Item 6)
- 8) Total land and facility value (Item 7) divided by total acres (Item 2)
- 9) Table VI-1
- 10) Total land and facility value (Item 7) multiplied by the adopted LOS standard (Item 9) divided by 1,000. Final total is the sum of value per resident for each park type.

**Credit Component**

To avoid overcharging new development for the capital cost of providing parks and recreation services, a review of the capital funding program for the parks and recreation program was completed. The purpose of this review is to estimate any future revenues generated by new development, other than impact fees, which will be used to fund the expansion of capital facilities and land related to the Palm Beach County’s parks and recreation program. As mentioned previously, the credit component does not include any capital renovation, maintenance, or operations expenses, as these types of expenditures do not add capacity and should not be considered for impact fee credit.



### Capital Expansion Credit

Capital expansion expenditure credit per resident are calculated based on non-impact fee revenue funding for capital expansion projects built over the past six years. To calculate the capital expenditure per resident, the average annual capital expansion expenditures are divided by average population for the same period. As shown in Table VI-4, the average annual expenditure over this six-year period amounts to approximately \$3.0 million or approximately \$1.94 per resident per year.

Once the revenue credit per population is calculated, a credit adjustment is needed for the portion of the revenue credit funded with ad valorem tax revenues, which is 20 percent of the cash funding. This adjustment accounts for the fact that new homes tend to pay higher property taxes per dwelling unit than older homes and was estimated based on a comparison of the average taxable value of newer homes to that of all homes. As presented, the adjusted revenue credit per resident amounts \$2.21 per year.

**Table VI-4  
Capital Expansion Projects**

Project Description <sup>(1)</sup>	FY 2016-2021
<b>Local Government One-Cent Infrastructure Surtax:</b>	
Samuel Friedland District Park Expansion	\$19,797
Bert Winters Park Redevelopment/Expansion	\$1,500,000
Canyon District Park New Park Development	\$12,000,000
Okeehetee South Park Expansion	\$1,000,000
<b>Subtotal -- Expenditures Funded with Surtax</b>	<b>\$14,519,797</b>
<b>Ad Valorem / Grants:</b>	
Burt Reynolds Park West Side Expansion	\$189,663
Okeehetee South Park Dev Phase III	\$28,609
Riverbend/Reese Grove Park Ph III	\$18,338
Waterway Park	\$3,372,489
<b>Subtotal -- Expenditures Funded with Ad Valorem / Grants</b>	<b>\$3,609,099</b>
<b>Total</b>	<b>\$18,128,896</b>
<b>Average Annual Expenditures<sup>(2)</sup></b>	<b>\$3,021,483</b>
<b>Average Annual Population - Countywide Service Area<sup>(3)</sup></b>	<b>1,553,540</b>
<b>Average Annual Expenditures per Resident<sup>(4)</sup></b>	<b>\$1.94</b>
<b>Portion Funded with Ad Valorem Revenues<sup>(5)</sup></b>	<b>\$0.39</b>
<b>Portion Funded with Non-Ad Valorem Revenues<sup>(6)</sup></b>	<b>\$1.55</b>
<b>Credit Adjustment Factor<sup>(7)</sup></b>	<b>1.70</b>
<b>Adjusted Capital Expansion Credit per Functional Resident<sup>(8)</sup></b>	<b>\$2.21</b>

- 1) Source: Palm Beach County
- 2) Average annual capital expenditures over the 6-year period
- 3) Source: Appendix A, Table A-1
- 4) Average annual capital expenditure (Item 2) divided by average annual population (Item 3)
- 5) Portion funded with ad valorem tax revenues (20%)
- 6) Average annual expenditures per resident (Item 4) less portion funded with ad valorem revenues (Item 5)
- 7) Adjustment factor to reflect higher ad valorem taxes paid by new homes
- 8) Credit portion funded with ad valorem revenues (Item 5) multiplied by the credit adjustment factor (Item 7) and added to the portion funded with non-ad valorem revenues (Item 6)

Debt Service Credit

Table VI-5 summarizes the outstanding debt service related to parks and recreation capital expansion projects. The County is currently paying the parks and recreation debt service obligations with ad valorem tax revenues. To calculate the credit of the current debt obligations, the present value of the total remaining payments is calculated and then divided by the average annual population estimated over the remaining life of the bond issue. As shown in Table VI-5, the resulting credit for parks and recreation facilities-related debt is \$1.28 per resident.

Similar to the capital expansion credit per resident, because the parks and recreation debt service is being retired using ad valorem tax revenues, an adjustment of the credit per resident is also necessary. As shown, the adjusted debt service credit per resident amounts to \$2.18.

**Table VI-5  
Debt Service Credit**

Description	Total Number of Years of Debt Issue <sup>(1)</sup>	Years Remaining <sup>(1)</sup>	Remaining Parks & Rec. Debt Service (Capacity Expansion) <sup>(1)</sup>	Present Value of Payments Remaining (Capacity Expansion) <sup>(2)</sup>	Avg Annual Population During Remaining Bond Issue Period <sup>(3)</sup>	Credit per Resident <sup>(4)</sup>
General Obligation Bonds, Series 2010 (Recreation and Cultural Facilities)	15	4	\$2,344,283	\$2,110,501	1,643,972	\$1.28
General Obligation Refunding Bonds, Series 2014 (Waterfront Access)	12	5	\$17,250,700	\$15,630,456	1,652,533	
Total Debt Service Credit per Resident						\$1.28
Credit Adjustment Factor <sup>(5)</sup>						1.70
<b>Residential Land Uses -- Adjusted Debt Service Credit per Resident<sup>(6)</sup></b>						<b>\$2.18</b>

- 1) Source: Palm Beach County
- 2) Present value of remaining payments in 2021 dollars
- 3) Source: Appendix A, Table A-1
- 4) Present value of payments remaining (Item 2) divided by average annual population (Item 3)
- 5) Adjustment factor to reflect higher ad valorem taxes paid by new homes
- 6) Credit per resident (\$1.28) multiplied by the credit adjustment factor (Item 5)

## Net Impact Cost

The net impact cost per resident is the difference between the cost and credit components. Table VI-6 summarizes the calculation of the net impact cost for the parks and recreational facilities impact fee. As presented, the net impact cost amounts to approximately \$952 per resident for residential land uses and \$958 per resident for nonresidential land uses.

**Table VI-6**  
**Net Impact Cost**

Variable	Impact Cost	Revenue Credits
<b>Impact Cost</b>		
Total Impact Cost per Resident <sup>(1)</sup>	\$995.08	-
<b>Impact Credit</b>		
Annual Capital Improvement Credit per Resident <sup>(2)</sup>		
Annual Credit for Residential Land Uses		\$2.21
Annual Credit for Non-residential Land Uses		\$1.94
Capitalization Rate		2.4%
Capitalization Period (in years)		25
Capital Improvement Credit per Resident <sup>(3)</sup>		
Residential Land Uses		\$41.19
Non-Residential Land Uses		\$36.16
Debt Service Credit per Resident <sup>(4)</sup>		
Residential Land Uses		\$2.18
Non-Residential Land Uses		\$1.28
<b>Total Impact Credit<sup>(5)</sup></b>		
Residential Land Uses		\$43.37
Non-Residential Land Uses		\$37.44
<b>Net Impact Cost</b>		
Net Impact Cost per Resident - Residential Land Uses <sup>(6)</sup>	-	<b>\$951.71</b>
Net Impact Cost per Resident - Non-Residential Land Uses <sup>(6)</sup>	-	<b>\$957.64</b>

1) Source: Table VI-3

2) Source: Table VI-4

3) Present value of annual credit per resident (Item 2) over a 25-year period with a capitalization rate of 2.4%

4) Source: Table VI-5

5) Sum of capital improvement cash credit (Item 3) and debt service credit (Item 4)

6) Total impact cost per functional resident (Item 1) less total capital expansion credit per function resident (Item 5)

## Calculated Impact Fee Schedule

Table VI-7 presents the calculated parks and recreation facilities impact fee schedule for Palm Beach County for residential and transient land uses, based on the net impact cost per resident previously presented in Table VI-6. Also presented is a comparison to the County's current adopted fee and percent change from the current fee.

Changes to the cost and credit components were due to inclusion of the land value as well as increases in the Park Development and Facility Values since the 2018 report. These changes increased the net cost per resident by 113 percent primarily due to the inclusion of park land value. The 2014-2018 study excluded the value of park land. The remaining changes are due to the fluctuations in the demand component. **It is important to note that the County did not adopt the 2014-2018 study calculated fees, and the basis of the current adopted fees is the 2012 study, which was adopted at 95 percent.**

**Table VI-7  
Parks & Recreation Facilities Impact Fee Schedule**

ITE LUC	Residential Land Use	Impact Unit	Residents per Unit <sup>(1)</sup>	Net Cost per Resident <sup>(2)</sup>	Calculated Impact Fee <sup>(2)</sup>	Current Adopted Fee <sup>(3)</sup>	% Change from Adopted <sup>(4)</sup>
<b>RESIDENTIAL:</b>							
<b>Residential</b>							
210/220/ 230/240	800 & Under	du	1.43	\$951.71	\$1,361	\$366	272%
	801 - 1,399	du	1.96	\$951.71	\$1,865	\$734	154%
	1,400 - 1,999	du	2.23	\$951.71	\$2,122	\$788	169%
	2,000 - 3,599	du	2.45	\$951.71	\$2,332	\$860	171%
	3,600 & Over	du	2.63	\$951.71	\$2,503	\$818	206%
<b>Senior Adult Housing</b>							
251/252	800 & Under	du	1.09	\$951.71	\$1,037	\$366	183%
	801 - 1,399	du	1.50	\$951.71	\$1,428	\$734	95%
	1,400 - 1,999	du	1.71	\$951.71	\$1,627	\$788	107%
	2,000 - 3,599	du	1.88	\$951.71	\$1,789	\$860	108%
	3,600 & Over	du	2.02	\$951.71	\$1,922	\$818	135%
<b>TRANSIENT, ASSISTED, GROUP:</b>							
301/320	Hotel/Motel	room	1.47	\$957.64	\$1,408	\$273	416%
254/620	Congregate Living Facility	bed	0.84	\$957.64	\$804	\$273	195%

- 1) Source: Appendix A, Table A-2
- 2) Net impact cost per resident from Table VI-6 multiplied by residents per unit (Item 1) for each land use
- 3) Palm Beach County Administrative Division
- 4) Percent change from the adopted impact fee (Item 3) to the calculated impact fee (Item 2)

**Parks & Recreation Facilities Impact Fee Schedule Comparison**

As part of the work effort in updating Palm Beach County’s parks and recreation impact fee schedule, the County’s calculated and adopted impact fee schedule was compared to the adopted fee schedules of select Florida counties. Table VI-8 presents this comparison.

**Table VI-8  
Parks & Recreation Facilities Impact Fee Schedule Comparison**

Land Use	Unit <sup>(2)</sup>	Palm Beach County		Broward County <sup>(5)</sup>	Collier County <sup>(6)</sup>	Hillsborough County <sup>(7)</sup>	Martin County <sup>(8)</sup>	Miami-Dade County <sup>(9)</sup>	St. Lucie County <sup>(10)</sup>	Orange County <sup>(11)</sup>
		Calculated <sup>(3)</sup>	Existing <sup>(4)</sup>							
Date of Last Update		2021	2012	N/A	2016	2020	2012	N/A	2017	2017
Assessed Portion of Calculated <sup>(1)</sup>		N/A	95%	N/A	100%	76%	100%	N/A	100%	100%
<b>Residential:</b>										
Single Family (2,000 sq ft)	du	\$2,332	\$860	\$519	\$3,628	\$2,145	\$1,972	\$2,613-\$4,154	\$1,707	\$1,785
Multi-Family (1,300 sq ft)	du	\$1,865	\$734	\$371	\$1,685	\$1,710	\$1,972	\$1,619-\$2,439	\$1,523	\$1,208
Mobile Home	du	\$1,865	\$734	\$528	\$2,862	\$1,710	\$1,972	\$2,613-\$4,154	\$1,118	\$1,330

- 1) Represents the portion of the maximum calculated fee for each respective county that is actually charged. Fee may have been lowered/increased through annual indexing or policy discounts. Does not account for moratorium/suspensions.
- 2) du = dwelling unit
- 3) Source: Table VI-7
- 4) Source: Palm Beach County. The 801 to 1,399 sf tier is used as a proxy for the mobile home category.
- 5) Source: Broward County Planning Department. Fees are calculated using a 3-bedroom tier plus administration fees.
- 6) Source: Collier County Impact Fee Administration Department. Community & Regional Park fees are combined.
- 7) Source: Hillsborough County Development Services Department
- 8) Source: Martin County Growth Management Department. The County is in the process of updating their impact fees.
- 9) Source: Miami-Dade County Department of Regulatory and Economic Resources. Fees vary depending on district.
- 10) Source: St. Lucie County Planning & Development Services Department
- 11) Source: Orange County Planning & Development Department

### ***Parks & Recreation Facilities Impact Fee Benefit Districts/Zones***

Currently, Palm Beach County has four parks and recreation impact fee benefit districts/zones, as illustrated in Article 13, Figure 13.B.1.C-1 of the County's Unified Land Development Code (ULDC). One of these districts is the western portion of the County (the Glades Area), which is a "no fee" area where impact fees are not collected. In addition, the County has agreements with individual municipalities where only a portion of the fee is collected. Benefit zones dictate where impact fee revenues can be spent to ensure that fee payers receive the associated benefit. Typically, these boundaries are based on land use patterns, growth rates, major man-made or geographical/environmental barriers.

As part of this study, Benesch reviewed the existing fee district boundaries. In addition to evaluating geographical boundaries, the impact fee revenue and expenditures were reviewed to determine the effectiveness of the existing boundaries. This information was supplemented with discussions with Palm Beach County representatives to identify any issues that have arisen due to the current district alignments.

Based on this review and discussions with the County, it is recommended that the current three eastern zones are reduced to two benefit zones separated by Southern Boulevard, which divides the county into equal south and north portions. A review of the recent impact fee revenue collection in each district shows an imbalance between the three zones, with the central zone accounting for almost half of the parks impact fee revenues, as shown in Table VI-9.

**Table VI-9  
Historical Parks Impact Fee Revenues and Expenditures**

Zone	Description	Total	%
<b>Impact Fee Revenues 2015-2020</b>			
1	North	\$2,876,120	15.7%
2	Central	\$8,668,580	47.2%
3	South	\$6,812,004	37.1%
4	West	n/a	-
<b>Impact Fee Expenditures 2015-2020</b>			
1	North	\$3,292,953	22.2%
2	Central	\$7,013,665	47.4%
3	South	\$4,499,057	30.4%
4	West	n/a	-

Source: Palm Beach County

This imbalance is due in part to the smaller area of vacant developable land present in the North and South districts. As shown in Table VI-10, the central district accounts for almost 50 percent of the developable land subject to the parks impact fee. Note that these measurements exclude the environmental land and cities that are not paying the county’s Parks and Recreation impact fee rate through Interlocal Agreements. Cities and un-developable land that do not pay the County’s parks and recreation impact fee are not subject to the “proof of benefit” portion of the dual rational nexus test that governs impact fees and were therefore excluded from the analysis.

**Table VI-10  
Parks & Recreation Impact Fee Benefit Zone Size Comparison**

Zone	Description	Sq Miles*	%
<b>Existing</b>			
1	North	88.61	26.7%
2	Central	157.44	47.5%
3	South	85.55	25.8%
4	West	n/a	-
<b>Proposed</b>			
1	North	160.65	48.7%
2	South	168.94	51.3%
3	West	n/a	-

Source: GIS measurement

\*excludes environmental land and cities that do not pay the counties parks & recreation impact fee

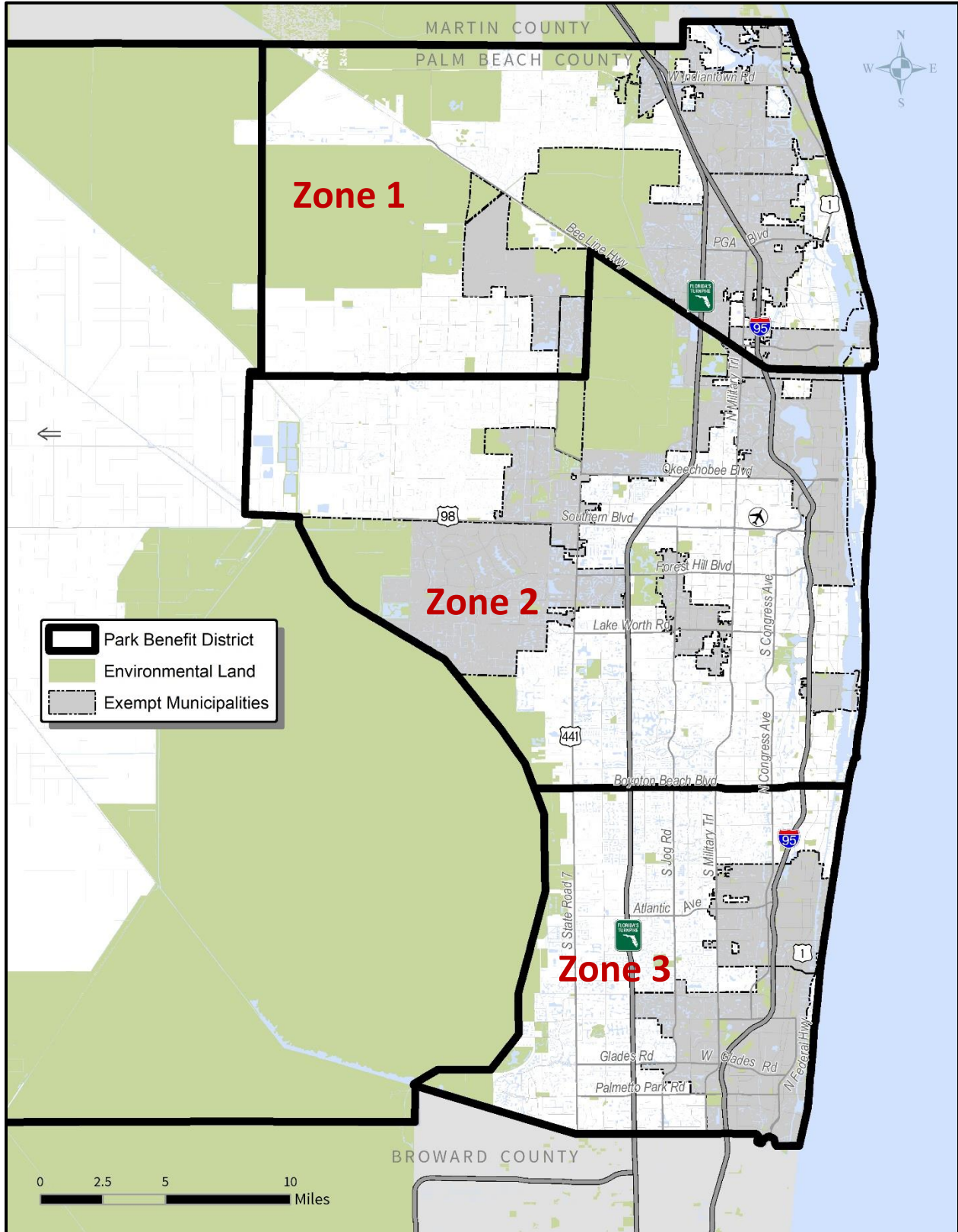


Map VI-1 illustrates the existing parks and recreation benefit zones while highlighting the environmental land and cities that do not pay the impact fee. The areas not-highlighted (white coloring) provide a clearer picture of where the impact fee will be collected and where it can be spent.

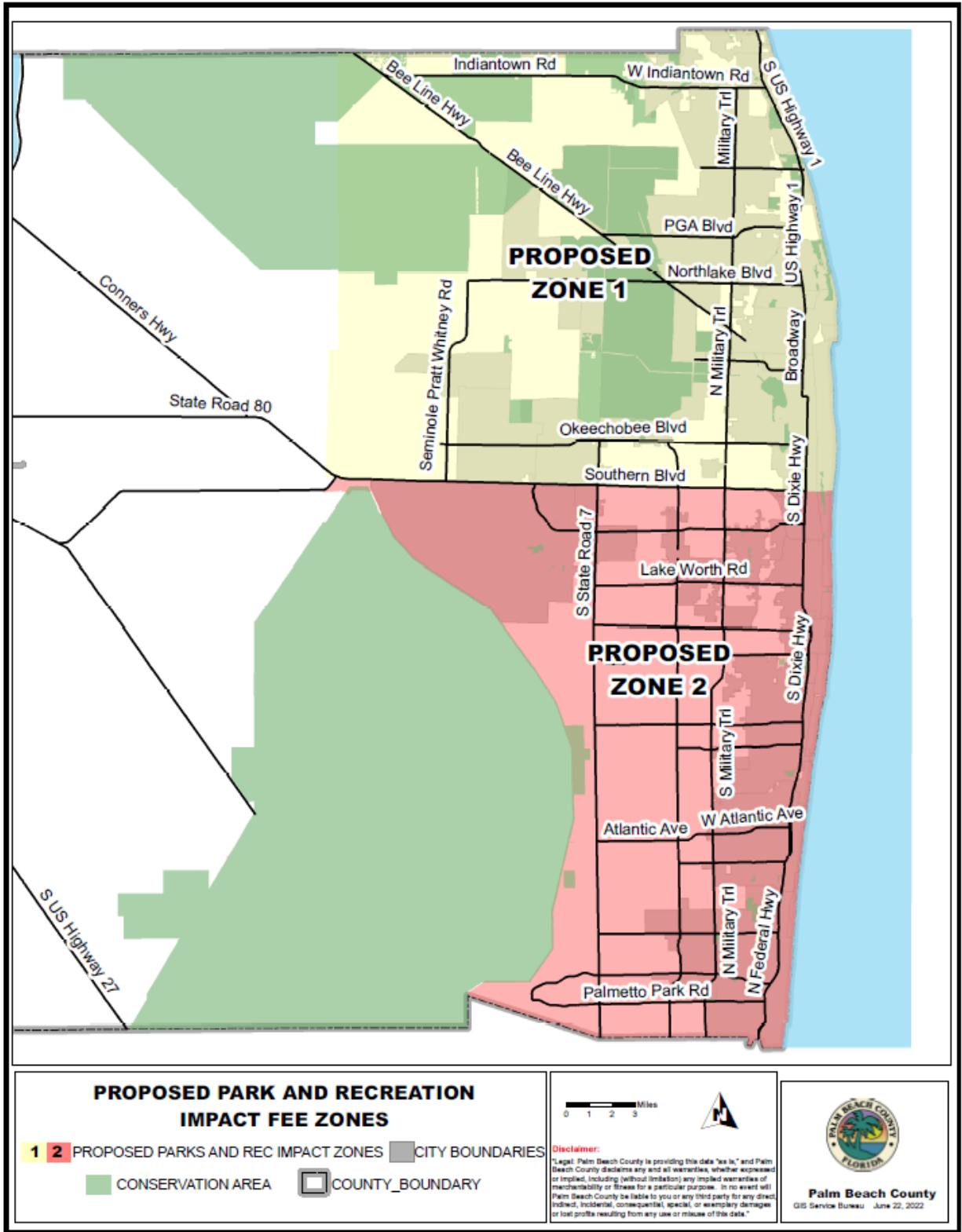
With a re-alignment to two eastern districts, separated by Southern Blvd, the distribution of vacant “developable” land in each benefit zone is evened out, closer to a 50-50 split. In addition, the proposed new southern district would incorporate the land associated with the 20-mile Bend Off-Highway Vehicle (OHV) park which is currently within the western district. This area does not have any new development but the OHV park is being built to serve eastern Palm Beach County. Map VI-2 illustrates the proposed benefit zone re-alignment.

# Map VI-1

## Existing Parks & Recreation Impact Fee Benefit Zones for Beach, Regional and District Parks



**Map VI-2**  
**Proposed Parks & Recreation Impact Fee Benefit Zones**



## VII. School Facilities

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This section addresses the analysis used in developing the educational facilities/schools impact fee. Several elements addressed in the section include:

- Inventory
- Service Area, Benefit Districts and Enrollment
- Facility Service Delivery
- Cost Component
- Credit Component
- Net Impact Cost per Student
- Demand Component: Student Generation Rates
- Calculated Impact Fee Schedule
- School Impact Fee Schedule Comparison

These elements are summarized throughout this section.

### *Inventory*

The Palm Beach County School District's current inventory includes 168 traditional schools, which are included in the impact fee calculations. The breakdown of school types follows:

- 103 elementary schools
- 33 middle schools
- 24 high schools
- 8 multi-level schools

A list of these schools is provided in Appendix B, Table B-1. In addition, Palm Beach County Schools also operates several alternative learning facilities and adult learning centers throughout the county. These schools as well as charter and private schools are not included in the impact fee calculations.

### ***Service Area, Benefit Districts and Enrollment***

The Palm Beach County School District provides public education facilities that are available to all Kindergarten through 12th grade (K-12) students throughout the entire county. Currently, Palm Beach County has two school impact fee benefit districts: a no-impact fee district established in the Glades Area and the rest of the county. As discussed previously, benefit districts are typically created to ensure the fee payer receives the benefit in cases when the capital projects built with impact fee revenues benefit a limited geographic area. In the case of public schools, attendance boundaries can be redrawn to balance school enrollment with available school capacity and therefore can serve different geographic areas over time. In addition, the Florida Department of Education (FDOE) has been increasing its support of Choice programs where students can attend schools outside of their designated districts. Given this, the appropriate impact fee benefit district for public schools is countywide. It is our understanding that in the no-impact fee district (Glades Area), the development activity is not significant. Therefore, it is appropriate to continue to exempt this area from impact fee collection and spending.

Table VII-1 presents historical student enrollment for the past 20 years and current enrollment for the 2020-21 school year as well as the projections over the next five years. To be consistent with the inventory used in the impact fee analysis, the enrollment figures presented in this table only include those students attending (or projected to attend) the schools listed in Appendix B, Table B-1, and exclude students attending alternative schools, charter schools, adult education centers and private schools. Between 2000 and 2020, the enrollment increased by 27,000 students. The decrease in 2020-21 is likely to be due to the on-going pandemic and is not expected to be a long-term trend. The annual percent change for enrollment as well as a three-year rolling average are also presented in Table VII-1.

**Table VII-1  
Enrollment Trends**

School Year	Time Frame	Enrollment <sup>(1)</sup>	Annual Percent Change <sup>(2)</sup>	Three-Year Average <sup>(3)</sup>
2000-01	Historical	147,234	-	-
2001-02	Historical	151,308	2.8%	-
2002-03	Historical	154,572	2.2%	-
2003-04	Historical	157,990	2.2%	2.4%
2004-05	Historical	162,136	2.6%	2.3%
2005-06	Historical	162,106	0.0%	1.6%
2006-07	Historical	159,226	-1.8%	0.3%
2007-08	Historical	159,300	0.0%	-0.6%
2008-09	Historical	159,304	0.0%	-0.6%
2009-10	Historical	160,485	0.7%	0.2%
2010-11	Historical	161,751	0.8%	0.5%
2011-12	Historical	162,720	0.6%	0.7%
2012-13	Historical	163,534	0.5%	0.6%
2013-14	Historical	162,798	-0.5%	0.2%
2014-15	Historical	166,561	2.3%	0.8%
2015-16	Historical	168,070	0.9%	0.9%
2016-17	Historical	170,579	1.5%	1.6%
2017-18	Historical	172,857	1.3%	1.2%
2018-19	Historical	173,562	0.4%	1.1%
2019-20	Historical	174,637	0.6%	0.8%
<b>2020-21</b>	<b>Current</b>	<b>167,147</b>	<b>-4.3%</b>	<b>-1.1%</b>
2021-22	Projected	164,700	-1.5%	-1.7%
2022-23	Projected	168,962	2.6%	-1.1%
2023-24	Projected	172,303	2.0%	1.0%
2024-25	Projected	174,453	1.2%	1.9%
2025-26	Projected	175,567	0.6%	1.3%

1) Source: Palm Beach County School District, includes only the students attending traditional schools shown in Appendix B, Table B-1

2) Percent change from one year to the next

3) Average change over the past three years

## Cost Component

Although capital costs of providing school facilities includes several components, such as the school facility cost, transportation cost, and ancillary facility costs, the impact fee calculations in this report includes only the school facility costs included in the School Board’s Capital Plan. This approach was developed during the previous technical study based on recommendations of the Impact Fee Advisory Committee.

### Facility Cost per Student Station

As mentioned, cost estimates are derived from the new school projects included in the School Board’s “FY 2021-2030 Capital Plan.” Presented in Table VII-2 are the projects which include three elementary schools, one middle school, one K-8 school, and two high schools. The cost per student station ranged from a low of \$29,700 for middle schools to a high of \$36,300 for high schools, with a weighted average cost of approximately \$33,300 per student station. These cost figures do not include land value, transportation and ancillary facility costs, and are considered to be conservative estimates.

**Table VII-2  
Facility Cost per Student Station**

Cost Component	Total Cost <sup>(1)</sup>	Permanent Student Stations <sup>(2)</sup>	Total Cost per Station <sup>(3)</sup>
<b><i>Palm Beach County FY 2021 - 2030 Capital Plan</i></b>			
Boca Raton Area Elementary School	\$31,154,527	972	\$32,052
West Acreage Area Elementary School	\$29,885,542	970	\$30,810
Scripps / Gardens Area Elementary School	\$29,885,542	970	\$30,810
<b><i>Subtotal - Elementary</i></b>	<b><i>\$90,925,611</i></b>	<b><i>2,912</i></b>	<b><i>\$31,224</i></b>
Sunset Palms Middle School	\$46,019,529	1,459	\$31,542
West Delray Area K-8 School	\$42,000,000	1,500	\$28,000
<b><i>Subtotal - Middle/K-8</i></b>	<b><i>\$88,019,529</i></b>	<b><i>2,959</i></b>	<b><i>\$29,746</i></b>
Greater Lake Worth Area High School	\$103,093,602	2,703	\$38,140
Western Communities High School	\$92,983,968	2,697	\$34,477
<b><i>Subtotal - High</i></b>	<b><i>\$196,077,570</i></b>	<b><i>5,400</i></b>	<b><i>\$36,311</i></b>
<b>Total/Weighted Average -- All Levels</b>	<b>\$375,022,710</b>	<b>11,271</b>	<b>\$33,273</b>

1) Source: Palm Beach County School District FY 2021-2030 Capital Plan

2) Source: Palm Beach County School District

3) Total cost (Item 1) divided by permanent student stations (Item 2)

In 2016, the Florida Legislature passed House Bill 7029, requiring that beginning July 1, 2017, schools districts may not use funds from any other sources for new construction of educational plant space that exceeds the statutory maximum cost per student station. The legislation also required the Office of the Economic and Demographic Research (EDR) to conduct a study of the cost per student station. EDR report was completed in January 2017; however, the Legislation has not yet adjusted the cost per station based on the findings of the study.

At this time, FDOE continues to use the indexed 2006 construction cost figures. These student station costs include construction, architectural/design, and FF&E costs but exclude land, site preparation, security, and other support costs. The Palm Beach County School District prepares a detail itemization of cost components to ensure that student station costs remain within the limits of the FDOE cost.

#### Total Facility Cost per Student by School Type

The total facility impact cost per student is based on the facility cost per student station figures derived in Table VII-2, and is typically calculated by multiplying the cost per student station by the number of total permanent stations and dividing by current student enrollment. This adjustment of dividing the cost per student station by the ratio of current student enrollment to available capacity converts the cost per student station to a cost per student. This calculation accounts for the current availability or shortage in permanent capacity and adjusts the costs accordingly. If there is available capacity (e.g., currently more permanent student stations than expected students), then the total facility cost per student increases because each student is consuming more than one station. Similarly, if there are currently more students enrolled than available capacity, the cost per student is adjusted downward.

As presented in Table VII-3, in the case of Palm Beach County, there is approximately two to 18 percent available capacity depending on school level. These figures are based on 2019-2020 pre-pandemic enrollment to prevent any skewing of the data. Although there is available capacity countywide, because the District's adopted LOS standard is 100 percent of FISH capacity, the cost per student station calculated also represents the facility cost per student and results in a more conservative impact fee. As shown in Table VII-3, this results in a weighted average total facility impact cost per student of \$33,273.



**Table VII-3  
Total Impact Cost per Student**

Calculation Step	Elementary School	Middle School	High School	Weighted Average / Total
<b>Facility Impact Cost per Student</b>				
Facility Cost per Student Station <sup>(1)</sup>	\$31,224	\$29,746	\$36,311	\$33,273
Existing (2021) Permanent Capacity <sup>(2)</sup>	95,420	46,580	55,178	197,178
Existing (2019-20) Student Enrollment <sup>(3)</sup>	80,882	39,716	54,039	174,637
Ratio of Existing Permanent Capacity to Existing Enrollment <sup>(4)</sup>	118%	117%	102%	113%
Adopted LOS Standard <sup>(5)</sup>	100%	100%	100%	100%
Final Ratio of Permanent Capacity to Enrollment Used for Impact Fee Calculations <sup>(6)</sup>	100%	100%	100%	100%
<b>Total Facility Impact Cost per Student<sup>(7)</sup></b>	<b>\$31,224</b>	<b>\$29,746</b>	<b>\$36,311</b>	<b>\$33,273</b>

- 1) Source: Table VII-2
- 2) Source: Appendix B, Table B-1, Indicates permanent capacity after FISH adjustment.
- 3) Source: Palm Beach County School District, includes traditional school students and alternative education students housed at the schools listed in Appendix B, Table B-1
- 4) Existing capacity (Item 2) divided by existing student enrollment (Item 3)
- 5) Source: Palm Beach County School District
- 6) Used the adopted LOS standard since it is lower than the achieved LOS in terms of available capacity (Item 4)
- 7) Facility cost per student station (Item 1) multiplied by the final ratio used in the calculations (Item 6)

## ***Credit Component***

To ensure that new residential development is not being overcharged for the capital costs associated with new public schools, a credit for non-impact fee revenue generated by new development that is used towards capital expansion of school facilities must be considered in the credit component of the school impact fee. A credit for school impact fees is not provided for revenues used for capital renovation of existing education facilities or for maintenance and operational costs, as these projects do not add capacity and should not be considered for impact fee credit.

Based upon a review of the capacity addition expenditures over the past five years, it has been determined that, in addition to impact fees, the Palm Beach County School District uses primarily capital improvement millage to fund the capital expansion of school facilities. Because the District has also utilized Certificates of Participation (COPs) for capacity expanding projects, a credit for the remaining debt service payments is also calculated.

### **Capital Improvement Credit**

As shown in Table VII-4, to calculate the revenue credit per student, the average annual capacity related expenditures between 2016 and 2020 (approximately \$1.3 million) is divided by the average annual enrollment for the same time period (approximately 171,900 students). As shown, this figure amounts to \$7.36 per student per year.

Once the revenue credit per student is calculated, a credit adjustment is needed for the portion of the revenue credit funded with ad valorem tax revenues, which is almost 100 percent of the cash funding. This adjustment accounts for the fact that new homes tend to pay higher property taxes per dwelling unit than older homes and was estimated based on a comparison of the average taxable value of newer homes to that of all homes. As presented, the adjusted revenue credit amounts to \$12.51 per student per year. This annual credit results in a total credit of \$195 per student over the next 25 years.

**Table VII-4  
Capital Improvement Credit per Student**

Project Type	2016	2017	2018	2019	2020	Total
<b>Capital Improvement Tax/Local Funding<sup>(1)</sup> :</b>						
Additions	-	-	\$98,178	\$46,578	\$42,878	\$187,635
New Schools	-	-	-	\$49,575	\$1,964,767	\$2,014,342
Site Acquisitions	\$103,554	\$6,310	\$497,955	\$916,373	\$2,566,012	\$4,090,203
Ancillary Facility Construction	\$0	\$8,685	\$0	\$3,780	\$8,280	\$20,745
<b>Subtotal - Local Funding</b>	<b>\$103,554</b>	<b>\$14,995</b>	<b>\$596,134</b>	<b>\$1,016,306</b>	<b>\$4,581,937</b>	<b>\$6,312,925</b>
<b>State Funding<sup>(1)</sup> :</b>						
Additions	-	-	-	\$9,750	\$5,250	\$15,000
New Schools	-	-	-	-	-	-
Site Acquisitions	-	-	-	-	-	-
Ancillary Facility Construction	-	-	-	-	-	-
<b>Subtotal - State Funding</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$9,750</b>	<b>\$5,250</b>	<b>\$15,000</b>
<b>Total Expenditures</b>						<b>\$6,327,925</b>
Average Annual Expenditures <sup>(2)</sup>						\$1,265,585
Average Enrollment <sup>(3)</sup>						171,941
<b>Revenue Credit per Student<sup>(4)</sup></b>						<b>\$7.36</b>
Credit Adjustment Factor <sup>(5)</sup>						1.70
<b>Adjusted Revenue Credit per Student<sup>(6)</sup></b>						<b>\$12.51</b>
Capitalization Rate <sup>(7)</sup>						4.0%
Capitalization Period, Years <sup>(8)</sup>						25
<b>Present Value of Capital Improvement Revenue Credit per Student<sup>(9)</sup></b>						<b>\$195</b>

- 1) Source: Palm Beach County School District
- 2) Total expenditures divided by 5 to calculate the average annual expenditures
- 3) Source: Table VII-1
- 4) Average annual expenditures (Item 2) divided by the average enrollment (Item 3)
- 5) Adjustment factor to reflect higher ad valorem taxes paid by new homes
- 6) Revenue credit per student (Item 4) multiplied by the credit adjustment factor (Item 5)
- 7) Interest rate the District is likely to pay for future bonds, based on the most recent COPs issues
- 8) Time period after which major repairs are needed
- 9) Present value of adjusted revenue credit per student (Item 6) at 4% interest rate (Item 7) over a 25-year capitalization period (Item 8)

## **Debt Service Credit per Student**

As mentioned previously, Palm Beach County School District has utilized COPs to pay for a portion of the capacity expansion projects and given that there is still an outstanding debt service, a credit is calculated for the future payments related to capacity expansion projects. The District uses primarily ad valorem revenues to pay the debt service.

To calculate the debt service credit per student, the remaining payments were brought back to present value, based on the number of years and annual interest rate of each COP issue. Once the present value of remaining payments is calculated, each debt issue is divided by the average annual enrollment for the same time period.

As previously explained, because the debt service is being paid back with ad valorem tax revenues, an adjustment was made to account for the fact that newer homes tend to pay higher property taxes than older homes. As presented in Table VII-5, the adjusted total debt service credit per student amounts to approximately \$4,770.

**Table VII-5  
Debt Service Credit per Student**

Description	Number of Years of Remaining Payments <sup>(1)</sup>	Remaining Payments Due for Expansion <sup>(2)</sup>	Present Value of Total Remaining Payments for Expansion <sup>(3)</sup>	Average Annual Enrollment <sup>(4)</sup>	Debt Service Credit per Student <sup>(5)</sup>
<b><i>Certificates of Participation/COBI</i></b>					
COPS 2012A	1	\$1,206,240	\$1,148,800	164,700	\$6.98
COPS 2012C	8	\$11,861,575	\$9,583,200	174,081	\$55.05
COPS 2014B	4	\$52,912,660	\$46,918,500	170,105	\$275.82
COPS 2015A	1	\$7,554,596	\$7,368,900	164,700	\$44.74
COPS 2015B	10	\$18,228,080	\$14,075,100	175,889	\$80.02
COPS 2015C	11	\$38,814,495	\$25,817,699	176,781	\$146.04
COPS 2015D	11	\$45,105,660	\$33,498,000	176,781	\$189.49
COPS 2017A	6	\$107,675,700	\$87,974,350	172,200	\$510.88
COPS 2017B	7	\$25,476,125	\$20,972,502	173,155	\$121.12
COPS 2018A	6	\$25,461,608	\$21,544,649	172,200	\$125.11
COPS 2018B	7	\$75,081,760	\$58,710,399	173,155	\$339.06
COPS 2018C	8	\$42,722,820	\$32,335,799	174,081	\$185.75
COPS 2020A	13	\$26,932,920	\$16,611,202	178,558	\$93.03
COPS 2021A	19	\$188,987,147	\$101,901,261	183,919	\$554.06
COPS 2021B	14	\$13,531,760	\$9,935,279	179,446	\$55.37
COBI 2020A	9	\$5,356,510	\$4,284,209	174,990	<u>\$24.48</u>
<b>Total Debt Service Credit per Student</b>					<b>\$2,807.00</b>
<b>Credit Adjustment Factor<sup>(6)</sup></b>					<b>1.70</b>
<b>Adjusted Total Debt Service Credit per Student<sup>(7)</sup></b>					<b>\$4,771.90</b>

- 1) Source: Palm Beach County School District
- 2) Source: Palm Beach County School District
- 3) Present value of the total remaining payments due, based on the interest rate of each payment and the number of years of remaining payments
- 4) Source: Table VII-1, future year population beyond 2025-26 is estimated based on the growth rate of past five years.
- 5) Present value of total remaining payments (Item 3) divided by the average annual enrollment over the life of the remaining payments (Item 4)
- 6) Adjustment factor to reflect higher ad valorem taxes paid by new homes
- 7) Total debt service credit per student multiplied by the credit adjustment factor (Item 6)

## Net Impact Cost

The net impact fee per student is the difference between the cost component and the credit component. Table VII-6 summarizes the three-step process used to calculate the net impact cost per student for public schools in Palm Beach County.

First, the total impact cost per student is determined, which is the weighted average facility impact cost per student from Table VII-3.

Second, the total revenue credit per student is determined. This is the sum of the capital improvement credit per student and the debt service credit per student from Table VII-4 and Table VII-5.

Third, the net impact cost per student is determined, which is the difference between the total impact cost per student and total revenue credit per student and is calculated at \$28,300 per student.

**Table VII-6**  
**Net Impact Cost per Student**

Total Impact Cost	Per Student
<b>Total Impact Cost per Student<sup>(1)</sup></b>	<b>\$33,273</b>
Revenue Credit	Per Student
Capital Improvement Credit <sup>(2)</sup>	\$195
Debt Service Credit <sup>(3)</sup>	\$4,772
<b>Total Revenue Credit per Student<sup>(4)</sup></b>	<b>\$4,967</b>
Net Impact Cost	Per Student
<b>Net Impact Cost per Student<sup>(5)</sup></b>	<b>\$28,306</b>

1) Source: Table VII-3

2) Source: Table VII-4

3) Source: Table VII-5

4) Sum of the capital improvement credit per student (Item 2) and the debt service credit per student (Item 3)

5) Total impact cost per student (Item 1) less the total revenue credit per student (Item 4)

### ***Demand Component - Student Generation Rates***

The number of students living in a household varies, as does the number of students living in a particular type of residential unit. Therefore, school impact fees are typically assessed based on specific student generation rates (SGR), or students per residential housing unit.

To determine SGR by land use, Geographic Information Systems (GIS) is used to link each student address to its respective parcel in the Palm Beach County Property Appraiser's database to generate the number of students per unit by size for the current school year. This analysis included the following data sources:

- The School District of Palm Beach geocoded student addresses for students attending those schools listed in Appendix B, Table B-1, based on pre-pandemic enrollment levels.
- Palm Beach County Property Appraiser (PCPA) parcel data (received August 2021)

The development of the SGR analysis is a two-step process; as mentioned previously. First, using the parcel data file, residential units were tabulated based on the different square footage tiers of the school impact fee.

Second, student addresses geocoded to the parcel were selected using the above-mentioned subsets of parcel data. Geocoded data were selected by residential unit size and totaled. Finally, the number of students were divided by the total number of parcels in each selected square footage tier.

Based on the analysis, it was determined that approximately 98 percent of the student addresses could be matched to a respective residential parcel in the Property Appraiser's database. Of the remaining, a portion of the addresses indicated a non-residential or vacant property, land uses that are not included in the impact fee schedule. These students were not included in this analysis. Additionally, this analysis excludes those residential units that are "age-restricted" and therefore not eligible to house traditional school students. It is important to note that PCPA started to track age restricted housing after the previous technical study. This additional information resulted in a higher student generation rate for some of the housing tiers.

Table VII-7 presents the total number of students and total number of units by each residential square footage tier that were used to determine the SGR. The resulting SGR by size represents the number of students anticipated to occupy a dwelling unit over the life cycle of the home.

**Table VII-7  
Student Generation Rates**

<b>Traditional Schools</b>			
<b>Residential Land Use</b>	<b>Total Housing Units<sup>(1)</sup></b>	<b>Number of Students<sup>(2)</sup></b>	<b>Students per Unit<sup>(3)</sup></b>
<b><i>Residential</i></b>			
800 sf & Under	49,705	12,866	0.259
801 to 1,399 sf	231,077	71,615	0.310
1,400 to 1,999 sf	153,887	43,957	0.286
2,000 to 3,599 sf	124,581	36,595	0.294
3,600 sf or more	<u>27,073</u>	<u>6,111</u>	<u>0.226</u>
<b>Total/Weighted Average</b>	<b>586,323</b>	<b>171,144</b>	<b>0.292</b>

1) Source: Palm Beach County Property Appraiser

2) Source: Palm Beach County School District

3) Number of students (Item 2) divided by the number of units (Item 1) for each square footage tier



### **Calculated Impact Fee Schedule**

To determine the proposed school impact fee for each residential land use, the net impact cost per student from Table VII-6 was multiplied by the SGR from Table VII-7 for each residential land use. The resulting impact fees are presented in Table VII-8. In addition to the calculated fee, the current adopted fee, which was adopted at 95 percent, is also shown for comparison purposes.

In terms of individual impact fee components, the cost per station increased by approximately 15 percent while credit decreased due to a portion of the COPs being paid off or refinanced at a lower interest rate. Overall effect of changes to the cost and credit components is a 30-percent increase in the fees. Additional changes are due to the fluctuations in the student generation rates. As discussed previously, a factor contributing to these fluctuations is a better accounting of age restricted housing, which is subtracted from all housing units since these homes are not subject to the school impact fee.

**Table VII-8  
Calculated School Impact Fee Schedule**

Residential Land Use	Unit	Students per Unit <sup>(1)</sup>	Net Impact Cost per Student <sup>(2)</sup>	Total Impact Fee <sup>(3)</sup>	Current Adopted Fee <sup>(4)</sup>	Percent Change <sup>(5)</sup>
<b>Residential</b>						
800 sf & Under	du	0.259	\$28,306	<b>\$7,331</b>	\$2,362	210%
801 to 1,399 sf	du	0.310	\$28,306	<b>\$8,775</b>	\$4,330	103%
1,400 to 1,999 sf	du	0.286	\$28,306	<b>\$8,096</b>	\$6,153	32%
2,000 to 3,599 sf	du	0.294	\$28,306	<b>\$8,322</b>	\$6,608	26%
3,600 sf or more	du	0.226	\$28,306	<b>\$6,397</b>	\$6,506	-2%

1) Source: Table VII-7

2) Source: Table VII-8

3) Students per unit (Item 1) multiplied by the net impact cost per student (Item 2)

4) Source: Palm Beach County Administrative Division, adopted at 95% of the calculated fee

5) Percent change from the current adopted fee (Item 4) to the total impact fee (Item 3)

### **Schools Impact Fee Schedule Comparison**

As part of the work effort in updating Palm Beach County's schools impact fee program, a comparison of the adopted and calculated single family school impact fee for Palm Beach County to the single family school impact fees adopted by other counties throughout Florida has been prepared. Table VII-9 presents this comparison. For those where information was available, the impact fee adoption percentage and the full calculated rate are also shown.

Table VII-9

School Impact Fee Schedule Comparison – Single Family (2,000 square feet)

County	Date of Last Update <sup>(1)</sup>	Adoption Percent <sup>(1)</sup>	Single Family (per du)		School Capital Outlay Surtax
			Adopted Fee <sup>(1)</sup>	Fee @ 100% <sup>(2)</sup>	
Miami-Dade County	1995	100%	\$2,448	\$2,448	No
Marion County <sup>(3)</sup>	2006	100%	\$3,967	\$3,516	No
Citrus County	2021	50%	\$2,059	\$4,117	No
Volusia County	2013	66%	\$2,942	\$4,483	Yes
Indian River County	2020	28%	\$1,310	\$4,680	No
St. Johns County	2018	100%	\$5,312	\$4,725	Yes
Flagler County	2004	76%	\$3,600	\$4,756	Yes
Baker County	2005	52%	\$2,592	\$5,000	No
Nassau County	2017	100%	\$5,431	\$5,431	No
St. Lucie County	2009	100%	\$6,786	\$5,447	Yes
Lee County	2018	53%	\$2,879	\$5,484	Yes
Martin County	2012	100%	\$5,567	\$5,567	Yes
Manatee County	2017	100%	\$6,127	\$6,127	Yes
Hernando County	2019	50%	\$3,176	\$6,352	Yes
<b>Palm Beach County - Adopted</b>	<b>2015</b>	<b>95%</b>	<b>\$6,608</b>	<b>\$6,956</b>	No
Sarasota County	2015	26%	\$2,032	\$7,835	No
Hillsborough County	2020	100%	\$8,227	\$8,227	Yes
<b>Palm Beach County - Calculated</b>	<b>2021</b>	<b>N/A</b>	<b>N/A</b>	<b>\$8,322</b>	<b>No</b>
Lake County	2019	100%	\$8,927	\$8,927	No
Pasco County	2017	79%	\$7,128	\$9,028	No
Clay County	2009	77%	\$7,034	\$9,096	Yes
Orange County	2020	96%	\$9,148	\$9,513	Yes
Broward County	2017	74%	\$7,047	\$9,516	No
Brevard County	2015	50%	\$5,097	\$10,193	Yes
Collier County	2015	67%	\$8,790	\$11,164	No
Polk County	2019	65%	\$7,798	\$11,997	Yes
Seminole County	2017	73%	\$9,000	\$12,322	No
Osceola County	2021	96%	\$12,373	\$12,923	Yes

1) Source: Published impact fee schedules and discussions with representatives from each County

2) Represents the full calculated fee from each respective technical study

3) Educational system impact fee suspended until January 2022

## VIII. Transportation

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This section summarizes the analysis used to update Palm Beach County’s transportation impact fee schedule and includes the following subsections:

- Demand Component
- Cost Component
- Credit Component
- Calculated Impact Fee
- Transportation Impact Fee Comparison
- Benefit Districts/Zones

As in the case of the other impact fee program areas, the methodology used for the transportation impact fee study follows a consumption-driven approach in which new development is charged based upon the proportion of vehicle-miles of travel (VMT) that each unit of new development is expected to consume of a lane-mile of the transportation network. The general equation used to compute the impact fee for a given land use is:

$$\text{[Demand x Cost]} - \text{Credit} = \text{Fee}$$

The “demand” for travel placed on a transportation system is expressed in units of Vehicle-Miles of Travel (VMT) (daily vehicle-trip generation rate x the trip length (in miles) x the percent new trips [of total trips]) for each land use contained in the impact fee schedule. Trip generation represents the average daily rates to provide a stable measure of new development’s impact. The number of trips tends to vary significantly throughout the day by time of day depending on activity levels; however, overall daily trips tend to be stable.

The “cost” of building new capacity typically is expressed in units of dollars per vehicle-mile of transportation capacity.

The “credit” is an estimate of future non-impact fee revenues generated by new development that are allocated to provide transportation capacity expansion. The impact fee is considered to be an “up front” payment for a portion of the cost of a lane-mile of capacity that is directly related to the amount of capacity consumed by each unit of land use contained in the impact fee schedule, that is not paid for by future tax revenues generated by the new development activity over the next 25 years. These credits are required under the supporting case law for the

calculation of impact fees where a new development activity must be reasonably assured that they are not paying, or being charged, twice for the same level of service.

The input variables used in the fee equation are as follows:

*Demand Variables:*

- Trip generation rate
- Trip length
- Percent new trips
- Interstate & toll facility adjustment factor

*Cost Variables:*

- Cost per vehicle-mile
- Capacity added per lane mile

*Credit Variables:*

- Equivalent gas tax credit (pennies)
- Present worth
- Fuel efficiency
- Effective days per year

***Demand Component***

Travel Demand

Travel demand is the amount of transportation system consumed by a unit of new land development activity. Demand is calculated using the following variables and is measured in terms of the vehicle-miles of new travel (VMT) a unit of development consumes on the existing transportation system.

- Number of daily trips generated (Trip Generation Rate = TGR)
- Average length of those trips (Trip Length = TL)
- Proportion of travel that is new travel, rather than travel that is already traveling on the road system and is captured by new development (Percent New Trips = PNT)

As part of this update, the trip characteristics variables were obtained primarily from two sources: (1) trip characteristics studies previously conducted throughout Florida (Florida Studies

Database), and (2) the Institute of Transportation Engineers' (ITE) *Trip Generation Handbook* (11<sup>th</sup> edition). The Florida Studies Database (included in Appendix E) was used to determine trip length, percent new trips, and the trip generation rate for several land uses.

### Interstate & Toll Facility Adjustment Factor

This variable is used to recognize that interstate highway and toll facility improvements are funded by the State (specifically, the Florida Department of Transportation) using earmarked State and Federal funds. Typically, transportation impact fees are not used to pay for these improvements and the portion of travel occurring on the interstate/toll facility system is usually eliminated from the total travel for each use.

To calculate the interstate and toll (I/T) facility discount factor, the loaded highway network<sup>1</sup> file was generated for the Southeast Regional Planning Model (SERPM v8). A select link analysis was conducted for all traffic analysis zones located within Palm Beach County to differentiate trips with an origin and/or destination within the county versus trips with no origin or destination within the county.

Currently, interstate and toll facilities within the study area include Interstate 95 and the Florida Turnpike (SR 19). The limited access vehicle-miles of travel (Limited Access VMT) for trips with an origin and/or destination within the county was calculated for the identified limited access facilities. The total VMT was calculated for all trips with an origin and/or destination within the study area for all roads, including limited access facilities.

The I/T adjustment factor of 34.8 percent was determined by dividing the total limited access VMT by the total study area VMT for the 2045 Cost Feasible network. By applying this factor to the VMT for each land use, the reduced VMT is then representative of only the roadways which can be funded by impact fees.

## **Cost Component**

### County Roadway Cost

This section examines the right-of-way (ROW), construction, and other cost components associated with county roads with respect to transportation capacity expansion improvements in Palm Beach County. In addition to local data, bid data for recently completed/ongoing projects

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<sup>1</sup> The "loaded highway network" refers to the final travel demand model roadway network with traffic volumes assigned (or loaded) to each model roadway link.

and recent construction data from roadway projects throughout Florida were used to supplement the cost data for county roadway improvements. The cost for each roadway capacity project was separated into four components: design, right-of-way (ROW), construction, and construction engineering/inspection (CEI).

#### *Design and CEI*

Design costs for county roads were estimated at **10 percent** of construction phase costs based on a review of recent local cost data and cost data from other Florida jurisdictions. Additional detail is provided in Appendix F, Tables F-2 and F-3.

CEI costs for county roads were estimated at **9 percent** of construction phase costs based on a review of recent data from other jurisdictions throughout Florida. Additional detail is provided in Appendix F, Table F-9.

#### *Right-of-Way*

The ROW cost reflects the total cost of the acquisitions along a corridor that were necessary to have sufficient cross-section width to widen an existing road or, in the case of new construction, to build a new road. This factor was determined through a review of the ROW-to-construction cost ratios for recent county improvements in Palm Beach County. For county roadways, the ROW factors ranged from less than 1 percent to 70 percent with an average of 15 percent. For purposes of this update study, the ROW cost for county roads was calculated at approximately **15 percent** of the construction cost per lane mile. This factor is lower than ROW-to-construction ratios seen in other jurisdictions throughout Florida, which average approximately 38 percent. Additional detail is provided in Appendix F, Tables F-4 and F-5.

#### *Construction*

The construction cost for county roads was based on local improvements in Palm Beach County and in other communities in Florida. A review of recent construction cost data for Palm Beach County identified four capacity expansion (lane addition and new road construction) projects:

- Roebuck Rd from Jog Rd to Haverhill Rd
- Lyons Rd from Clint Moore Rd to North of LWDD L-39 Canal
- Hood Rd from East of Florida Turnpike to West of Central Blvd
- Silver Beach Rd from East of Congress Ave to Old Dixie/Pres. Barack Obama Hwy

As shown in Appendix F, Table F-6, the construction costs for these local improvements ranged from approximately \$1.66 million per lane mile to \$6.68 million per lane mile with a weighted

average cost of \$3.49 million per lane mile.

In addition to the local projects, recent improvements from multiple communities throughout the state were also reviewed. This review included 37 projects with more than 160 lane miles of urban design (curb & gutter) roadway improvements from 14 counties and resulted in an average construction cost of \$3.11 million per lane mile. When improvements in counties with urban characteristics (similar to Palm Beach County) were reviewed, the data set included 12 improvements, averaging \$3.68 million per lane mile. Appendix F, Table F-7 provides further detail on the projects reviewed.

Based on a review of these data sets, a construction cost of **\$3.50 million** per lane mile is used in the impact fee calculation for urban design (curb & gutter) improvements. Discussions with County representatives confirmed that this is a reasonable construction cost estimate for impact fee calculation purposes.

Note that this estimated cost per lane mile pertains to urban design (curb & gutter) county roadway improvements. Due to the lack of sample for open drainage capacity expansion improvements, the cost per lane mile for these types of roadways was based on the relationship between curb & gutter and open drainage roadway costs from the FDOT District 7 Long Range Estimates (LRE), as this data was not available for District 4. Based on these cost estimates, the costs for roadways with open drainage-design characteristics were estimated at **\$2.67 million per lane mile** or approximately 76 percent of the costs for roadways with curb & gutter design characteristics. Additional detail is provided in Appendix F, Table F-1.

To determine the weighted average cost for county roadways, the cost for curb & gutter and open drainage roadways were weighted based on the distribution of roadways included in the Palm Beach County 2045 Long Range Transportation Plan's (LRTP) Cost Feasible Plan. As shown in Table VIII-1, the weighted average roadway construction cost was calculated at approximately **\$3.48 million** per lane mile, with a total weighted average cost of **\$4.66 million per lane mile** for county roadways.

**Table VIII-1  
Estimated Total Cost per Lane Mile for County Roads**

Cost Phase	Cost per Lane Mile		
	Curb & Gutter	Open Drainage <sup>(5)</sup>	Weighted Average <sup>(6)</sup>
Design <sup>(1)</sup>	\$350,000	\$266,000	\$347,000
Right-of-Way <sup>(2)</sup>	\$525,000	\$399,000	\$521,000
Construction <sup>(3)</sup>	\$3,500,000	\$2,660,000	\$3,475,000
CEI <sup>(4)</sup>	\$315,000	\$239,000	\$313,000
<b>Total Cost</b>	<b>\$4,690,000</b>	<b>\$3,564,000</b>	<b>\$4,656,000</b>
Lane Mile Distribution <sup>(7)</sup>	97%	3%	100%

- 1) Design cost is estimated at 10% of construction costs
  - 2) Right-of-way cost is estimated at 15% of construction costs
  - 3) Source: Estimate based on a review of data in Appendix F, Tables F-6 and F-7
  - 4) CEI cost is estimated at 9% of construction costs
  - 5) Open drainage costs are estimated at 76% of the curb & gutter costs
  - 6) Lane mile distribution (Item 7) multiplied by the design, right-of-way, construction, and CEI phase costs by design type to develop a weighted average cost per lane mile
  - 7) Source: Appendix F, Table F-10; Item (c) and (d)
- Note: All figures rounded to nearest \$000

**State Roadway Cost**

This section examines the right-of-way (ROW), construction, and other cost components associated with county roads with respect to transportation capacity expansion improvements in Palm Beach County. In addition to local data, bid data for recently completed/ongoing projects and recent construction data from roadway projects throughout Florida were used to supplement the cost data for county roadway improvements. The cost for each roadway capacity project was separated into four components: design, right-of-way (ROW), construction, and construction engineering/inspection (CEI).

*Design and CEI*

Design costs for state roads were estimated at **11 percent** of construction phase costs based on a review of recent project costs obtained from other Florida jurisdictions. Additional detail is provided in Appendix F, Table F-3.

CEI costs for state roads were estimated at **11 percent** of construction phase costs based on a review of cost data from jurisdictions throughout Florida. Additional detail is provided in Appendix F, Table F-9.



### *Right-of-Way*

The ROW cost factor for state roads was estimated as a percentage of the construction cost per lane mile. Due to limited local acquisition data, the ROW factor of **15 percent** calculated for county roads was also used for state roads. This factor is lower than the state ROW factors observed in Florida jurisdictions, which averaged 41 percent (see Appendix F, Table F-5 for additional detail).

### *Construction*

The construction cost for state roads was based on local improvements in Palm Beach County and in other communities in Florida. A review of construction cost data for Palm Beach County since 2013 identified one capacity expansion (lane addition and new road construction) project:

- SR 80 from West of Lion County Safari Road to Forest Hills Boulevard

This is a very long project spanning 7.20 miles (14.4 lane miles added) with a cost of \$2.22 million per lane mile (see Appendix F, Table F-8 for additional detail). Due to the atypical length and small sample, additional projects from throughout Florida were reviewed.

This review included 63 projects with more than 374 lane miles of urban design (curb & gutter) roadway improvements from 31 counties and resulted in an average construction cost of \$4.24 million per lane mile. When improvements in counties with urban characteristics as Palm Beach County were reviewed, the data set included only 19 improvements (excluding Palm Beach County), averaging \$4.69 million per lane mile. Appendix F, Table F-8 provides further detail on the projects reviewed.

Based on a review of these data sets, a construction cost of **\$4.40 million** per lane mile was used in the impact fee calculation for urban design (curb & gutter) improvements. This cost reflects a blend of the local improvement and the state road improvements from other urban counties in Florida.

Note that this estimated cost per lane mile pertains to urban design (curb & gutter) county roadway improvements. As previously discussed for county roads, the costs for roadways with open drainage-design characteristics were estimated at approximately 76 percent of the costs for roadways with curb & gutter design characteristics.

To determine the weighted average cost for state roadways, the cost for curb & gutter and open drainage roadways were weighted based on the distribution of roadways included in the Palm

Beach County 2045 LRPT Cost Feasible Plan. As shown in Table VIII-2, the weighted average roadway construction cost was calculated at approximately **\$4.37 million** per lane mile, with a total weighted average cost of **\$5.99 million per lane mile** for state roadways.

**Table VIII-2  
Estimated Total Cost per Lane Mile for State Roads**

Cost Phase	Cost per Lane Mile		
	Curb & Gutter	Open Drainage <sup>(5)</sup>	Weighted Average <sup>(6)</sup>
Design <sup>(1)</sup>	\$484,000	\$368,000	\$481,000
Right-of-Way <sup>(2)</sup>	\$660,000	\$502,000	\$655,000
Construction <sup>(3)</sup>	\$4,400,000	\$3,344,000	\$4,368,000
CEI <sup>(4)</sup>	\$484,000	\$368,000	\$481,000
<b>Total Cost</b>	<b>\$6,028,000</b>	<b>\$4,582,000</b>	<b>\$5,985,000</b>
Lane Mile Distribution <sup>(7)</sup>	97%	3%	100%

1) Design cost is estimated at 11% of construction costs

2) Right-of-way cost is estimated at 15% of construction costs

3) Source: Estimate based on a review of data in Appendix F, Table F-8

4) CEI cost is estimated at 11% of construction costs

5) Open drainage costs are estimated at 76% of the curb & gutter costs

6) Lane mile distribution (Item 7) multiplied by the design, right-of-way, construction, and CEI phase costs by jurisdiction to develop a weighted average cost per lane mile

7) Source: Appendix F, Table F-10; Item (c) and (d)

Note: All figures rounded to nearest \$000

Summary of Costs (Blended Cost Analysis)

The weighted average cost per lane mile for county and state roads is presented in Table VIII-3. The resulting weighted average cost of approximately **\$5.56 million** per lane mile was utilized as the roadway cost input in the calculation of the transportation impact fee schedule. The weighted average cost per lane mile includes county and state roads and is based on distribution of county and state funding shown in the future five-year capital plan.

**Table VIII-3****Estimated Total Cost per Lane Mile for County and State Roadway Projects**

Cost Phase	County Roads <sup>(1)</sup>	State Roads <sup>(2)</sup>	County and State Roads <sup>(3)</sup>
Design	\$347,000	\$481,000	<b>\$438,000</b>
Right-of-Way	\$521,000	\$655,000	<b>\$612,000</b>
Construction	\$3,475,000	\$4,368,000	<b>\$4,082,000</b>
CEI	\$313,000	\$481,000	<b>\$427,000</b>
<b>Total Cost</b>	<b>\$4,656,000</b>	<b>\$5,985,000</b>	<b>\$5,559,000</b>
Funding Distribution <sup>(4)</sup>	32%	68%	100%

1) Source: Table VIII-1

2) Source: Table VIII-2

3) Funding distribution (Item 4) multiplied by each cost phase to develop a weighted average cost per lane mile

4) Source: Appendix G, Table G-6

Note: All figures rounded to nearest \$000

Vehicle-Miles of Capacity Added per Lane Mile

An additional component of the transportation impact fee equation is the capacity added per lane-mile of roadway constructed. The vehicle-miles of capacity (VMC) is an estimate of capacity added per lane mile, for roadway improvements in the 2045 LRTP. As shown in Table VIII-4, each lane mile will add approximately 14,000 VMC.

**Table VIII-4****Weighted Average Capacity Added per Lane Mile**

Road Type	Lane Miles Added <sup>(1)</sup>	Vehicle-Miles of Capacity Added <sup>(2)</sup>	VMC Added per Lane Mile <sup>(3)</sup>	Weighting Factor <sup>(4)</sup>	Weighted Average VMC Added per Lane Mile <sup>(5)</sup>
County Roads	174.16	1,735,769	9,967	32%	3,200
State Roads	32.12	512,274	15,949	68%	10,800
<b>Total</b>	<b>206.28</b>	<b>2,248,043</b>			<b>14,000</b>

1) Source: Appendix F, Table F-10

2) Source: Appendix F, Table F-10

3) Vehicle-miles of capacity added (Item 2) divided by lane miles added (Item 1)

4) Source: Appendix G, Table G-6

5) VMC added per lane mile for county and state roads multiplied by the weighting factor (Item 4) to develop a weighted average VMC added per lane mile

### Cost per Vehicle-Mile of Capacity

The transportation cost per unit of development is assessed based on the cost per vehicle-mile of capacity. As shown in Tables VIII-3 and VIII-4, the cost and capacity for roadways in Palm Beach County have been calculated based on typical roadway improvements. As shown in Table VIII-5, the cost for travel within the county is approximately **\$397** per VMC.

The cost per VMC figure is used in the transportation impact fee calculation to determine the total cost per unit of development based on vehicle-miles of travel consumed. For each vehicle-mile of travel that is added to the roadway system, approximately \$397 of transportation capacity is consumed.

**Table VIII-5**  
**Weighted Average Cost per Vehicle-Mile of Capacity Added**

Road Type	Cost per Lane Mile <sup>(1)</sup>	Average VMC Added per Lane Mile <sup>(2)</sup>	Cost per VMC <sup>(3)</sup>
County Roads	\$4,656,000	9,967	\$467.14
State Roads	\$5,985,000	15,949	\$375.26
Combined Weighted	<b>\$5,559,000</b>	<b>14,000</b>	
<b>Weighted Average VMC Added per Lane Mile</b>			<b>\$397.07</b>

1) Source: Table VIII-3

2) Source: Table VIII-4

3) Cost per lane mile (Item 1) divided by the average VMC added per lane mile (Item 2)

### ***Credit Component***

#### Capital Improvement Credit

The credit component of the impact fee accounts for the County and State funding sources that are being expended on roadway capacity expansion (excluding impact fee funds). This section summarizes the calculations utilized to develop the credit component of the impact fee. Additional details are provided in Appendix G.

The present value of the portion of non-impact fee revenues generated by new development over a 25-year period (estimated life of a structure as well as when roadways are likely to need significant maintenance/rehabilitation) that is expected to fund capacity expansion projects was credited against the cost and the system consumed by travel associated with new development. To provide a connection to the demand component, which is measured in terms of travel, the non-impact fee dollars were converted to a fuel tax equivalency.

### County Credit

Palm Beach County spends an average of \$1.7 million per year, or the equivalent of 0.3 pennies, on transportation capacity-expansion projects funded with non-impact fee revenues. This information is included in Table VIII-6 and additional detail is provided in Appendix G, Table G-4.

### State Credit

As shown in Table VIII-6, state expenditures for transportation capacity projects in Palm Beach County were reviewed and a credit for the capacity-expansion portion attributable to state projects was estimated (excluding expenditures on limited access facilities). This review, which included 10 years of historical expenditures, as well as five (5) years of planned expenditures, indicated that FDOT's transportation spending averages \$41.2 million per year and generates a credit of 7.7 pennies of equivalent gas tax revenue, annually. The use of a 15-year period for developing a state credit accounts for the volatility in FDOT spending in the county over short time periods. Additional detail is provided in Appendix G, Table G-5.

In summary, for transportation, Palm Beach County allocates 0.3 pennies, while the State spends an average of 7.7 pennies, annually. A total credit of 8.0 pennies or \$42.9 million per year was included in the transportation impact fee calculation to recognize the future capital revenues that are expected to be generated by new development from all non-impact fee revenue sources. This credit reflects the most recent available data for transportation expenditures from County and State sources.

**Table VIII-6**  
**Equivalent Pennies of Gas Tax Revenue**

Credit	Average Annual Expenditures	Value per Penny <sup>(3)</sup>	Equivalent Pennies per Gallon <sup>(4)</sup>
County Revenues <sup>(1)</sup>	\$1,740,000	\$5,364,469	\$0.003
State Revenues <sup>(2)</sup>	\$41,151,368	\$5,364,469	\$0.077
<b>Total</b>	<b>\$42,891,368</b>		<b>\$0.080</b>

1) Source: Appendix G, Table G-2

2) Source: Appendix G, Table G-3

3) Source: Appendix G, Table G-1

4) Avg annual expenditures divided by the value per penny (Item 4) divided by 100

## Present Worth Variables

### *Facility Life*

The facility life used in the impact fee analysis is 25 years, which represents the reasonable life of a roadway.

### *Interest Rate*

This is the discount rate at which gasoline tax revenues might be bonded. It is used to compute the present value of the gasoline taxes generated by new development. The discount rate of 2.40 percent was used in the transportation impact fee calculation based on information provided by the County.

### Fuel Efficiency

The fuel efficiency (i.e., the average miles traveled per gallon of fuel consumed) of the fleet of motor vehicles was estimated using the quantity of gasoline consumed by travel associated with a particular land use. This variable is used in the calculation of the credit component of the transportation impact fee.

Appendix G, Table G-7 documents the calculation of fuel efficiency value based on the following equation, where “VMT” is vehicle miles of travel and “MPG” is fuel efficiency in terms of miles per gallon.

$$\text{Fuel Efficiency} = \sum VMT_{\text{RoadwayType}} \div \sum \left( \frac{VMT_{\text{VehicleType}}}{MPG_{\text{VehicleType}}} \right)_{\text{RoadwayType}}$$

The methodology uses non-interstate VMT and average fuel efficiency data for passenger vehicles (i.e., passenger cars and other 2-axle, 4-tire vehicles, such as vans, pickups, and SUVs) and large trucks (i.e., single-unit, 2-axle, 6-tire or more trucks and combination trucks) to calculate the total gallons of fuel used by each of these vehicle types.

The combined total VMT for the vehicle types is then divided by the combined total gallons of fuel consumed to calculate, in effect, a “weighted” fuel efficiency value that reflects the existing fleet mix of traffic on non-interstate roadways. The VMT and average fuel efficiency data were obtained from the most recent Federal Highway Administration’s *Highway Statistics 2019*. Based on the calculation completed in Appendix G, Table G-7, the fuel efficiency rate to be used in the updated impact fee equation is 18.97 miles per gallon.

### *Effective Days per Year*

An effective 365 days per year of operation was used for all land uses in the proposed fee. However, this will not be the case for all land uses since some uses operate only on weekdays (e.g., office buildings) and/or only seasonally (e.g., schools). The use of 365 days per year, therefore, provides a conservative estimate, ensuring that non-impact fee contributions are adequately credited against the fee.

### ***Calculated Impact Fee***

Detailed impact fee calculations for each land use are included in Appendix H, which includes the major land use categories and the impact fees for the individual land uses contained in each of the major categories. For each land use, Appendix H illustrates the following:

- Demand component variables (trip rate, trip length, and percent new trips);
- Total impact fee cost;
- Annual capital improvement credit;
- Present value of the capital improvements credit;
- Net transportation impact fee rates;
- Current adopted Palm Beach County impact fee rates; and
- Percent difference between the calculated impact fee and the current adopted impact fee.

It should be noted that the net impact fee illustrated in Appendix H is not necessarily a recommended fee, but instead represents the technically calculated impact fee per unit of land use that could be charged in Palm Beach County.

For clarification purposes, it may be useful to walk through the calculation of an impact fee for one of the land use categories. In the following example, the net impact fee is calculated for the Residential land use category using information from the impact fee schedules included in Appendix H. For each land use category, the following equations are utilized to calculate the net impact fee:

$$\text{Net Impact Fee} = \text{Total Impact Cost} - \text{Capital Improvement Credit}$$

Where:

Total Impact Cost =  $([\text{Trip Rate} \times \text{Assessable Trip Length} \times \% \text{ New Trips}] / 2) \times (1 - \text{Interstate/Toll Facility Adjustment Factor}) \times (\text{Cost per Vehicle-Mile of Capacity})$

Capital Improvement Credit = Present Value (Annual Capital Improvement Credit), given 2.40% interest rate & a 25-year facility life

Annual Capital Improvement Credit =  $([\text{Trip Rate} \times \text{Total Trip Length} \times \% \text{ New Trips}] / 2) \times (\text{Effective Days per Year} \times \$/\text{Gallon to Capital}) / \text{Fuel Efficiency}$

Each of the inputs has been discussed previously in this document; however, for purposes of this example, brief definitions for each input are provided in the following paragraphs, along with the actual inputs used in the calculation of the fee for the single family land use category:

- *Trip Rate* = the average daily trip generation rate, in vehicle-trips/day (7.81)
- *Assessable Trip Length* = the average trip length on collector roads or above, for the category, in vehicle-miles (6.62)
- *Total Trip Length* = the assessable trip length plus an adjustment factor of half a mile, which is added to the trip length to account for the fact that gas taxes are collected for travel on all roads including local roads (6.62 + 0.50 = 7.12)
- *% New Trips* = adjustment factor to account for trips that are already on the roadway (100%)
- *Divide by 2* = the total daily miles of travel generated by a particular category (i.e., rate\*length\*% new trips) is divided by two to prevent the double-counting of travel generated between two land use codes since every trip has an origin and a destination
- *Interstate/Toll Facility Adjustment Factor* = adjustment factor to account for travel demand occurring on interstate highways and/or toll facilities (34.8%)
- *Cost per Lane Mile* = unit cost to construct one lane mile of roadway, in \$/lane-mile (\$5,559,000)
- *Average Vehicle-Capacity Added per Lane Mile* = represents the average daily traffic on one travel lane at capacity for one lane mile of roadway, in vehicles/lane-mile/day (14,000)
- *Cost per Vehicle-Mile of Capacity* = unit of vehicle-miles of capacity consumed per unit of development. Cost per vehicle-mile divided by average capacity added per lane mile
- *Present Value* = calculation of the present value of a uniform series of cash flows, gas tax payments in this case, given an interest rate, “i,” and a number of periods, “n;” for 2.40% interest and a 25-year facility life, the uniform series present worth factor is 18.6369



- *Effective Days per Year* = 365 days
- *\$/Gallon to Capital* = the amount of equivalent gas tax revenue per gallon of fuel that is used for capital improvements, in \$/gallon (\$0.080)
- *Fuel Efficiency* = average fuel efficiency of vehicles, in vehicle-miles/gallon (18.97)

#### Transportation Impact Fee Calculation

Using these inputs, a net impact fee can be calculated for the Single Family land use category as follows:

$$\text{Total Impact Cost} = ([7.81 * 6.62 * 1.0] / 2) * (1 - 0.348) * (\$5,559,000 / 14,000) = \mathbf{\$6,693}$$

$$\text{Annual Cap. Improv. Credit} = ([7.81 * 7.12 * 1.0] / 2) * 365 * (\$0.080 / 18.97) = \$43$$

$$\text{Capital Improvement Credit} = \$43 * 18.6369 = \$801$$

$$\text{Net Transportation Impact Fee} = \$6,693 - \$801 = \mathbf{\$5,892}$$

#### ***Transportation Impact Fee Schedule Comparison***

A comparison of calculated fee schedule to the current adopted fee by land use is presented in Table VIII-7 for select land uses. Changes to the cost and credit components resulted in a fee increase of 30 percent compared to the 2014-2018 study. Remaining changes are due to the updated demand variables. **However, it is important to note that the County did not adopt the full fee schedule developed as part of the 2014-2018 study, which affects the percent change in different fee categories.**

A summary of calculated impact fee rates for all land uses is presented in Appendix H, Table H-1.

**Table VIII-7  
Transportation Impact Fee Comparison**

Land Use	Unit <sup>(2)</sup>	Palm Beach County		Martin County <sup>(5)</sup>	Broward County <sup>(6)</sup>	Miami-Dade County <sup>(7)</sup>	St. Lucie County <sup>(8)</sup>	Collier County <sup>(9)</sup>	Orange County <sup>(10)</sup>	Hillsborough County <sup>(11)</sup>
		Calculated <sup>(3)</sup>	Adopted <sup>(4)</sup>							
Date of Last Update		<b>2022</b>	2012/2018	2020	n/a	2006	2017/2019	2019	2020	2020
Assessed Portion of Calculated <sup>(1)</sup>		<b>100%</b>	95%	100%	n/a	100%	100%	100%	100%	90%
<b>Residential:</b>										
Single Family (2,000 sf)	du	<b>\$5,892</b>	\$4,717	\$5,516	\$431	\$9,819	\$5,130	\$8,090	\$8,218	\$8,265
<b>Non-Residential:</b>										
Light Industrial	1,000 sf	<b>\$2,633</b>	\$1,522	\$2,729	\$482	\$3,965	\$1,103	\$4,584	\$3,117	\$3,807
Office (50,000 sq ft)	1,000 sf	<b>\$5,847</b>	\$3,418	\$5,366	\$445	\$15,999	\$3,718	\$8,605	\$8,132	\$7,502
Retail (100,000 sq ft)	1,000 sfgla	<b>\$8,323</b>	\$7,656	\$8,503	\$410	\$20,824	\$6,341	\$13,774	\$11,052	\$12,206
Bank w/Drive-Thru	1,000 sf	<b>\$13,163</b>	\$16,116	\$13,092	\$410	\$25,953	\$6,341	\$21,254	\$14,868	\$18,549
Fast Food w/Drive-Thru	1,000 sf	<b>\$63,592</b>	\$30,702	\$15,693	\$410	\$52,235	\$6,341	\$104,272	\$74,592	\$94,045

- 1) Represents that portion of the maximum calculated fee for each respective county that is actually charged. Fees may have been lowered through indexing or policy discounts. Does not account for moratoriums/suspensions
- 2) du = dwelling unit
- 3) Source: Appendix H, Table H-1
- 4) Source: Palm Beach County Administrative Division
- 5) Source: Martin County 2020 Impact Fee Update Study. Rates shown represent the maximum calculated and are not yet adopted.
- 6) Source: Broward County Planning & Redevelopment Division, Development Management. Fees shown are an average of all 46 Impact Fee Zones. In practice, Broward charges a concurrency fee and not these impact fees
- 7) Source: Miami-Dade County Impact Fee Division. Fees shown are an average of the urban infill area and non-urban infill area rates. Manufacturing rate is shown for light industrial. Adopted rates reflect indexing since 2006.
- 8) Source: St. Lucie County Planning & Development Services Department. Fees shown are for the Mainland district
- 9) Source: Collier County Impact Fee Administration Department.
- 10) Source: Orange County Planning & Development Department. Fees shown are for the urban district.
- 11) Source: Hillsborough County Development Services Department. Fees shown are for the urban district.

### **Transportation Impact Fee Benefit Districts/Zones**

Currently, Palm Beach County has five transportation impact fee benefit districts/zones, as illustrated in Article 13, Figure 13.B.1.C-1 of the County’s Unified Land Development Code (ULDC). These districts do not include the western portion of the County, which is not charged the transportation impact fee.

Benefit zones dictate where impact fee revenues can be spent to ensure that fee payers receive the associated benefit. Typically, these boundaries are based on land use patterns, growth rates, major roadway boundaries, and major geographical/environmental boundaries.

As part of this study, Benesch reviewed the existing fee district boundaries. In addition to evaluating geographical boundaries, the impact fee revenue and expenditures were reviewed to determine the effectiveness of the existing boundaries and discussions were held with Palm Beach County representatives to discuss any issues that have arisen due to the current benefit zone alignments. As shown in Table VIII-8, historical revenues have a relatively even distribution across all five zones, with no one zone collecting more than 23 percent of transportation impact fee revenues. Expenditures are not as balanced, with Zones 2 and 3 showing the most variation, but both still represent a reasonable share of total expenditures.

**Table VIII-8**  
**Historical Transportation Impact Fee**  
**Revenues and Expenditures**

<b>Zone</b>	<b>Total</b>	<b>%</b>
<b><i>Impact Fee Revenues 2004-2020</i></b>		
1	\$80,622,580	20.1%
2	\$86,052,334	21.4%
3	\$73,161,445	18.2%
4	\$69,529,124	17.3%
5	\$92,083,993	22.9%
<b><i>Impact Fee Expenditures 2004-2020</i></b>		
1	\$87,409,866	20.0%
2	\$60,535,685	13.8%
3	\$130,769,560	29.8%
4	\$75,328,502	17.2%
5	\$84,068,087	19.2%

Source: Palm Beach County

Additionally, concern was raised over the overall size of each benefit zone being too large, but a comparison to other similar counties indicate that the Palm Beach County benefit zones are on the low end of the average size. Table VIII-9 provides breakdown for each county.

**Table VIII-9**  
**Palm Beach County Transportation**  
**Impact Fee Benefit Zone Comparison**

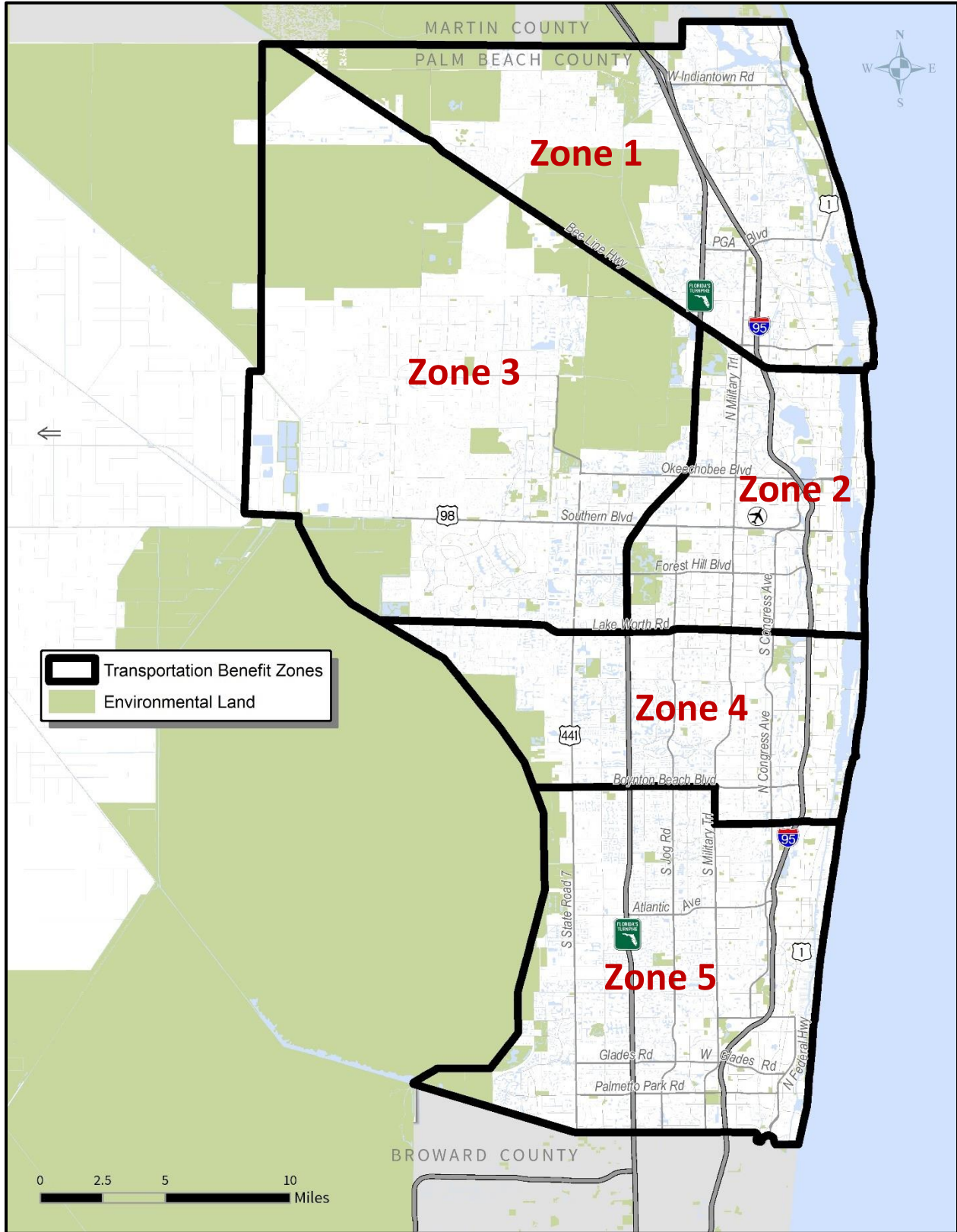
Zone	Sq Miles*	% of Total
<b><i>Palm Beach County</i></b>		
1	93.55	18.2%
2	65.45	12.7%
3	159.82	31.1%
4	75.48	14.7%
5	119.28	23.2%
<b>Avg.</b>	<b>102.72</b>	-
<b><i>Orange</i></b>		
1	145.51	21.8%
2	150.53	22.6%
3	219.04	32.8%
4	152.08	22.8%
<b>Avg.</b>	<b>166.79</b>	-
<b><i>Hillsborough</i></b>		
1	139.44	19.8%
2	113.22	16.0%
3	180.50	25.6%
4	89.54	12.7%
5	183.11	25.9%
<b>Avg.</b>	<b>141.16</b>	-
<b><i>Brevard (excl. Islands)</i></b>		
1	134.78	26.1%
2	98.63	19.1%
3	282.79	54.8%
<b>Avg.</b>	<b>172.07</b>	-

Source: GIS measurement

\*excludes environmental land and water

Based on this review and discussions with staff, no changes are recommended to the existing transportation impact fee benefit zones.

**Map VIII-1**  
**Existing Transportation Impact Fee Benefit Zones**



**Appendix A**  
**Population: Supplemental Information**

## Appendix A: Population

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With the exception of the school, transportation and fire rescue impact fee, all impact fee programs included in this report require the use of population data in calculating current levels of service, performance standards, and demand and credit calculations. With this in mind, a consistent approach to developing population estimates and projections is an important component of the data compilation process. To accurately determine demand for services, as well as to be consistent with Palm Beach County's Comprehensive Plan, not only the residents, or permanent population of the County, but also the seasonal residents and visitors were considered. Seasonal residents include visitors and part-time residents, which are defined as living in Palm Beach County for less than six months each year. Therefore, for purposes of calculating future demand for capital facilities for each impact fee program area, the weighted seasonal population is used in all population estimates and projections. References to population contained in this report pertain to the weighted seasonal population, unless otherwise noted.

Palm Beach County provides countywide services for roads, parks, public buildings, and schools. The service area for libraries includes the unincorporated portions of the County as well as 24 cities. Law enforcement services are provided in the unincorporated portions of the County and 17 cities. Given the differences in services areas, population estimates are provided separately for countywide, library and law service areas. The fire rescue service impact fee calculations utilize an incident-based approach which does not require service area population calculations.

Table A-1 presents the countywide, library, and law enforcement service area population trends. The projections indicate that the current weighted seasonal population of the County is approximately 1.60 million and is estimated to increase to 1.86 million by 2040. In the case of the library service area, the current weighted population is approximately 1.03 million and is estimated to increase to 1.21 million. For the law enforcement service area, the current weighted population is 0.94 million and is estimated to increase to 1.10 million by 2040. Based on these estimates, the projected population growth rate averages 0.81 percent per year between 2021 and 2040.

**Table A-1**  
**Weighted Seasonal Population Trends and Projections**

Year	Weighted Seasonal Population Figure		
	Palm Beach Countywide <sup>(1)</sup>	Service Area for Library <sup>(2)</sup>	Service Area for Law Enf. <sup>(3)</sup>
2000	1,192,925	768,050	713,447
2001	1,219,628	786,435	729,864
2002	1,249,154	812,047	751,887
2003	1,281,568	834,636	769,349
2004	1,316,558	852,148	781,554
2005	1,346,377	868,720	792,612
2006	1,363,362	877,255	797,233
2007	1,373,668	886,912	806,162
2008	1,377,516	890,524	808,258
2009	1,380,304	892,552	808,968
2010	1,400,677	927,753	839,113
2011	1,412,653	935,525	845,979
2012	1,426,260	938,054	852,688
2013	1,442,721	943,862	861,256
2014	1,462,020	953,219	871,818
2015	1,483,766	964,628	883,277
2016	1,502,894	974,244	892,865
2017	1,527,153	986,919	903,802
2018	1,548,292	997,510	912,620
2019	1,566,793	1,006,787	921,625
2020	1,577,786	1,031,113	928,383
<b>2021</b>	<b>1,598,324</b>	<b>1,034,445</b>	<b>943,870</b>
2022	1,616,386	1,046,134	954,535
2023	1,634,650	1,057,956	965,321
2024	1,653,122	1,069,911	976,228
2025	1,671,730	1,081,955	987,219
2026	1,686,777	1,091,692	996,103
2027	1,701,957	1,101,518	1,005,068
2028	1,717,275	1,111,431	1,014,114
2029	1,732,730	1,121,434	1,023,242
2030	1,748,748	1,131,801	1,032,700
2031	1,761,164	1,139,836	1,040,032
2032	1,773,669	1,147,930	1,047,417
2033	1,786,262	1,156,080	1,054,853
2034	1,798,945	1,164,288	1,062,343
2035	1,811,298	1,172,283	1,069,639
2036	1,821,441	1,178,849	1,075,628
2037	1,831,642	1,185,450	1,081,652
2038	1,841,899	1,192,088	1,087,708
2039	1,852,214	1,198,764	1,093,799
2040	1,862,892	1,205,676	1,100,105

- 1) Source: Appendix A, Tables A-14
- 2) Source: Appendix A, Tables A-15
- 3) Source: Appendix A, Tables A-16



## **Apportionment of Demand by Residential Unit Type and Size**

Tables A-2, A-3, and A-4 present the residents per housing unit for the residential categories by size for the countywide, law enforcement service area, and libraries service area. The tables present the residents per housing unit for combined residential land use based on weighted seasonal population for countywide fees and library impact fee. In the case of law enforcement impact fee, the current fee schedule includes separate categories for single family, multi-family and mobile homes. This analysis includes all housing units, both occupied and vacant.

To estimate the residents per housing unit by square footage tiers, an additional analysis was undertaken. This analysis utilizes the persons per household (PPH) figures by home size obtained from the American Community Survey (ACS) to develop a ratio. This ratio is then multiplied by the weighted average residents per housing unit in Palm Beach County to obtain the residents per housing unit for the square footage tiers.

**Table A-2  
Population per Housing Unit by Housing Type, Countywide**

<b>Housing Type</b>	<b>Population<sup>(1)</sup></b>	<b>Housing Units<sup>(2)</sup></b>	<b>Ratio</b>	<b>Residents / Housing Units<sup>(4)</sup></b>
<b>Residential</b>				
800 sf & Under			64%	1.43
801 to 1,399 sf			88%	1.96
1,400 to 1,999 sf			100%	2.23
2,000 to 3,599 sf			110%	2.45
3,600 sf or more			118%	2.63
<b>Weighted Average</b>	<b>1,531,381</b>	<b>686,138</b>		<b>2.23</b>
<b>Senior Adult Housing<sup>(5)</sup></b>				
800 sf & Under			64%	1.09
801 to 1,399 sf			88%	1.50
1,400 to 1,999 sf			100%	1.71
2,000 to 3,599 sf			110%	1.88
3,600 sf or more			118%	2.02
<b>Weighted Average</b>	<b>1,171,047</b>	<b>686,138</b>		<b>1.71</b>

1) Source: 2019 ACS, Table B25033 (adjusted for peak seasonal population)

2) Source: 2019 ACS, Table DP04

3) Ratios developed based on national PPH data derived from the 2019 American Housing Survey

4) Population (Item 1) divided by housing units (Item 2)

5) Estimate for Senior Housing is based on people per household figures, adjusted for the residents over 55 years of age based on information obtained from the 2017 National Household Travel Survey, prepared by the US Department of Transportation.

**Table A-3**

**Population per Housing Unit by Housing Type, Law Enforcement Service Area**

Housing Type	Population <sup>(1)</sup>	Housing Units <sup>(2)</sup>	Residents / Housing Units <sup>(3)</sup>
Single Family	651,149	231,196	2.82
Multi-Family	219,436	129,725	1.69
Mobile Home	43,980	15,511	2.84
<b>Weighted Average</b>	<b>914,565</b>	<b>376,432</b>	<b>2.43</b>
Senior Adult Housing (Detached) <sup>(4)</sup>	497,934	231,196	2.15
Senior Adult Housing (Attached) <sup>(5)</sup>	167,803	129,725	1.29

1) Source: 2019 ACS, Table B25033 (adjusted for peak seasonal population)

2) Source: 2019 ACS, Table DP04

3) Population (Item 1) divided by housing units (Item 2)

4) Estimate for Senior Housing (Detached) is based on people per household figures for single family homes, adjusted for the residents over 55 years of age based on information obtained from the 2017 National Household Travel Survey, prepared by the US Department of Transportation.

5) Estimate for Senior Housing (Attached) is based on people per household figures for multi-family homes, adjusted for the residents over 55 years of age based on information obtained from the 2017 National Household Travel Survey, prepared by the US Department of Transportation.

**Table A-4  
Population per Housing Unit by Housing Type, Library Service Area**

<b>Housing Type</b>	<b>Population<sup>(1)</sup></b>	<b>Housing Units<sup>(2)</sup></b>	<b>Ratio<sup>(3)</sup></b>	<b>Residents / Housing Units<sup>(4)</sup></b>
<b>Residential</b>				
800 sf & Under			64%	1.49
801 to 1,399 sf			88%	2.05
1,400 to 1,999 sf			100%	2.33
2,000 to 3,599 sf			110%	2.56
3,600 sf or more			118%	2.75
<b>Weighted Average</b>	<b>1,014,653</b>	<b>435,527</b>		<b>2.33</b>
<b>Senior Adult Housing<sup>(5)</sup></b>				
800 sf & Under			64%	1.14
801 to 1,399 sf			88%	1.57
1,400 to 1,999 sf			100%	1.78
2,000 to 3,599 sf			110%	1.96
3,600 sf or more			118%	2.10
<b>Weighted Average</b>	<b>775,905</b>	<b>435,527</b>		<b>1.78</b>

- 1) Source: 2019 ACS, Table B25033 (adjusted for peak seasonal population)
- 2) Source: 2019 ACS, Table DP04
- 3) Ratios developed based on national PPH data derived from the 2019 American Housing Survey
- 4) Population (Item 1) divided by Housing Units (Item 2)
- 5) Estimate for Senior Housing is based on people per household figures, adjusted for the residents over 55 years of age based on information obtained from the 2017 National Household Travel Survey, prepared by the US Department of Transportation.

***Functional Population***

Functional population, as used in the impact fee analysis, is a generally accepted methodology for several impact fee areas and is based on the assumption that demand for certain facilities is generally proportional to the presence of people at a land use, including residents, employees, and visitors. It is not enough to simply add resident population to the number of employees, since the service demand characteristics can vary considerably by type of industry.

Functional population is the equivalent number of people occupying space within a community on a 24-hour-day, 7-days-a-week basis. A person living and working in the community will have the functional population coefficient of 1.0. A person living in the community but working elsewhere may spend only 16 hours per day in the community on weekdays and 24 hours per day on weekends for a functional population coefficient of 0.76 (128-hour presence divided by

168 hours in one week). A person commuting into the county to work five days per week would have a functional population coefficient of 0.30 (50-hour presence divided by 168 hours in one week). Similarly, a person traveling into the community to shop at stores, perhaps averaging 8 hours per week, would have a functional population coefficient of 0.05.

Functional population thus tries to capture the presence of all people within the community, whether residents, workers, or visitors, to arrive at a total estimate of effective population needed to be served.

This form of adjusting population to help measure real facility needs replaces the population approach of merely weighting residents two-thirds and workers one-third (Nelson and Nicholas 1992)<sup>2</sup>. By estimating the functional and weighted population per unit of land use across all major land uses in a community, an estimate of the demand for certain facilities and services in the present and future years can be calculated. The following paragraphs explain how functional population is calculated for residential and non-residential land uses.

#### Residential Functional Population

Developing the residential component of functional population is simpler than developing the non-residential component. It is generally estimated that people spend one-half to three-fourths of their time at home and the rest of each 24-hour day away from their place of residence. In developing the residential component of Palm Beach County's functional population, an analysis of the County's population and employment characteristics was conducted. Tables A-5 and A-6 present this analysis for the County. Based on this analysis, Palm Beach County residents, on average, spend 16 hours each day at their place of residence. This corresponds to approximately 67 percent of each 24-hour day at their place of residence and the other 33 percent away from home.

It is important to note that these calculations were reviewed on a countywide basis as well as for the law enforcement service area. There was no change between the estimated residential functional population coefficient. Therefore, the countywide figure is also utilized for the law enforcement service area.

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<sup>2</sup> Arthur C. Nelson and James C. Nicholas, "Estimating Functional Population for Facility Planning," *Journal of Urban Planning and Development* 118(2): 45-58 (1992)

**Table A-5  
Population & Employment Characteristics**

Item/Calculation Step	Figure
Total workers living in Palm Beach County <sup>(1)</sup>	646,470
Palm Beach County Population (2016) <sup>(2)</sup>	1,413,180
Total workers as a percent of population <sup>(3)</sup>	45.7%
School age population (5-17 years) (2016) <sup>(4)</sup>	202,514
School age population as a percent of population <sup>(5)</sup>	14.3%
Population net of workers and school age population <sup>(6)</sup>	564,196
Other population as a percent of total population <sup>(7)</sup>	39.9%

- 1) Source: Census Transportation Planning Package (CTPP) 2016
- 2) Source: Appendix A, Table A-14
- 3) Total workers (Item 1) divided by population (Item 2)
- 4) Source: 2016 ACS 5-Yr Estimates, Table S01001
- 5) Total school age population (Item 4) divided by 2016 population (Item 2)
- 6) Palm Beach County population (Item 2) less total workers (Item 1) and school age population (Item 4)
- 7) Population net of workers and school age population (Item 6) divided by 2016 population (Item 2)

**Table A-6  
Residential Coefficient for 24-Hour Functional Population**

Population Group	Hours at Residence <sup>(1)</sup>	Percent of Population <sup>(2)</sup>	Effective Hours <sup>(3)</sup>
Workers	13	45.7%	5.9
Students	15	14.3%	2.1
Other	20	39.9%	8.0
Total Hours at Residence <sup>(4)</sup>			16.0
<b>Residential Functional Population Coefficient<sup>(5)</sup></b>			<b>66.7%</b>

- 1) Estimated
- 2) Source: Appendix A, Table A-5
- 3) Hours at residence (Item 1) multiplied by percent of population (Item 2)
- 4) Sum of effective hours
- 5) Sum of effective hours (Item 4) divided by 24

The resulting percentage from Table A-6 is used in the calculation of the residential coefficient for the 24-hour functional population. The actual calculations are presented in Tables A-8 and A-9.

Non-Residential Functional Population

Given the varying characteristics of non-residential land uses, developing the estimates of functional residents for non-residential land uses is more complicated than developing estimated

functional residents for residential land uses. Nelson and Nicholas originally introduced a method for estimating functional resident population, which is now widely used in the industry. This method uses trip generation data from the Institute of Transportation Engineers' (ITE) Trip Generation Manual and Benesch's Trip Characteristics Database, information of passengers per vehicle, workers per vehicle, length of time spent at the land use, and other variables.

Specific calculations include:

- Total one-way trips per employee (ITE trips multiplied by 50 percent to avoid double counting entering and exiting trips as two trips).
- Visitors per impact unit based on occupants per vehicle (trips multiplied by occupants per vehicle less employees).
- Worker hours per week per impact unit (such as nine worker-hours per day multiplied by five days in a work week).
- Visitor hours per week per impact unit (visitors multiplied by number of hours per day times relevant days in a week, such as five for offices and seven for retail shopping).
- Functional population coefficients per employee developed by estimating time spent by employees and visitors at each land use.

Table A-7 shows the functional population coefficients for residential and non-residential uses in Palm Beach County, which are used to estimate the 2021 functional population for the countywide and law enforcement service area in Tables A-8 and A-9.

**Table A-7  
General Functional Population Coefficients**

Population/ Employment Category	ITE LUC	Employee Hours In-Place <sup>(1)</sup>	Trips per Employee <sup>(2)</sup>	One-Way Trips per Employee <sup>(3)</sup>	Journey-to-Work Occupants per Trip <sup>(4)</sup>	Daily Occupants per Trip <sup>(5)</sup>	Visitors per Employee <sup>(6)</sup>	Visitor Hours per Trip <sup>(1)</sup>	Days per Week <sup>(7)</sup>	Functional Population Coefficient <sup>(8)</sup>
Population									7.00	0.667
Natural Resources	n/a	9.00	3.10	1.55	1.32	1.38	0.09	1.00	7.00	0.379
Construction	110	9.00	3.10	1.55	1.32	1.38	0.09	1.00	5.00	0.271
Manufacturing	140	9.00	2.51	1.26	1.32	1.38	0.08	1.00	5.00	0.270
Transportation, Communication, Utilities	110	9.00	3.10	1.55	1.32	1.38	0.09	1.00	5.00	0.271
Wholesale Trade	150	9.00	5.05	2.53	1.32	1.38	0.15	1.00	5.00	0.272
Retail Trade	820	9.00	50.50	25.25	1.24	1.73	12.37	1.50	7.00	1.148
Finance, Insurance, Real Estate	710	9.00	3.33	1.67	1.24	1.73	0.82	1.00	5.00	0.292
Services <sup>(9)</sup>	n/a	9.00	20.32	10.16	1.24	1.73	4.98	1.00	6.00	0.499
Government <sup>(10)</sup>	730	9.00	7.45	3.73	1.24	1.73	1.83	1.00	7.00	0.451

(1) Assumed

(2) Trips per employee represents all trips divided by the number of employees and is based on Trip Generation 11th Edition (Institute of Transportation Engineers 2021) as follows:  
 ITE Code 110 at 3.10 weekday trips per employee, Volume 2 - Industrial Land Uses, page 39  
 ITE Code 140 at 2.51 weekday trips per employee, Volume 2 - Industrial Land Uses, page 76  
 ITE Code 150 at 5.05 weekday trips per employee, Volume 2 - Industrial Land Uses, page 104  
 ITE Code 710 at 3.33 weekday trips per employee, Volume 2 Office Land Uses, page 716  
 ITE Code 730 at 7.45 weekday trips per employee, Volume 2 Office Land Uses, page 795  
 ITE Code 820 (page 186) based on blended average of trips by retail center size calculated below.  
 Trips per retail employee from the following table:

Retail Scale	Trip Rate	Sq Ft per Employee <sup>(11)</sup>	Trips per Employee	Share	Weighted Trips
Retail (Less than 40k sq. ft.)	54.45	802	44	50.0%	22.00
Retail (40k to 150k sq. ft.)	67.52	975	66	35.0%	23.10
Retail (greater than 150k sq. ft.)	37.01	963	36	15.0%	5.40
Sum of Weighted Trips/1k sq.ft.					50.50

(3) Trip per employee (Item 2) multiplied by 0.5.

(4) Journey-to-Work Occupants per Trip from 2001 Nationwide Household Travel Survey (FHWA 2001) as follows:  
 1.32 occupants per Construction, Manufacturing, TCU, and Wholesale trip  
 1.24 occupants per Retail Trade, FIRE, and Services trip

(5) Daily Occupants per Trip from 2001 Nationwide Household Travel Survey (FHWA 2001) as follows:  
 1.38 occupants per Construction, Manufacturing, TCU, and Wholesale trip  
 1.73 occupants per Retail Trade, FIRE, and Services trip

(6) [Daily occupants per trip (Item 5) multiplied by one-way trips per employee (Item 3)] - [(Journey-to-Work occupants per trip (Item 4) multiplied by one-way trips per employee (Item 3))

(7) Typical number of days per week that indicated industries provide services and relevant government services are available.

(8) Table A-6 for residential and the equation below to determine the Functional Population Coefficient for all land-use categories except residential includes the following:  

$$\frac{((\text{Days per Week} \times \text{Employee Hours in Place}) + (\text{Visitors per Employee} \times \text{Visitor Hours per Trip} \times \text{Days per Week}))}{(24 \text{ Hours per Day} \times 7 \text{ Days per Week})}$$

(9) Trips per employee for the services category is the average trips per employee for the following service related land use categories: quality restaurant, high-turnover restaurant, supermarket, hotel, motel, elementary school, middle school, high school, hospital, medical office, and church. Source for the trips per employee figure from ITE, 11th ed., when available.

(10) Includes Federal Civilian Government, Federal Military Government, and State and Local Government categories.

(11) Square feet per retail employee from the Energy Information Administration from Table B-1 of the Commercial Energy Building Survey, 2003

**Table A-8  
Functional Population, Countywide**

<b>Population Category</b>	<b>Palm Beach County Baseline Data <sup>(1)</sup></b>	<b>Functional Resident Coefficient <sup>(2)</sup></b>	<b>Functional Population <sup>(3)</sup></b>
2021 Weighted Population	1,598,324	0.667	1,066,082
<b><i>Employment Category</i></b>			
Natural Resources	11,646	0.379	4,414
Construction	56,238	0.271	15,240
Manufacturing	24,264	0.270	6,551
Transportation, Communication, and Utilities	46,160	0.271	12,509
Wholesale Trade	28,447	0.272	7,738
Retail Trade	94,130	1.148	108,061
Finance, Insurance, and Real Estate	169,670	0.292	49,544
Services	534,402	0.499	266,667
Government Services	68,913	0.451	31,080
Total Employment by Category Population <sup>(4)</sup>			501,804
<b>2021 Total Functional Population <sup>(5)</sup></b>			<b>1,567,886</b>

- 1) Source: Table A-1 for population and 2021 Woods & Poole for employment data
- 2) Source: Table A-7
- 3) The functional population is Palm Beach County baseline data (Item 1) multiplied by the functional resident coefficient (Item 2)
- 4) The total employment population by category is the sum of the employment figures from the nine employment categories (e.g., natural resources, construction, etc.)
- 5) The total functional population is the sum of the residential functional population and the employment functional population



**Table A-9**  
**Functional Population, Law Enforcement Service Area**

Population Category	Palm Beach County Baseline Data <sup>(1)</sup>	Functional Resident Coefficient <sup>(2)</sup>	Functional Population <sup>(3)</sup>
2021 Weighted Population	943,870	0.667	629,561
<b>Employment Category</b>			
Natural Resources	9,189	0.379	3,483
Construction	21,652	0.271	5,868
Manufacturing	8,371	0.270	2,260
Transportation, Communication, and Utilities	18,095	0.271	4,904
Wholesale Trade	9,900	0.272	2,693
Retail Trade	35,769	1.148	41,063
Finance, Insurance, and Real Estate	44,963	0.292	13,129
Services	86,573	0.499	43,200
Government Services	6,960	0.451	3,139
Total Employment by Category Population <sup>(4)</sup>			119,739
<b>2021 Total Functional Population <sup>(5)</sup></b>			<b>749,300</b>

- 1) Source: Table A-1 for population and 2021 Woods & Poole for employment data
- 2) Source: Table A-7
- 3) The functional population is Palm Beach County baseline data (Item 1) multiplied by the functional resident coefficient (Item 2)
- 4) The total employment population by category is the sum of the employment figures from the nine employment categories (e.g., natural resources, construction, etc.)
- 5) The total functional population is the sum of the residential functional population and the employment functional population

Table A-10 presents the County’s annual functional population figures for both countywide and the law enforcement service area from 2000 through 2040, based on the 2021 functional population figures from Tables A-8 and A-9, and the annual population growth rates from the population figures previously presented in Table A-1.

**Table A-10**  
**Functional Population (2000 - 2040)**

Year	Functional Population	
	Palm Beach Countywide <sup>(1)</sup>	Service Area for Law Enf. <sup>(1)</sup>
2000	1,170,421	566,381
2001	1,196,638	579,408
2002	1,225,597	596,906
2003	1,257,340	610,754
2004	1,291,665	620,465
2005	1,320,857	629,214
2006	1,337,500	632,863
2007	1,347,665	639,951
2008	1,351,438	641,615
2009	1,354,141	642,192
2010	1,374,182	666,146
2011	1,386,000	671,608
2012	1,399,306	676,914
2013	1,415,398	683,683
2014	1,434,364	692,092
2015	1,455,736	701,158
2016	1,474,515	708,801
2017	1,498,255	717,448
2018	1,518,931	724,479
2019	1,537,006	731,651
2020	1,547,765	736,992
<b>2021</b>	<b>1,567,886</b>	<b>749,300</b>
2022	1,585,603	757,767
2023	1,603,520	766,330
2024	1,621,640	774,990
2025	1,639,965	783,747
2026	1,654,725	790,801
2027	1,669,618	797,918
2028	1,684,645	805,099
2029	1,699,807	812,345
2030	1,715,445	819,819
2031	1,727,625	825,640
2032	1,739,891	831,502
2033	1,752,244	837,406
2034	1,764,685	843,352
2035	1,776,861	849,171
2036	1,786,811	853,926
2037	1,796,817	858,708
2038	1,806,879	863,517
2039	1,816,998	868,353
2040	1,827,537	873,389

Source: Tables A-8 (Countywide) and A-9 (Law Enforcement) for 2021. Other years are based on growth rates for Palm Beach County weighted seasonal population; Table A-1

### Functional Residents by Specific Land Use Category

When a wide range of land uses impact services, an estimate of that impact is needed for each land use. This section presents functional population coefficient estimates by residential and non-residential land uses.

#### *Residential and Transient Land Uses*

As mentioned previously, different functional population coefficients need to be developed for each impact fee service area to be analyzed. For residential and transient land uses, these coefficients are displayed in Tables A-11 and A-12. The average number of persons per housing unit was calculated for the residential categories by size of home. The analysis is based on information obtained from the 2019 ACS. Besides the residential land uses, Tables A-11 and A-12 also include transient land uses, such as hotels, motels, congregate care facilities (CCF), and nursing homes. Secondary sources, such as the Palm Beach County Research, Strategy & Destination Development and the Florida Department of Elderly Affairs, are used to determine the occupancy rate for hotels, motels, congregate living facilities, and nursing homes.

#### *Non-Residential Land Uses*

A similar approach is used to estimate functional residents for non-residential land uses. Table A-13 presents basic assumptions and calculations, such as trips per unit, trips per employee, employees per impact unit, one-way trips per impact unit, worker hours, occupants per vehicle trip, visitors (patrons, etc.) per impact unit, visitor hours per trip, and days per week for non-residential land uses. The final column shows the estimated functional resident coefficients by land use. These coefficients by land use create the demand component for the select impact fee programs and will be used in the calculation of the impact fee per unit for each land use category in the select impact fee schedules.

**Table A-11**

**24-Hour Functional Residents for Residential and Transient Land Uses, Countywide**

Residential Land Use	Impact Unit	ITE LUC <sup>(1)</sup>	Residents/Visitors Per Unit <sup>(2)</sup>	Occupancy Rate <sup>(3)</sup>	Adjusted Residents per Unit <sup>(4)</sup>	Peak Visitor Hours at Place <sup>(5)</sup>	Workers per Unit <sup>(6)</sup>	Work Day Hours <sup>(7)</sup>	Days per Week <sup>(8)</sup>	Functional Residents per Unit <sup>(9)</sup>
<b>Residential</b>										
<b>All Residential</b>										
800 sf & Under	du	N/A	1.43	-	-	-	-	-	-	0.95
801 to 1,399 sf	du	N/A	1.96	-	-	-	-	-	-	1.31
1,400 to 1,999 sf	du	N/A	2.23	-	-	-	-	-	-	1.49
2,000 to 3,599 sf	du	N/A	2.45	-	-	-	-	-	-	1.63
3,600 sf or more	du	N/A	2.63	-	-	-	-	-	-	1.75
<b>Senior Adult Housing</b>										
800 sf & Under	du	N/A	1.09	-	-	-	-	-	-	0.73
801 to 1,399 sf	du	N/A	1.50	-	-	-	-	-	-	1.00
1,400 to 1,999 sf	du	N/A	1.71	-	-	-	-	-	-	1.14
2,000 to 3,599 sf	du	N/A	1.88	-	-	-	-	-	-	1.25
3,600 sf or more	du	N/A	2.02	-	-	-	-	-	-	1.35
<b>Transient, Assisted, Group</b>										
Hotel/Motel	room	310/320	2.10	70%	1.47	12	0.29	9	7	0.84
Nursing Home/Congregate Living Facility	bed	254/620	1.00	84%	0.84	16	0.75	9	7	0.84
<p>(1) Land use code from the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 11th Edition</p> <p>(2) Estimates for the residential land uses from Table A-2; estimates for the hotel/motel land use is based on data obtained from Palm Beach County Research, Strategy &amp; Destination Development. One person per bed is assumed for nursing homes/congregate living facilities.</p> <p>(3) Source for hotel/motel occupancy: Palm Beach County Research, Strategy &amp; Destination Development. Hotel/motel occupancy rate based on average hotel/motel occupancy rate for 2009 through 2019. Source for nursing home/CLF occupancy rate is the Florida Department of Elderly Affairs, Palm Beach County Profile. Nursing home/CLF occupancy rate shows occupancy rate in 2018.</p> <p>(4) Residents per unit times occupancy rate</p> <p>(5), (7), (8) Estimated</p> <p>(6) Adapted from ITE Trip Generation Handbook, 11th Edition</p> <p>(9) For residential this is Residents Per Unit times 0.667. For Transient, Assisted, and Group it is:</p> <p><u>[(Adjusted Residents per Unit X Hours at Place X Days per Week) + (Workers Per Unit X Work Hours Per Day X Days per Week)]</u></p> <p>(24 Hours per Day X 7 Days per Week)</p>										

**Table A-12**

**24-Hour Functional Residents for Residential Land Uses and Transient Land Uses, Law Enforcement Service Area**

Residential Land Use	Impact Unit	ITE LUC <sup>(1)</sup>	Residents/Visitors per Unit <sup>(2)</sup>	Occupancy Rate <sup>(3)</sup>	Adjusted Residents per Unit <sup>(4)</sup>	Peak Visitor Hours at Place <sup>(5)</sup>	Workers per Unit <sup>(6)</sup>	Work Day Hours <sup>(7)</sup>	Days per Week <sup>(8)</sup>	Functional Residents per Unit <sup>(9)</sup>
<b>Residential</b>										
Single Family	du	210 /230	2.82							1.88
Multi-Family	du	220	1.69	-	-	-	-	-	-	1.13
Mobile Home	du	240	2.84	-	-	-	-	-	-	1.89
Senior Housing (Detached)	du	251	2.15	-	-	-	-	-	-	1.43
Senior Housing (Attached)	du	252	1.29	-	-	-	-	-	-	0.86
<b>Transient, Assisted, Group</b>										
Hotel / Motel	room	310	2.10	70%	1.47	12	0.29	9	7	0.84
Nursing Home/Congregate Living Facility	bed	254/620	1.00	84%	0.84	16	0.75	9	7	0.84
<p>(1) Land use code from the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 11th Edition                      (2) Estimates for the residential land uses from Table A-2; estimates for the hotel/motel land use is based on data obtained from Palm Beach County Research, Strategy &amp; Destination Development. One person per bed is assumed for nursing homes/congregate living facilities.                      (3) Source for hotel/motel occupancy: Palm Beach County Research, Strategy &amp; Destination Development. Hotel/motel occupancy rate based on average hotel/motel occupancy rate for 2009 through 2019. Source for nursing home/CLF occupancy rate is the Florida Department of Elderly Affairs, Palm Beach County Profile. Nursing home/CLF occupancy rate shows occupancy rate for 2018.                      (4) Residents per unit times occupancy rate                      (5), (7), (8) Estimated                      (6) Adapted from ITE Trip Generation Handbook, 11th Edition                      (9) For residential this is Residents Per Unit times 0.667. For Transient, Assisted, and Group it is:  <math display="block">\frac{[(\text{Adjusted Residents per Unit} \times \text{Hours at Place} \times \text{Days per Week}) + (\text{Workers Per Unit} \times \text{Work Hours Per Day} \times \text{Days per Week})]}{(24 \text{ Hours per Day} \times 7 \text{ Days per Week})}</math> </p>										

**Table A-13**  
**24-Hour Functional Population Estimates for Non-Residential Land Uses**

ITE LUC <sup>(1)</sup>	Land Use	Impact Unit	Trips per Unit <sup>(2)</sup>	Trips per Employee <sup>(3)</sup>	Employees per Unit <sup>(4)</sup>	One-Way Factor @ 50% <sup>(5)</sup>	Worker Hours <sup>(6)</sup>	Occupants per Trip <sup>(7)</sup>	Visitors <sup>(8)</sup>	Visitor Hours per Trip <sup>(9)</sup>	Days per Week <sup>(10)</sup>	Functional Residents per Unit <sup>(11)</sup>
<b>RECREATIONAL:</b>												
411	Public Park	acre	0.78	59.53	0.01	0.39	9	1.87	0.72	1.50	7	0.05
430	Golf Course	hole	30.38	20.52	1.48	15.19	9	1.87	26.93	0.25	7	0.84
445	Movie Theater	screen	114.83	53.12	2.16	57.42	9	1.87	105.22	1.00	7	5.19
491	Racquet/Tennis Club	court	27.71	45.71	0.61	13.86	9	1.87	25.31	1.50	7	1.81
<b>INSTITUTIONS:</b>												
520	Elementary School (Private)	student	2.27	22.50	0.10	1.14	9	1.11	1.17	2.00	5	0.10
522	Middle/Junior High School (Private)	student	2.10	23.41	0.09	1.05	9	1.11	1.08	2.00	5	0.09
525	High School (Private)	student	1.94	21.95	0.09	0.97	9	1.11	0.99	2.00	5	0.08
560	Church/Synagogue	1,000 sf	7.60	20.64	0.37	3.80	9	1.79	6.43	1.00	7	0.41
565	Day Care Center	1,000 sf	49.63	21.38	2.32	24.82	9	1.79	42.11	0.15	5	0.81
566	Cemetery	acre	6.02	51.75	0.12	3.01	9	1.79	5.27	0.50	7	0.15
<b>MEDICAL:</b>												
610	Hospital	1,000 sf	10.77	3.77	2.86	5.39	9	1.54	5.44	1.00	7	1.30
640	Animal Hospital/Veterinary Clinic	1,000 sf	24.20	12.69	1.91	12.10	9	1.54	16.72	1.00	7	1.41
<b>OFFICE:</b>												
710	General Office	1,000 sf	10.84	3.33	3.26	5.42	9	1.27	3.62	1.00	5	0.98
720	Medical Office (less than 10,000 sf)	1,000 sf	23.83	8.71	2.74	11.92	9	1.54	15.62	1.00	5	1.20
720	Medical Office (10,000 sf and greater)	1,000 sf	34.21	8.71	3.93	17.11	9	1.54	22.42	1.00	5	1.72
<b>RETAIL:</b>												
817	Nursery (Garden Center)	acre	108.10	21.83	4.95	54.05	9	1.72	88.02	1.00	7	5.52
822	Retail/Shopping Center less than 40,000 sf g/a	1,000 sf g/a	54.45	17.42	3.13	27.23	9	1.72	43.71	0.50	7	2.08
821	Retail/Shopping Center 40,000 to 150,000 sf g/a	1,000 sf g/a	67.52	17.42	3.88	33.76	9	1.72	54.19	0.50	7	2.58
820	Retail/Shopping Center greater than 150,000 sf g/a	1,000 sf g/a	37.01	17.42	2.12	18.51	9	1.72	29.72	0.50	7	1.41
840/841	New/Used Car Sales	1,000 sf	24.58	11.84	2.08	12.29	9	1.72	19.06	1.00	7	1.57
848	Tire Store	1,000 sf	27.69	16.78	1.65	13.85	9	1.72	22.17	1.00	7	1.54
851	Convenience Market	1,000 sf	739.50	243.38	3.04	369.75	9	1.72	632.93	0.20	7	6.41
880/881	Pharmacy/Drug Store with and w/o Drive-Thru	1,000 sf	103.86	69.17	1.50	51.93	9	1.72	87.82	0.35	7	1.84
882	Marijuana Dispensary	1,000 sf	211.12	N/A	1.50	105.56	9	1.72	180.06	0.35	7	3.19
890	Furniture Store	1,000 sf	6.30	10.93	0.58	3.15	9	1.72	4.84	0.50	7	0.32
<b>SERVICES:</b>												
912	Bank/Savings w/Drive-In	1,000 sf	103.73	32.73	3.17	51.87	9	1.72	86.05	0.15	6	1.48
931	Fine Dining/Quality Restaurant	1,000 sf	86.03	17.90	4.81	43.02	9	2.32	95.00	1.00	7	5.76
932	High-Turnover Restaurant	1,000 sf	103.46	21.26	4.87	51.73	9	2.32	115.14	0.75	7	5.42
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	479.17	44.52	10.76	239.59	9	2.32	545.09	0.25	7	9.71
941	Quick Lubrication Vehicle Shop	bay	40.00	16.00	2.50	20.00	9	1.72	31.90	0.50	7	1.60
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	172.01	275.78	0.62	86.01	9	1.72	147.32	0.20	7	1.46
945	Gas Station w/Convenience Store 2,000 to 5,499 sq ft	fuel pos.	264.38	241.21	1.10	132.19	9	1.72	226.27	0.20	7	2.30
945	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	345.75	241.21	1.43	172.88	9	1.72	295.92	0.20	7	3.00
947	Self-Service Car Wash	bay	43.94	n/a	0.50	21.97	9	1.72	37.29	0.50	7	0.96
<b>INDUSTRIAL:</b>												
110	General Light Industrial	1,000 sf	4.87	3.10	1.57	2.44	9	1.46	1.99	1.00	5	0.48
150	Warehousing	1,000 sf	1.71	5.05	0.34	0.86	9	1.46	0.92	0.75	5	0.11
151	Mini-Warehouse	1,000 sf	1.46	61.90	0.02	0.73	9	1.46	1.05	0.75	7	0.04

- 1) Land use code found in the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 11th Edition
- 2) Land uses and trip generation rates consistent with those included in the Transportation Impact Fee Update Study
- 3) Trips per employee from ITE Trip Generation Handbook, 11th Edition, when available
- 4) Trips per impact unit divided by trips per person (usually employee). When trips per person are not available, the employees per unit is estimated.
- 5) Trips per unit (Item 2) multiplied by 50 percent
- (6), (9), (10) Estimated
- 7) Nationwide Personal Transportation Survey
- 8) [(One-way Trips/Unit X Occupants/Trip) - Employees].
- 11) [(Workers X Hours/Day X Days/Week) + (Visitors X Hours/Visit X Days/Week)]/(24 Hours x 7 Days)

**Table A-14**  
**Weighted Seasonal Population Projections, Countywide**

Year	Permanent Population <sup>(1)</sup>	Seasonal Population <sup>(2)</sup>	Total Weighted Season Pop. <sup>(3)</sup>
2000	1,131,191	61,734	1,192,925
2001	1,156,550	63,078	1,219,628
2002	1,184,549	64,605	1,249,154
2003	1,215,286	66,282	1,281,568
2004	1,248,466	68,092	1,316,558
2005	1,273,752	72,625	1,346,377
2006	1,291,426	71,936	1,363,362
2007	1,302,451	71,217	1,373,668
2008	1,307,784	69,732	1,377,516
2009	1,312,016	68,288	1,380,304
2010	1,320,134	80,543	1,400,677
2011	1,330,681	81,972	1,412,653
2012	1,343,284	82,976	1,426,260
2013	1,357,675	85,046	1,442,721
2014	1,374,877	87,143	1,462,020
2015	1,395,024	88,742	1,483,766
2016	1,413,180	89,714	1,502,894
2017	1,435,357	91,796	1,527,153
2018	1,455,251	93,041	1,548,292
2019	1,472,706	94,087	1,566,793
2020	1,492,191	85,595	1,577,786
<b>2021</b>	<b>1,502,495</b>	<b>95,829</b>	<b>1,598,324</b>
2022	1,519,473	96,913	1,616,386
2023	1,536,643	98,007	1,634,650
2024	1,554,007	99,115	1,653,122
2025	1,571,500	100,230	1,671,730
2026	1,585,644	101,133	1,686,777
2027	1,599,915	102,042	1,701,957
2028	1,614,314	102,961	1,717,275
2029	1,628,843	103,887	1,732,730
2030	1,643,900	104,848	1,748,748
2031	1,655,572	105,592	1,761,164
2032	1,667,327	106,342	1,773,669
2033	1,679,165	107,097	1,786,262
2034	1,691,087	107,858	1,798,945
2035	1,702,700	108,598	1,811,298
2036	1,712,235	109,206	1,821,441
2037	1,721,824	109,818	1,831,642
2038	1,731,466	110,433	1,841,899
2039	1,741,162	111,052	1,852,214
2040	1,751,200	111,692	1,862,892

- 1) Source: BEBR-Medium projections for 2040. Interim years were interpolated to smooth out annual population growth rates.
- 2) Seasonal, occasional, and recreational population is estimated by multiplying permanent population (Item 1) by the ratio of seasonal to permanent population from the 2000 U.S Census for years 2001-2009 and county provided figures for 2010-2040. The figures are weighed by 0.42 to account for seasonal residents only residing in Palm Beach County for a portion of the year (assume 5 months; 5 months divided by 12 months = 0.42).
- 3) Sum of permanent population (Item 1) and seasonal population (Item 2)



**Table A-15**  
**Weighted Seasonal Population Projections, Library Service Area**

Year	Permanent Population <sup>(1)</sup>	Seasonal Population <sup>(2)</sup>	Total Weighted Season Pop. <sup>(3)</sup>
2000	731,460	36,590	768,050
2001	749,043	37,392	786,435
2002	773,437	38,610	812,047
2003	794,952	39,684	834,636
2004	811,631	40,517	852,148
2005	825,469	43,251	868,720
2006	834,620	42,635	877,255
2007	844,631	42,281	886,912
2008	849,169	41,355	890,524
2009	852,136	40,416	892,552
2010	876,834	50,919	927,753
2011	883,686	51,839	935,525
2012	885,934	52,120	938,054
2013	890,688	53,174	943,862
2014	898,888	54,331	953,219
2015	909,448	55,180	964,628
2016	918,627	55,617	974,244
2017	930,167	56,752	986,919
2018	940,164	57,346	997,510
2019	948,952	57,835	1,006,787
2020	977,878	53,235	1,031,113
<b>2021</b>	<b>975,119</b>	<b>59,326</b>	<b>1,034,445</b>
2022	986,138	59,996	1,046,134
2023	997,281	60,675	1,057,956
2024	1,008,551	61,360	1,069,911
2025	1,019,904	62,051	1,081,955
2026	1,029,083	62,609	1,091,692
2027	1,038,345	63,173	1,101,518
2028	1,047,690	63,741	1,111,431
2029	1,057,119	64,315	1,121,434
2030	1,066,891	64,910	1,131,801
2031	1,074,466	65,370	1,139,836
2032	1,082,095	65,835	1,147,930
2033	1,089,778	66,302	1,156,080
2034	1,097,515	66,773	1,164,288
2035	1,105,052	67,231	1,172,283
2036	1,111,241	67,608	1,178,849
2037	1,117,464	67,986	1,185,450
2038	1,123,721	68,367	1,192,088
2039	1,130,014	68,750	1,198,764
2040	1,136,529	69,147	1,205,676

- 1) Source: BEBR-Medium projection for 2040. Interim years were interpolated to smooth out annual population growth rates.
- 2) Source: Seasonal, occasional, and recreational population is estimated by multiplying permanent population (Item 1) by the ratio of seasonal to permanent population from the 2000 U.S Census for years 2001-2009 and county provided figures for 2011-2040. The figures are weighed by 0.42 to account for seasonal residents only residing in Palm Beach County for a portion of the year (assume 5 months; 5 months divided by 12 months = 0.42).
- 3) Sum of permanent population (Item 1) and seasonal population (Item 2)

**Table A-16**  
**Weighted Seasonal Population Projections, Law Enforcement Service Area**

Year	Permanent Population <sup>(1)</sup>	Seasonal Population <sup>(2)</sup>	Total Weighted Season Pop. <sup>(3)</sup>
2000	682,737	30,710	713,447
2001	698,515	31,349	729,864
2002	719,591	32,296	751,887
2003	736,304	33,045	769,349
2004	747,984	33,570	781,554
2005	756,774	35,838	792,612
2006	762,142	35,091	797,233
2007	771,433	34,729	806,162
2008	774,445	33,813	808,258
2009	776,071	32,897	808,968
2010	796,982	42,131	839,113
2011	802,925	43,054	845,979
2012	809,162	43,526	852,688
2013	816,619	44,637	861,256
2014	826,053	45,765	871,818
2015	836,727	46,550	883,277
2016	845,914	46,951	892,865
2017	855,895	47,907	903,802
2018	864,260	48,360	912,620
2019	872,828	48,797	921,625
2020	884,680	43,703	928,383
<b>2021</b>	<b>893,985</b>	<b>49,885</b>	<b>943,870</b>
2022	904,086	50,449	954,535
2023	914,303	51,018	965,321
2024	924,634	51,594	976,228
2025	935,043	52,176	987,219
2026	943,458	52,645	996,103
2027	951,949	53,119	1,005,068
2028	960,517	53,597	1,014,114
2029	969,162	54,080	1,023,242
2030	978,121	54,579	1,032,700
2031	985,065	54,967	1,040,032
2032	992,060	55,357	1,047,417
2033	999,103	55,750	1,054,853
2034	1,006,197	56,146	1,062,343
2035	1,013,107	56,532	1,069,639
2036	1,018,780	56,848	1,075,628
2037	1,024,485	57,167	1,081,652
2038	1,030,222	57,486	1,087,708
2039	1,035,991	57,808	1,093,799
2040	1,041,964	58,141	1,100,105

- 1) Source: BEBR-Medium projection for 2040. Interim years were interpolated to smooth out annual population growth rates.
- 2) Seasonal, occasional, and recreational population is estimated by multiplying permanent population (Item 1) by the ratio of seasonal to permanent population from the 2000 U.S Census for years 2001-2009 and county provided figures for 2011-2040. The figures are weighed by 0.42 to account for seasonal residents only residing in Palm Beach County for a portion of the year (assume 5 months; 5 months divided by 12 months = 0.42).
- 3) Sum of permanent population (Item 1) and seasonal population (Item 2)

**Table A-17**

**Weighted Seasonal Population Projections, Law Enforcement Service Area**

Palm Beach County/ Cities	Countywide Service Area				Library Service Area	Law Enf. Service Area	Fire Rescue Service Area
	Roads	Parks	Public Bldgs	Schools			
City of Atlantis	Y	Y	Y	Y	Y	N	N
City of Belle Glade	Y	Y	Y	Y	Y	Y	Y
City of Boca Raton	Y	Y	Y	Y	N	N	N
City of Boynton Beach	Y	Y	Y	Y	N	N	N
City of Briny Breezes	Y	Y	Y	Y	Y	N	N
Town of Cloud Lake	Y	Y	Y	Y	Y	Y	Y
City of Delray Beach	Y	Y	Y	Y	N	N	N
Town of Glen Ridge	Y	Y	Y	Y	Y	Y	Y
City of Greenacres	Y	Y	Y	Y	Y	Y	N
Town of Gulf Stream	Y	Y	Y	Y	N	N	N
Town of Haverhill	Y	Y	Y	Y	Y	Y	Y
Town of Highland Beach	Y	Y	Y	Y	N	N	N
Town of Hypoluxo	Y	Y	Y	Y	Y	N	N
Town of Juno Beach	Y	Y	Y	Y	Y	N	Y
Town of Jupiter Inlet Colony	Y	Y	Y	Y	Y	N	N
Town of Jupiter	Y	Y	Y	Y	Y	N	Y
Town of Lake Clarke Shores	Y	Y	Y	Y	Y	N	Y
Town of Lake Park	Y	Y	Y	Y	N	Y	Y
City of Lake Worth Beach	Y	Y	Y	Y	N	Y	Y
Town of Lantana	Y	Y	Y	Y	N	N	Y
Town of Loxahatchee Groves	Y	Y	Y	Y	Y	Y	Y
Town of Manalapan	Y	Y	Y	Y	N	N	Y
Town of Mangonia Park	Y	Y	Y	Y	Y	Y	N
Village of North Palm Beach	Y	Y	Y	Y	N	N	N
Town of Ocean Ridge	Y	Y	Y	Y	Y	N	N
City of Pahokee	Y	Y	Y	Y	Y	Y	Y
Town of Palm Beach	Y	Y	Y	Y	N	N	N
City of Palm Beach Gardens	Y	Y	Y	Y	Y	N	N
Town of Palm Beach Shores	Y	Y	Y	Y	Y	Y	N
Village of Palm Springs	Y	Y	Y	Y	N	N	Y
City of Riviera Beach	Y	Y	Y	Y	N	N	N
Village of Royal Palm Beach	Y	Y	Y	Y	Y	Y	Y
City of South Palm Beach	Y	Y	Y	Y	Y	Y	Y
City of South Bay	Y	Y	Y	Y	Y	Y	Y
Village of Tequesta	Y	Y	Y	Y	Y	N	N
Village of Golf	Y	Y	Y	Y	N	Y	N
Village of Wellington	Y	Y	Y	Y	Y	Y	Y
<b>City of Westlake</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>
City of West Palm Beach	Y	Y	Y	Y	N	N	N
PBC Unincorporated	Y	Y	Y	Y	Y	Y	Y

Source: Palm Beach County

**Appendix B**  
**School Facilities Impact Fee – Inventory**

## **Appendix B: School Facilities Inventory**

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This appendix presents the inventory of traditional schools in Palm Beach County. The current inventory of traditional schools that are owned by the Palm Beach County Schools District is presented in Table B-1.

**Table B-1  
Existing School Facility Inventory**

Number	Schools	Year Acquired	Grade	Acres	FISH Permanent Net Square Footage	Permanent Student Stations	Modular Units	Modular Net Square Footage	Modular Stations	Total Permanent & Modular NSF	Total Perm & Modular Stations
<b>Elementary Schools</b>											
ES-1	Acreage Pines Elementary	1987	PK 05	48	85,958	553	0	0	0	85,958	553
ES-2	Allamanda Elementary	1963	PK 05	15	129,697	740	0	0	0	129,697	740
ES-3	Banyan Creek Elementary	1986	PK 05	19	141,298	1,136	0	0	0	141,298	1,136
ES-4	Barton Elementary	1956	PK 05	9	154,476	1,400	0	0	0	154,476	1,400
ES-5	Beacon Cove Intermediate Bessie Dubois Campus	2000	PK 05	15	111,271	857	8	9,976	144	121,247	1,001
ES-6	Belle Glade Elementary	1968	PK 05	19	120,366	978	0	0	0	120,366	978
ES-7	Belvedere Elementary	1941	PK 05	10	90,837	586	4	5,478	72	96,315	658
ES-8	Benoist Farms Elementary	2001	PK 05	16	117,508	856	0	0	0	117,508	856
ES-9	Berkshire Elementary	1958	PK 05	10	138,137	1,229	0	0	0	138,137	1,229
ES-10	Binks Forest Elementary	1999	PK 05	15	101,924	774	24	32,682	432	134,606	1,206
ES-11	Boca Raton Elementary	1937	PK 05	4	67,630	401	0	0	0	67,630	401
ES-12	Calusa Elementary	1986	PK 05	17	91,416	584	20	18,996	384	110,412	968
ES-13	Cholee Lake Elementary	2000	PK 05	20	110,507	766	20	24,539	360	135,046	1,126
ES-14	Citrus Cove Elementary	1987	PK 05	18	131,689	1,227	0	0	0	131,689	1,227
ES-15	Clifford O Taylor/Kirklane Elementary	1969	PK 05	19	171,830	1,439	0	0	0	171,830	1,439
ES-16	Coral Reef Elementary	1999	PK 05	26	133,629	1,162	0	0	0	133,629	1,162
ES-17	Coral Sunset Elementary	1984	PK 05	20	129,391	990	0	0	0	129,391	990
ES-18	Crosspointe Elementary	2000	PK 05	18	104,931	738	8	10,584	144	115,515	882
ES-19	Crystal Lakes Elementary	1986	PK 05	15	86,539	582	17	17,407	308	103,946	890
ES-20	Cypress Trails Elementary	1987	PK 05	20	81,807	637	8	13,104	144	94,911	781
ES-21	Del Prado Elementary	1987	PK 05	20	78,438	605	18	17,480	324	95,918	929
ES-22	Diamond View Elementary	2002	PK 05	25	127,491	750	23	22,080	380	149,571	1,130
ES-23	Discovery Key Elementary	1983	PK 05	23	109,097	738	25	29,156	450	138,253	1,188
ES-24	Dr Mary Mcleod Bethune Elementary	1998	PK 05	18	117,962	798	0	0	0	117,962	798
ES-25	Dwight D Eisenhower Elementary	1969	PK 05	9	138,431	731	0	0	0	138,431	731
ES-26	Egret Lake Elementary	1991	PK 05	25	93,785	583	8	12,150	144	105,935	727
ES-27	Elbridge Gale Elementary	2004	PK 05	18	125,858	1,038	0	0	0	125,858	1,038
ES-28	Equestrian Trails Elementary	2002	PK 05	10	119,703	766	8	7,680	144	127,383	910
ES-29	Everglades Elementary School (03-W)	2007	PK 05	15	119,246	942	0	0	0	119,246	942
ES-30	Forest Hill Elementary	1961	PK 05	13	101,926	754	12	11,520	252	113,446	1,006
ES-31	Forest Park Elementary	1955	PK 05	13	122,127	780	0	0	0	122,127	780
ES-32	Freedom Shores Elementary	1966	PK 05	22	112,589	806	20	23,240	360	135,829	1,166

**Table B-1 (Continued)**  
**Existing School Facility Inventory**

Number	Schools	Year Acquired	Grade	Acres	FISH Permanent Net Square Footage	Permanent Student Stations	Modular Units	Modular Net Square Footage	Modular Stations	Total Permanent & Modular NSF	Total Perm & Modular Stations
<b>Elementary Schools</b>											
ES-33	Frontier Elementary	2000	PK 05	20	108,101	738	7	8,400	108	116,501	846
ES-34	Galaxy Elementary	1957	PK 05	13	110,476	752	0	0	0	110,476	752
ES-35	Glade View Elementary	1964	PK 05	10	89,651	402	0	0	0	89,651	402
ES-36	Golden Grove Elementary	1996	PK 05	26	106,750	749	0	0	0	106,750	749
ES-37	Grassy Waters Elementary	2001	PK 05	15	116,707	785	11	13,860	198	130,567	983
ES-38	Greenacres Elementary	1926	PK 05	9	84,903	498	18	22,660	324	107,563	822
ES-39	Grove Park Elementary	1965	PK 05	11	80,844	702	14	24,189	252	105,033	859
ES-40	H L Johnson Elementary	1982	PK 05	20	138,266	1,000	0	0	0	138,266	1,000
ES-41	Hagen Road Elementary (New)	2006	PK 05	13	123,115	849	0	0	0	123,115	849
ES-42	Hammock Pointe Elementary	1989	PK 05	15	141,603	980	0	0	0	141,603	980
ES-43	Heritage Elementary	1999	PK 05	20	125,549	738	6	5,760	108	131,309	846
ES-44	Highland Elementary	1949	PK 05	12	107,950	610	30	30,873	462	138,823	1,072
ES-45	Hope Centennial Elementary (06-D)	2006	PK 05	8	123,111	952	0	0	0	123,111	952
ES-46	Indian Pines Elementary	1987	PK 05	15	138,771	1,158	0	0	0	138,771	1,158
ES-47	Indian Ridge School	1994	PK 12	9	76,691	269	0	0	0	76,691	269
ES-48	J C Mitchell Elementary	1957	PK 05	20	137,995	1,032	0	0	0	137,995	1,032
ES-49	Jerry Thomas Elementary	1979	PK 05	19	130,736	1,012	0	0	0	130,736	1,012
ES-50	Jupiter Elementary	1925	PK 05	14	131,191	824	3	2,676	51	133,867	875
ES-51	Jupiter Farms Elementary	1988	PK 05	59	87,508	587	5	6,637	90	94,145	677
ES-52	K E Cunningham/Canal Point Elementary	1984	PK 05	16	80,868	707	0	0	0	80,868	707
ES-53	Lake Park Elementary	1923	PK 05	5	71,139	418	0	0	0	71,139	418
ES-54	Lantana Elementary	1930	PK 05	10	96,394	599	0	0	0	96,394	599
ES-55	Liberty Park Elementary	1987	PK 05	11	135,187	981	3	2,881	54	138,068	1,035
ES-56	Lighthouse Elementary	1987	PK 05	20	77,768	701	9	12,946	162	90,714	863
ES-57	Limestone Creek Elementary	1987	PK 05	19	129,766	1,022	2	7,984	36	137,750	1,058
ES-58	Lincoln Elementary	1954	PK 05	17	163,261	974	0	0	0	163,261	974
ES-59	Loxahatchee Groves Elementary	1986	PK 05	30	94,688	564	16	15,360	296	110,048	860
ES-60	Manatee Elementary	1989	PK 05	15	160,500	1,441	5	6,960	0	167,460	1,441
ES-61	Marsh Pointe Elementary (03-X)	2002	PK 05	18	115,984	1,022	0	0	0	115,984	1,022
ES-62	Meadow Park Elementary	1954	PK 05	12	115,435	672	0	0	0	115,435	672
ES-63	Melaleuca Elementary	1966	PK 05	13	69,491	658	14	20,237	252	89,728	910
ES-64	Morikami Park Elementary	1986	PK 05	12	104,397	772	4	5,440	72	109,837	844

**Table B-1 (Continued)**  
**Existing School Facility Inventory**

Number	Schools	Year Acquired	Grade	Acres	FISH Permanent Net Square Footage	Permanent Student Stations	Modular Units	Modular Net Square Footage	Modular Stations	Total Permanent & Modular NSF	Total Perm & Modular Stations
<b>Elementary Schools</b>											
ES-65	New Horizons Elementary	1988	PK 05	28	81,822	623	7	7,720	126	89,542	749
ES-66	Northboro Elementary	1889	PK 05	8	123,968	970	0	0	0	123,968	970
ES-67	Northmore Elementary	1949	PK 05	10	95,673	637	0	0	0	95,673	637
ES-68	Orchard View Elementary	1994	PK 05	10	111,201	764	2	4,416	36	115,617	800
ES-69	Pahokee Elementary	1957	PK 05	9	81,140	671	0	0	0	81,140	671
ES-70	Palm Beach Gardens Elementary	1962	PK 05	10	111,459	739	0	0	0	111,459	739
ES-71	Palm Beach Public School	1921	PK 05	2	68,595	393	0	0	0	68,595	393
ES-72	Palm Springs Elementary	1958	PK 05	8	121,160	760	14	19,121	252	140,281	1,012
ES-73	Palmetto Elementary	1926/1998	PK 06	6	124,584	864	1	1,356	18	125,940	882
ES-74	Panther Run Elementary	1988	PK 05	20	130,092	978	0	0	0	130,092	978
ES-75	Pierce Hammock Elementary	2003	PK 05	15	120,813	790	1	1,692	18	122,505	808
ES-76	Pine Grove Elementary	1957	PK 05	14	86,483	654	0	0	0	86,483	654
ES-77	Pine Jog Elementary (03-Y)	2006	PK 05	15	125,990	974	0	0	0	125,990	974
ES-78	Pioneer Park Elementary	1990	PK 05	17	102,411	800	0	0	0	102,411	800
ES-79	Pleasant City Elementary	2000	PK 05	5	69,462	386	0	0	0	69,462	386
ES-80	Poinciana Elementary	1925	PK 05	9	96,907	685	0	0	0	96,907	685
ES-81	Rolling Green Elementary	1957	PK 05	15	146,744	1,109	0	0	0	146,744	1,109
ES-82	Roosevelt Elementary	1954	PK 05	10	117,695	801	0	0	0	117,695	801
ES-83	Rosenwald Elementary	1948	PK 05	20	70,596	314	0	0	0	70,596	314
ES-84	Royal Palm Beach Elementary	2001	PK 05	7	104,677	774	4	3,840	72	108,517	846
ES-85	Royal Palm School	1977	PK 12	18	147,481	623	0	0	0	147,481	623
ES-86	S D Spady Elementary	1994	PK 05	12	91,371	697	0	0	0	91,371	697
ES-87	Sandpiper Shores Elementary	1986	PK 05	20	86,974	592	29	29,638	472	116,612	1,064
ES-88	Seminole Trails Elementary	1979	PK 05	20	137,032	1,066	0	0	0	137,032	1,066
ES-89	South Grade Elementary	1924	PK 05	4	93,653	607	6	5,760	108	99,413	715
ES-90	South Olive Elementary	1954	PK 05	10	95,382	601	2	3,990	36	99,372	637
ES-91	Starlight Cove Elementary	1994	PK 05	15	129,633	1,086	0	0	0	129,633	1,086
ES-92	Sunrise Park Elementary	1998	PK 05	20	109,029	738	13	12,480	234	121,509	972
ES-93	Sunset Palms Elementary (03-Z)	2004	PK 05	33	127,106	978	4	3,840	46	130,946	1,024
ES-94	Timber Trace Elementary	1990	PK 05	20	87,899	581	25	26,909	432	114,808	1,013
ES-95	U B Kinsey/Palmview Elementary	1929	PK 05	7	102,657	664	2	1,920	36	104,577	700
ES-96	Washington Elementary	1963	PK 05	9	18,736	20	0	0	0	18,736	20



**Table B-1 (Continued)**  
**Existing School Facility Inventory**

Number	Schools	Year Acquired	Grade	Acres	FISH Permanent Net Square Footage	Permanent Student Stations	Modular Units	Modular Net Square Footage	Modular Stations	Total Permanent & Modular NSF	Total Perm & Modular Stations
<b>Elementary Schools</b>											
ES-97	Waters Edge Elementary	1994	PK 05	16	106,191	746	4	3,840	72	110,031	818
ES-98	Wellington Elementary	1980	PK 05	20	118,684	1,022	0	0	0	118,684	1,022
ES-99	West Gate Elementary	1925	PK 05	15	114,859	734	0	0	0	114,859	734
ES-100	West Riviera Elementary	1964	PK 05	8	82,391	729	0	0	0	82,391	729
ES-101	Westward Elementary	1960	PK 05	12	119,796	890	0	0	0	119,796	890
ES-102	Whispering Pines Elementary	1983	PK 05	20	112,711	642	20	22,763	290	135,474	932
ES-103	Wynnebrook Elementary	1965	PK 05	11	72,743	573	16	15,360	288	88,103	861
ML-1	Hidden Oaks K-8 School	2003	PK 08	20	109,719	848	7	6,528	122	116,247	970
ML-2	Gove Elementary	2011	PK 05	17	115,567	832	0	0	0	115,567	832
ML-3	North Grade Elementary	1927	PK 08	6	92,640	522	10	13,110	176	105,750	698
ML-4	Plumosa Elementary School Of The Arts	1949	KG 08	27	169,344	711	0	0	0	169,344	711
ML-5	The Conservatory School at North Palm Beach	1958	PK 12	8	91,056	583	0	0	0	91,056	583
ML-6	Verde K-8 School	1975	PK 08	20	135,456	1,515	0	0	0	135,456	1,515
ML-7	Village Academy	1957	PK 12	7	116,743	794	0	0	0	116,743	794
<b>Subtotal - Elementary Schools</b>				<b>1,723</b>	<b>12,118,615</b>	<b>86,174</b>	<b>537</b>	<b>627,218</b>	<b>9,341</b>	<b>12,745,833</b>	<b>95,420</b>
<b>Middle Schools</b>											
MS-1	Bak Middle School Of The Arts	1965	06 08	24	217,585	1,562	0	0	0	217,585	1,562
MS-2	Bear Lakes Middle	1986	06 08	30	180,507	1,591	0	0	0	180,507	1,591
MS-3	Boca Raton Community Middle	1966	06 08	20	195,394	1,574	0	0	0	195,394	1,574
MS-4	Carver Community Middle	1986	06 08	27	168,449	1,704	0	0	0	168,449	1,704
MS-5	Christa McAuliffe Middle	1984	06 08	30	147,260	1,149	14	23,680	308	170,940	1,457
MS-6	Congress Middle	1975	06 08	36	192,959	1,591	0	0	0	192,959	1,591
MS-7	Conniston Community Middle	1927	06 08	16	172,808	1,307	0	0	0	172,808	1,307
MS-8	Crestwood Middle	1980	06 08	30	133,423	1,045	45	52,838	792	186,261	1,837
MS-9	Don Estridge High Tech Middle	2002	06 08	27	182,994	1,327	3	2,880	66	185,874	1,393
MS-10	Eagles Landing Middle	1997	06 08	20	142,044	1,231	11	9,600	198	151,644	1,429
MS-11	Emerald Cove Middle (02-Jj)	2004	06 08	12	201,305	1,565	0	0	0	201,305	1,565
MS-12	Howell L Watkins Middle	1961	06 08	19	188,224	1,281	5	10,439	110	198,663	1,391
MS-13	Independence Middle	2000	06 08	19	171,018	1,362	14	21,855	308	192,873	1,670
MS-14	Jeaga Middle	2001	06 08	34	173,980	1,207	8	11,004	176	184,984	1,383
MS-15	John F Kennedy Middle	1962	06 08	21	189,426	1,671	0	0	0	189,426	1,671
MS-16	Jupiter Middle	1960	06 08	30	142,854	1,232	35	39,428	688	182,282	1,920

**Table B-1 (Continued)**  
**Existing School Facility Inventory**

Number	Schools	Year Acquired	Grade	Acres	FISH Permanent Net Square Footage	Permanent Student Stations	Modular Units	Modular Net Square Footage	Modular Stations	Total Permanent & Modular NSF	Total Perm & Modular Stations
<b>Middle Schools</b>											
MS-17	L.C. Swain Middle	2003	06 08	30	192,805	1,583	0	0	0	192,805	1,583
MS-18	Lake Shore Middle	1944	06 08	22	201,618	1,466	6	5,760	132	207,378	1,598
MS-19	Lake Worth Middle	1988	06 08	25	176,547	1,580	0	0	0	176,547	1,580
MS-20	Lantana Community Middle	1963	06 08	14	149,001	901	10	12,775	220	161,776	1,121
MS-21	Loggers Run Middle	1981	06 08	30	120,203	1,073	4	4,030	88	124,233	1,161
MS-22	Okeehoelee Middle	1995	06 08	18	178,042	1,793	0	0	0	178,042	1,793
MS-23	Omni Middle	1987	06 08	24	150,645	1,199	19	17,440	352	168,085	1,551
MS-24	Osceola Creek Middle	2002	06 08	39	171,771	1,194	0	0	0	171,771	1,194
MS-25	Palm Springs Community Middle	1960	06 08	16	212,472	1,893	0	0	0	212,472	1,893
MS-26	Polo Park Middle	1966	06 08	27	176,031	1,326	11	13,958	242	189,989	1,568
MS-27	Roosevelt Community Middle	1994	06 08	17	209,746	1,633	3	2,880	66	212,626	1,699
MS-28	Tradewinds Middle	2002	06 08	48	192,126	1,383	0	0	0	192,126	1,383
MS-29	Turning Points Academy	1994	06 12	6	71,047	820	0	0	0	71,047	820
MS-30	Watson B Duncan Middle	1989	06 08	35	147,962	1,235	13	16,273	286	164,235	1,521
MS-31	Wellington Landings Middle	1980	06 08	34	140,286	1,119	33	45,336	626	185,622	1,745
MS-32	Western Pines Middle	1996	06 08	30	143,361	1,171	0	0	0	143,361	1,171
MS-33	Woodlands Middle	1985	06 08	26	176,975	1,348	10	23,164	220	200,139	1,568
ML-1	Hidden Oaks K-8 School	2003	PK 08	4	19,362	150	1	1,152	22	20,514	172
ML-2	Gove Elementary	2011	PK 05	2	12,841	92	0	0	0	12,841	92
ML-3	North Grade Elementary	1927	PK 08	1	11,450	64	1	1,620	22	13,070	86
ML-8	Pahokee Middle / Senior High	1983	06 12	25	147,262	994	0	0	0	147,262	994
ML-5	The Conservatory School at North Palm Beach	1958	PK 12	2	25,683	165	0	0	0	25,683	165
ML-7	Village Academy	1957	PK 12	2	37,146	253	0	0	0	37,146	253
<b>Subtotal - Middle Schools</b>				<b>872</b>	<b>5,864,612</b>	<b>46,834</b>	<b>246</b>	<b>316,112</b>	<b>4,922</b>	<b>6,180,724</b>	<b>51,756</b>
<b>High Schools</b>											
HS-1	Alexander W Dreyfoos Jr School Of The Arts	1907	09 12	19	248,348	1,353	1	864	0	249,212	1,353
HS-2	Atlantic Community High	2002	09 12	42	404,920	2,423	6	5,760	150	410,680	2,573
HS-3	Boca Raton Community High	1961	09 12	36	354,289	3,091	0	0	0	354,289	3,091
HS-4	Boynton Beach Community High	1994	09 12	54	348,386	2,298	0	1,902	0	350,288	2,298
HS-5	Forest Hill Community High	1957	09 12	24	313,415	1,934	0	0	0	313,415	1,934
HS-6	Glades Central Community High	1992	09 12	71	245,163	1,599	0	0	0	245,163	1,599
HS-7	John I Leonard Senior High	1964	09 12	48	382,474	3,027	16	15,748	270	398,222	3,297

**Table B-1 (Continued)**  
**Existing School Facility Inventory**

Number	Schools	Year Acquired	Grade	Acres	FISH Permanent Net Square Footage	Permanent Student Stations	Modular Units	Modular Net Square Footage	Modular Stations	Total Permanent & Modular NSF	Total Perm & Modular Stations
<b>High Schools</b>											
HS-8	Jupiter Community High	1960	09 12	51	331,452	2,368	49	46,080	1,150	377,532	3,518
HS-9	Lake Worth Community High	1920	09 12	27	318,942	2,655	13	12,480	325	331,422	2,980
HS-10	Olympic Heights Community High	1988	09 12	59	366,496	2,367	0	0	0	366,496	2,367
HS-11	Palm Beach Central High	2001	09 12	55	371,937	2,449	17	23,940	425	395,877	2,874
HS-12	Palm Beach Gardens Community High	1965	09 12	41	379,095	3,002	0	0	0	379,095	3,002
HS-13	Palm Beach Lakes Community High	1983	09 12	44	411,424	2,886	0	0	0	411,424	2,886
HS-14	Park Vista Community High	1994	09 12	50	391,647	2,616	30	36,764	700	428,411	3,316
HS-15	Riviera Beach Preparatory & Achievement Academy	1966	06 12	25	111,767	484	0	0	0	111,767	484
HS-16	Royal Palm Beach Community High	1994	09 12	55	325,520	2,339	0	0	0	325,520	2,339
HS-17	Sabal Palm/Highridge	1958	05 12	1	9,191	47	3	2,880	50	12,071	97
HS-18	Santaluces Community High	1976	09 12	75	350,811	2,364	3	9,306	75	360,117	2,439
HS-19	Seminole Ridge Community High	2002	09 12	60	377,937	2,425	2	4,210	50	382,147	2,475
HS-20	Spanish River Community High	1980	09 12	59	335,096	2,353	13	12,480	325	347,576	2,678
HS-21	Suncoast Community High School	2005	09 12	38	294,344	1,804	0	0	0	294,344	1,804
HS-22	Wellington Community High	1983	09 12	63	342,878	2,377	0	0	0	342,878	2,377
HS-23	West Boca Raton Community High	2002	09 12	57	373,319	2,426	0	0	0	373,319	2,426
HS-24	William T Dwyer High	1988	09 12	60	368,796	2,552	0	0	0	368,796	2,552
ML-8	Pahokee Middle / Senior High	1983	06 12	29	172,873	1,167	0	0	0	172,873	1,167
ML-7	Village Academy	1957	PK 12	1	22,995	156	0	0	0	22,995	156
<b>Subtotal - High Schools</b>				<b>1,144</b>	<b>7,953,515</b>	<b>54,562</b>	<b>153</b>	<b>172,414</b>	<b>3,520</b>	<b>8,125,929</b>	<b>58,082</b>
<b>Grand Total - All Schools</b>				<b>3,739</b>	<b>25,936,742</b>	<b>187,570</b>	<b>936</b>	<b>1,115,744</b>	<b>17,783</b>	<b>27,052,486</b>	<b>205,258</b>

Source: Florida Inventory of School Houses (FISH), School Land Inventory and Palm Beach County School District

**Appendix C**  
**Building and Land Values:**  
**Supplemental Information**

## Appendix C: Building and Land Values

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This Appendix provides a summary of building and land value estimates for public buildings, fire rescue, libraries, and parks and recreation impact fees. Information related to cost estimates for transportation is included in Appendix E.

### ***Building Values***

To estimate building and recreational facility value, the following information was reviewed:

- Recent construction by Palm Beach County, as applicable;
- Cost estimates for future facilities;
- Insurance values of existing facilities;
- Data from other jurisdictions; and
- Discussions with the representatives from Palm Beach County.

The following paragraphs provide a summary for each service area.

#### Public Buildings

Public buildings include administrative offices, courthouse, law enforcement buildings, industrial buildings and industrial support structures. Each type of building has varying costs depending on the design and amenities. As part of the cost estimates the following was considered:

- The County has built a forensic science and technology center in 2020 at a cost of \$315 per square foot.
- Estimates for upcoming construction ranged from \$300 per square foot to \$400 per square foot depending on facility type.
- The insured values of the buildings ranged from \$53 per square foot for the Industrial Support Facilities to \$238 per square foot for the Courthouse.
- Cost estimates for future facilities suggest an average cost of \$400 per square foot to \$450 per square foot.
- Similar building cost data from other jurisdictions ranged from \$155 per square foot to \$300 per square foot.

Given this information an average building value of \$55 per square foot to \$400 per square foot is used for all buildings. Table C-1 provides a summary of this information.

**Table C-1  
Public Buildings Inventory Cost Estimates**

Building Type	2014 Cost per Square Foot	Indexed Cost
Jail	\$290	\$351
Office/Admin Space	\$250	\$303
Courthouse	\$325	\$393
Industrial Space	\$200	\$242
Industrial Space Support	\$25	\$30
ENR Building Cost Index (2014-2021)		21.00%
Recent Construction	Year/Type of Space	Cost per Square Foot
PBSO Forensic Science & Technology Center	2020	\$316
<b>Upcoming Construction</b>		
Airport Ctr Bldg 3 w/Parking Garage	Office	\$300
- Parking Spaces (per space)	Garage	\$30,000
Family & Juvenile Courthouse w/Parking Garage	Courthouse	\$400
- Parking Spaces (per space)	Garage	\$30,000
South Co Admin Complex	Office	\$300
- Parking Spaces (per space)	Parking	\$30,000
West Co Gov't Center	Office	\$350
Upcoming Construction	2021-2025	Cost per Square Foot
PBSO District 1 Substation & Marine Unit		\$449
Supervisor of Elections Admin & Production Facility		\$404
Insurance Values	2021	Cost per Square Foot
Jail	2021	\$238
Office/Admin Space	2021	\$172
Courthouse	2021	\$238
Industrial Space	2021	\$104
Industrial Space Support	2021	\$53
Palm Beach County Estimates		Cost per Square Foot
Jail		\$400
Office/Admin Space		\$350
Courthouse		\$450
Industrial Space		\$250
Industrial Space Support		\$75
Other Florida Jurisdictions		Cost per Square Foot
Other Florida Jurisdictions	2014-2020	\$155 to \$300
Used in the Study		Cost per Square Foot
<b>Jail</b>		<b>\$325</b>
<b>Office/Admin Space</b>		<b>\$300</b>
<b>Courthouse</b>		<b>\$400</b>
<b>Industrial Space</b>		<b>\$220</b>
<b>Industrial Space Support</b>		<b>\$55</b>

### Fire Rescue Facilities

For fire rescue station/building cost estimates, the following analysis was used.

- Palm Beach County built Station 22 in 2019 for a cost of \$495 per square foot. The most recent bid received in 2021 for Station 40 resulted in estimated cost of \$590 per square foot.
- The construction cost of additional stations is estimated to range from \$400 per square foot to \$620 per square foot.
- The insurance values average \$204 per square foot. Insurance values are considered to be conservative estimates since not all building components are insured.
- Benesch supplemented the local data with cost estimates utilized in recently completed law enforcement impact fee studies. This analysis reviewed data from studies conducted between 2016 and 2020 as well as recent bids, which ranged from \$250 per square foot to \$550 per square foot for building cost only.

This information is presented in Table C-2.

**Table C-2  
Fire Rescue Building Inventory Cost Estimates**

<b>Building Type</b>	<b>2014 Cost per Square Foot</b>	<b>Indexed Cost</b>
Fire Stations per SF	\$260	\$315
Training Facility	\$230	\$278
Support	\$160	\$194
ENR Building Cost Index (2014-2021)		21.00%
<b>Recent/Upcoming Construction</b>	<b>Year/Type of Space</b>	<b>Cost per Square Foot</b>
Station 22	2019	\$493
<b>Upcoming Construction</b>		
FS 40/FS 41 North	2021	\$590
Agricultural Reserve Central FS	2021	\$399
Lake Worth West FS	2021	\$537
Agricultural Reserve South FS	2022	\$419
Delray Trails FS	2022	\$490
FS 52 Replacement	2022	\$588
FS 43 Replacement	2023	\$620
Southern Blvd 20 Mile Bend Station	2023	\$415
Agricultural Reserve North FS	2025	\$480
<b>Weighted Average</b>		<b>\$495</b>
<b>Weighted Average (FS 22 &amp; 40)</b>		<b>\$529</b>
<b>Insurance Values</b>	<b>2021</b>	<b>Cost per Square Foot</b>
Buildings & Contents	2021	\$204
<b>Other Florida Jurisdictions</b>		<b>Cost per Square Foot</b>
Other Florida Jurisdictions	2016-2022	\$250 to \$550
<b>Used in the Study</b>		<b>Cost per Square Foot</b>
<b>Stations</b>		<b>\$525</b>

Source: Palm Beach County and other Florida jurisdictions

Given this information, building cost is estimated at \$525 per square foot for fire rescue facilities.

### Libraries

The following analysis was conducted for library cost estimates:

- Palm Beach County has not built any new libraries over the past five years.
- The New Canyon Branch Library is estimated to cost \$600 per square foot.



- The insurance values of the existing libraries averaged \$385 per square foot. Insurance values tend to be conservative estimates because insurance companies exclude the value of the foundation and other more permanent parts of the structure since they would not have to be rebuilt if the structure was damaged or lost.
- Benesch supplemented the local data with cost estimates utilized in recently completed library impact fee studies. This analysis reviewed data from studies conducted between 2014 and 2020, which ranged from \$230 per square foot to \$370 per square foot for building construction only.

Given this information, library building cost is estimated at \$400 per square foot for impact fee calculation purposes.

### Recreational Facilities

Recreational facility values are based on primarily on historical projects and discussions with the County representatives. The resulting estimates are presented in Table VI-3, earlier in this report.

### ***Land Values***

For each impact fee program area, land values were determined based on the following analysis, as data available:

- Recent land purchases or appraisals for the related infrastructure (if any);
- Land value of current inventory as reported by the Palm Beach County Property Appraiser (PCPA);
- Value of vacant land by size and by land use;
- Vacant land sales between 2015 and 2020 by size and by land use; and
- Discussions with the County representatives.

### Public Buildings

The following was considered in estimating the land value for public buildings:

- The 2014 study used an estimated land value of \$175,000. Indexing this value to current dollars results in \$240,000 per acre.
- The most recent land purchase for public buildings was completed over the past five year for the non-congregate shelter at a cost of \$81,000 per acre.

- The estimated value of parcels that will be used for future construction averaged \$156,000 per acre with a median value of \$164,000 per acre and a range of \$10,000 per acre to \$2.7 million per acre, based on Property Appraiser estimates.
- The value of parcels where current public buildings are located averages \$204,000 per acre, with a median value of \$284,000 per acre and a range of \$2,100 per acre to \$3.3 million per acre. Property Appraiser land value estimates for governmental entities tend to be on the low end since these properties are not subject to property tax and the values are not always updated to reflect the market conditions.
- Vacant land sales of similarly sized parcels (from 0.6 acre to 10 acres) between 2015 and 2020 averaged \$266,000 per acre with a median value of \$80,000 per acre for all vacant land use types. These prices were lower for residential properties, with an average of \$220,000 per acre and a median value of \$74,000 per acre.
- Similarly, the value of vacant land reported by the Property Appraiser averaged \$133,000 per acre with a median value of \$57,000 per acre for all vacant properties. For residential properties, the average value is estimated at \$90,000 per acre with a median value of \$57,000 per acre.

Given this information, an average land value of **\$200,000 per acre** is determined to be a reasonable estimate for public buildings impact fee calculation purposes based primarily on the value of parcels where the current inventory of buildings is located.

#### Fire Rescue

The land value estimate for fire rescue facilities is based on the following:

- The 2014 study used an estimated land value of \$150,000. Indexing this value to current dollars results in \$205,000 per acre.
- The most recent purchase for fire rescue facilities was completed in 2018 for a value of \$209,000 per acre.
- The value of parcels where future facilities will be located averages \$324,000 per acre with a median value of \$317,000 per acre.
- The value of parcels where current fire stations are located averages \$174,000 per acre, with a range of \$12,000 per acre to \$1.9 million per acre. Property Appraiser land value estimates for governmental entities tend to be on the low end since these properties are not subject to property tax and the values are not always updated to reflect the market conditions.
- Vacant land sales of similarly sized parcels (from 0.6 acre to 5 acres) between 2015 and 2020 is \$240,000 per acre with a median value of \$77,000 per acre. These prices are higher

for commercial properties, with an average of \$610,000 per acre and a median value of \$510,000 per acre.

- Similarly, the value of vacant land reported by the Property Appraiser averaged \$115,000 per acre with a median value of \$57,000 per acre for all vacant properties. For commercial properties, the average value is estimated at \$398,000 per acre with a median value of \$355,000 per acre.

Given this information and based on discussions with representatives from Palm Beach County, an average land value of **\$325,000 per acre** is determined to be a reasonable estimate for fire rescue impact fee calculation purposes.

### Libraries

The land value estimate for libraries is based on the following:

- The 2014 study used an estimated land value of \$190,000. Indexing this value to current dollars results in \$260,000 per acre.
- Although there are no recent purchases or upcoming purchases in the near future, the Library Department provided the potential location of future libraries. The average sales value of vacant land in these areas was \$114,000 per acre with a median value of \$73,000 per acre. The average value of all vacant land in these areas was \$88,000 per acre with a median value of \$57,000 per acre.
- Value of land where existing libraries are located averages \$269,000 per acre, with a median value of \$284,000 per acre and a range of \$11,000 per acre to \$810,000 per acre. As mentioned previously, Property Appraiser land value estimates for governmental entities tend to be on the low end since these properties are not subject to property tax and the values are not always updated to reflect the market conditions.
- Vacant land sales of similarly sized parcels (from 0.6 acre to 10 acres) between 2015 and 2020 averaged \$204,000 per acre with a median value of \$73,000 per acre for residential vacant land.
- Similarly, the value of vacant residential land reported by the Property Appraiser averaged \$84,000 per acre with a median value of \$57,000 per acre for all vacant properties.

Given this information and based on discussions with representatives from Palm Beach County, an average land value of **\$100,000 per acre** is determined to be a reasonable estimate for library impact fee calculation purposes.

## Parks

The park land value estimate is based on the following:

- The 2014 study used an estimated land value of \$50,000 per acre for district parks, \$60,000 per acre for regional parks, and \$865,000 per acre for beach parks. Indexing this value to current dollars results in \$68,000 per acre for district parks, \$82,000 per acre for regional parks, and \$1.2 million per acre for beach parks.
- The most recent land purchase made by the County was in 2016 for district park at a cost of \$10,000 per acre. Prior to that, the County purchased land for another district park in 2013 at a cost of \$1 million per acre.
- The value of parcels where current parks are located averages \$46,000 per acre for district parks, \$45,000 for regional parks, and \$922,000 per acre for beach parks. Property Appraiser land value estimates for governmental entities tend to be on the low end since these properties are not subject to property tax and the values are not always updated to reflect the market conditions.
- Vacant land sales of similarly sized parcels between 2015 and 2020 ranged from \$200,000 per acre west of I-95 to \$1.1 million per acre in east of I-95 for all vacant land use type.

Given this information, an average land value of **\$70,000 per acre for District Parks, \$80,000 per acre for Regional Parks, and \$950,000 per acre for Beach Parks** are determined to be reasonable estimates for parks land for impact fee calculation purposes. The County noted that future purchases of additional beach park land are unlikely, and therefore, beach park land value should not be included in the calculations.

**Appendix D**  
**Public Buildings Inventory**

## **Appendix D: Public Buildings Inventory**

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This appendix provides an inventory of public buildings inventory. Table D-1 provides square footage associated with each building by type. Table D-2 provides total square footage on each parcel and total and allocated acreages for each parcel and building.

**Table D-1  
Public Buildings Inventory, Square Footage**

Dept	Building	Address	Office SF	Industrial SF	Industrial Support SF	Court SF	Jail SF	Jail Beds	Parking Spaces	Total SF
Agriculture	Mounts	531 N. Military Trail, West Palm Beach	6,800							6,800
Agriculture	Hutcheson	559 N. Military Trail, West Palm Beach	19,121							19,121
Agriculture	Ag Ext Office	2916 State Road 15, Belle Glade	2,028							2,028
Courthouse	Main	205 N. Dixie Hwy, West Palm Beach				698,561				698,561
Courthouse	SA/PD	401 N. Dixie Hwy, West Palm Beach	165,000							165,000
Courthouse	Judicial Center Parking	505 Banyan Blvd, West Palm Beach			524,782				1,811	524,782
Courthouse	North	3188 PGA Blvd, Palm Beach Gardens				68,524				68,524
Courthouse	South	200 W. Atlantic Ave, Delray Beach				150,000				150,000
Courthouse	West County	2950 State Road 15, Belle Glade				36,626				36,626
Clerk	Park Place	429 Park Place, West Palm Beach	796	10,680						11,476
Clerk	Courthouse - 7th Flr	205 N. Dixie Hwy, West Palm Beach		8,000						8,000
Community Services	Jupiter Health	6401 W. Indiantown Road, Jupiter	3,300							3,300
Community Services	West Jupiter Comm	6401 W. Indiantown Road, Jupiter	4,600							4,600
Community Services	North County Senior Ctr	5217 Northlake Blvd, Palm Beach Gardens	14,500							14,500
Community Services	Mid-County Senior Ctr	3680 Lake Worth Road, Lake Worth	26,000							26,000
Community Services	Mayme Fredrick	1440 Dr. Martin Luther King Jr Blvd, Riviera Beach	19,000							19,000
Community Services	810 Datura	810 Datura Street, West Palm Beach	29,650							29,650
Community Services	Westgate Community	3691 Oswego Ave, West Palm Beach	5,405							5,405
Community Services	CAC - 1699 Wingfield	1699 Wingfield Street, Lake Worth	4,654							4,654
Community Services	West County Senior	2916 State Road 15, Belle Glade	6,700							6,700
Community Services	Central HRC/Lewis Ctr	1000 45th Street, West Palm Beach	34,631							34,631
Community Services	Belle Glade Assessment Center	341 NW 11th Street, Belle Glade	3,640							3,640
Community Services	Non-Congregate Shelter	1749 E. Main Street, Pahokee	28,878							28,878
Engineering	Vista - 2300 Building	2300 N. Jog Road, West Palm Beach	56,400							56,400
Engineering	Vista - OSC	2633 Vista Parkway, West Palm Beach		106,800	121,800					228,600
Engineering	R&B - Cross State	550 N. Benoist Farm Road, West Palm Beach			300					300
Engineering	R&B - West County	580 N. State Market Road, Pahokee		7,900						7,900
ERM	Vista - 2300 Building	2300 N. Jog Road, West Palm Beach	34,700							34,700
ERM	Vista - OSC	2633 Vista Parkway, West Palm Beach		1,100						1,100
ERM	Mosquito Control	9011 W. Lantana Road, Lake Worth	30,149							30,149
FDO	Vista - OSC	2633 Vista Parkway, West Palm Beach	46,200	12,800						59,000
FDO	Vista - OSC Fleet	2633 Vista Parkway, West Palm Beach		93,400	391,400					484,800
FDO	Gov't Center Parking	215 N. Olive Avenue, West Palm Beach	14,490	11,435						25,925
FDO	Fleet - West & Fuel	580 N. State Market Road, Pahokee		4,174						4,174
FDO	North County Fuel	8130 N Jog Road, West Palm Beach								N/A
FDO	Jupiter Fuel	14185 Military Trail, Jupiter								N/A
FDO	FMD Storage	3611 State Road 715, Pahokee		4,274						4,274

**Table D-1 (Continued)**  
**Public Buildings Inventory, Square Footage**

Dept	Building	Address	Office SF	Industrial SF	Industrial Support SF	Court SF	Jail SF	Jail Beds	Parking Spaces	Total SF
FDO	FMD South	345 S. Congress Ave, Delray Beach	3,762	3,000						6,762
FDO	FMD West	2916 State Road 15, Belle Glade		2,500						2,500
FDO	FMD North	8130 Jog Road, West Palm Beach		5,000						5,000
Medical Examiner	CJC	3228 Gun Club Road, West Palm Beach	13,301							13,301
PBSO	Marine Unit	6970 N. Ocean Blvd, Ocean Ridge		2,000						2,000
PBSO	Maine Unit @ Phil Foster	900 E. Blue Heron Blvd, Riviera Beach	2,100							2,100
PBSO	Driving Training	9067 Southern Boulevard, West Palm Beach	1,675							1,675
PBSO	Training Center	4215 Cherry Road, West Palm Beach	32,363							32,363
PBSO	Weapons Training	21500 Southern Boulevard, West Palm Beach	5,056		5,271					10,327
PBSO	K-9 Training	8100 Forest Hill Blvd, West Palm Beach	5,105							5,105
PBSO	District 3 HQ	8130 Jog Road, West Palm Beach	12,000							12,000
PBSO	District 3 - Fleet	8130 Jog Road, West Palm Beach		1,500						1,500
PBSO	CJC - Impound Lot	3228 Gun Club Road, West Palm Beach								N/A
PBSO	CJC - Impound Lot B	3228 Gun Club Road, West Palm Beach								N/A
PBSO	CJC - A	3228 Gun Club Road, West Palm Beach	210,000							210,000
PBSO	CJC - Fuel	3228 Gun Club Road, West Palm Beach								N/A
PBSO	CJC -Motor Pool	3228 Gun Club Road, West Palm Beach		60,000						60,000
PBSO	CJC-Motor Pool Land	3228 Gun Club Road, West Palm Beach								N/A
PBSO	Main Jail	3228 Gun Club Road, West Palm Beach					800,305	2,156		800,305
PBSO	Stockade	9620 Process Drive, West Palm Beach					153,633	265		153,633
PBSO	West County Jail	38811 James Wheeler Way, Belle Glade					314,199	999		314,199
PBSO	EAGLE Academy	38811 James Wheeler Way, Belle Glade					39,810	144		39,810
PBSO	District 4 Fleet	345 S. Congress Avenue, Delray Beach		2,635						2,635
PBSO	District 4 HQ	14925 Cumberland Drive, Delray Beach	11,000							11,000
PBSO	District 6 Substation	7894 S. Jog Road, Boynton Beach	16,300							16,300
PBSO	District 7 HQ	17901 State Road 7, Boca Raton	11,200							11,200
PBSO	District 7 Fuel	17901 State Road 7, Boca Raton								N/A
PBSO	District 5 HQ	38840 State Road 80, Belle Glade	9,164		1,400					10,564
PBSO	Central Video Visitation	9620 Process Drive, West Palm Beach	9,316							9,316
PBSO	Forensic Sciences and Technology	3075 Gun Club Road, West Palm Beach	59,600	27,400	12,000					99,000
Property Appraiser	South County	14925 Cumberland Drive, Delray Beach	5,000							5,000
Public Health	Lantana Clinic	1199 W. Lantana Road, Lantana	33,874							33,874
Public Health	Delray Clinic	345 S. Congress Avenue, Delray Beach	33,874							33,874
Public Health	NE Health Center	825 Avenue P, Riviera Beach	14,210							14,210
Public Health	Jupiter Health Center	6401 W. Indiantown Road, Jupiter	4,434							4,434
Public Health	West County Clinic	38754 State Road 80, Belle Glade	37,452							37,452
Public Affairs	Parking Garage	215 N. Olive Avenue, West Palm Beach	2,130							2,130



**Table D-1 (Continued)**  
**Public Buildings Inventory, Square Footage**

Dept	Building	Address	Office SF	Industrial SF	Industrial Support SF	Court SF	Jail SF	Jail Beds	Parking Spaces	Total SF
Public Affairs	Graphics - Repump	1701 S. Jog Road, Greenacres		4,000						4,000
Public Safety	High Ridge Family	1200 45th Street, West Palm Beach	31,800							31,800
Public Safety	Youth Services Bureau	1200 45th Street, West Palm Beach	9,756							9,756
Public Safety	4 Points - Consumer Aff.	50 S. Military Trail, West Palm Beach	7,369							7,369
Public Safety	EOC	20 S. Military Trail, West Palm Beach	38,686							38,686
Public Safety	South County Youth	345 S. Congress Avenue, Delray Beach	6,290							6,290
Public Safety	West Animal Care&Control	3615 State Road 715, Pahokee	3,000							3,000
Public Safety	Animal Care & Control	7100 Belvedere Road, West Palm Beach	25,869		18,815					44,684
PZB	Vista - 2300 Building	2300 N. Jog Road, West Palm Beach	106,000							106,000
PZB	South County	451 S. Congress Avenue, Delray Beach	2,600							2,600
Purchasing	4 Points	50 S. Military Trail, West Palm Beach	12,128							12,128
Purchasing	Warehouse	2633 Vista Parkway, West Palm Beach		91,000						91,000
Small Business Asst.	4 Points	50 S. Military Trail, West Palm Beach	2,987							2,987
Supervisor of Elections	20 S Military	240 S. Military Trail, West Palm Beach	39,003							39,003
Tax Collector	Lake Worth	3551 S. Military Trail, Lake Worth	6,220							6,220
Tax Collector	South County	501 S. Congress Ave, Delray Beach	12,343							12,343
Multiple Use	Block D Parking	315 3rd Street, West Palm Beach								N/A
Multiple Use	Building 509	3323 Belvedere Road, West Palm Beach	7,500							7,500
Multiple Use	Bill Bailey Community Ctr.	1101 Dr. Martin Luther King Jr. Blvd W, Belle Glade	23,613							23,613
Multiple Use	Cabana Colony	12180 Alt A1A, Palm Beach Gardens	2,000							2,000
Multiple Use	4 Points Common	50 S. Military Trail, West Palm Beach	1,144							1,144
Multiple Use	Government Center	301 N. Olive Ave, West Palm Beach	301,851							301,851
Multiple Use	Gov't Ctr Parking Garage	215 N. Olive Avenue, West Palm Beach			236,104				651	236,104
Multiple Use	Hepburn St	600 N. Hepburn Ave., Jupiter		4,086						4,086
Multiple Use	Midwestern	200 Civic Center Way, Royal Palm Beach	19,968							19,968
Multiple Use	North County Gov't Ctr	3188 PGA Blvd, Palm Beach Gardens	35,113							35,113
Multiple Use	South County Gov't Ctr	345 S. Congress Avenue, Delray Beach	50,000							50,000
Multiple Use	South Cty Parking Garage	11 SW 2nd Ave, Delray Beach			140,819				369	140,819
Multiple Use	Vista - 2300 Common	2300 N. Jog Road, West Palm Beach	38,400							38,400
Multiple Use	Vista - 2300 Garage	2300 N. Jog Road, West Palm Beach			289,528				756	289,528
Multiple Use	West County Gov't Ctr	2916 State Road 15, Belle Glade	23,100							23,100
Multiple Use	1916 Courthouse	301 N. Olive Ave, West Palm Beach	30,933							30,933
Multiple Use	Airport Center - Bldg. 1	100 Australian Ave, West Palm Beach	62,000							62,000
Multiple Use	Airport Center - Bldg. 2	100 Australian Ave, West Palm Beach	62,000							62,000
Multiple Use	20 Mile Bend Tower	20 County Road 880, West Palm Beach								N/A
Multiple Use	Belle Glade Tower	1052 Duda Road, Belle Glade								N/A
Multiple Use	Pahokee Tower	640 N State Market Road, Pahokee								N/A

**Table D-1 (Continued)**  
**Public Buildings Inventory, Square Footage**

Dept	Building	Address	Office SF	Industrial SF	Industrial Support SF	Court SF	Jail SF	Jail Beds	Parking Spaces	Total SF
Multiple Use	Jupiter Tower	8021 W Indiantown Road, Jupiter								N/A
Multiple Use	Connemara Tower	5420 N Ocean Drive, Riviera Beach								N/A
Multiple Use	North EMS Tower	1130 45th Street, Riviera Beach								N/A
Multiple Use	EOC Tower	20 S Military Trail, West Palm Beach								N/A
Multiple Use	Forest Hill Tower	7950 Forest Hill Blvd, West Palm Beach								N/A
Multiple Use	Boynton Beach Tower	515 NW 14th Court, Boynton Beach								N/A
Multiple Use	South EMS Tower	345 S Congress Ave, Delray Beach								N/A
Multiple Use	Boca Raton Tower	7941 Glades Road, Boca Raton								N/A
<b>Building Totals</b>			<b>2,051,231</b>	<b>463,684</b>	<b>1,742,219</b>	<b>953,711</b>	<b>1,307,947</b>	<b>3,564</b>	<b>3,587</b>	<b>6,518,792</b>

Source: Palm Beach County

**Table D-2  
Public Buildings Inventory, Allocated Acreage**

Department <sup>(1)</sup>	Building <sup>(1)</sup>	Address <sup>(1)</sup>	Office SF	Ind SF	Ind Supp SF	Court SF	Total SF <sup>(1)</sup>	Total SF on Site <sup>(1)</sup>	Acreage <sup>(1)</sup>	Allocated Acreage <sup>(2)</sup>
Public Safety	West Animal Care&Control	3615 State Road 715, Pahokee	3,000				3,000	3,000	2.00	2.00
FDO	FMD Storage	3611 State Road 715, Pahokee		4,274			4,274	4,274	2.57	2.57
PBSO	West County Jail	38811 James Wheeler Way, Belle Glade	314,199				314,199	472,979	115.62	76.81
PBSO	EAGLE Academy		39,810				39,810			9.73
PBSO	District 5 HQ		9,164		1,400		10,564			2.58
Agriculture	Ag Ext Office		2,028				2,028			0.50
Community Services	West County Senior		6,700				6,700			1.64
FDO	FMD West			2,500			2,500			0.61
Multiple Use	West County Gov't Ctr		23,100				23,100			5.65
Public Health	West County Clinic		38754 State Road 80, Belle Glade	37,452			37,452			9.16
Courthouse	West County		2950 State Road 15, Belle Glade				36,626			8.95
Multiple Use	Belle Glade Tower	1052 Duda Road, Belle Glade				N/A	N/A	638.58	-	
PBSO	Weapons Training	21500 Southern Boulevard, West Palm Beach	5,056		5,271		10,327	10,327	63.53	63.53
Multiple Use	20 Mile Bend Tower	20 County Road 880, West Palm Beach					N/A	N/A	1.26	-
PBSO	District 7 HQ	17901 State Road 7, Boca Raton	11,200				11,200	11,200	6.86	6.86
PBSO	District 7 Fuel						N/A			-
Community Services	North County Senior Ctr	5217 Northlake Blvd, Palm Beach Gardens	14,500				14,500	14,500	5.00	5.00
Engineering	Vista - OSC	2633 Vista Parkway, West Palm Beach		106,800	121,800		228,600	864,500	46.24	12.23
ERM	Vista - OSC			1,100			1,100			0.06
FDO	Vista - OSC		46,200	12,800			59,000			3.16
FDO	Vista - OSC Fleet			93,400	391,400		484,800			25.93
Purchasing	Warehouse			91,000			91,000			4.87
Engineering	Vista - 2300 Building		2300 N. Jog Road, West Palm Beach	56,400						56,400
ERM	Vista - 2300 Building	34,700					34,700	0.80		
PZB	Vista - 2300 Building	106,000					106,000	2.45		
Multiple Use	Vista - 2300 Common	38,400					38,400	0.89		
Multiple Use	Vista - 2300 Garage	289,528					289,528	6.70		
PBSO	Training Center	4215 Cherry Road, West Palm Beach		32,363				32,363	N/A	19.63
Public Safety	Animal Care & Control	7100 Belvedere Road, West Palm Beach	25,869		18,815		44,684	44,684	14.05	14.05
Engineering	R&B - Cross State	550 N. Benoist Farm Road, West Palm Beach			300		300	300	5.25	5.25
PBSO	Driving Training	9067 Southern Boulevard, West Palm Beach	1,675				1,675	291,170	98.60	0.57
ERM	Mosquito Control	9011 W. Lantana Road, Lake Worth	30,149				30,149	30,149	6.43	6.43
PBSO	Stockade	9620 Process Drive, West Palm Beach	153,633				123,633	N/A	38.72	23.00
PBSO	Stockade Kitchen		9,071				30,000			1.21
PBSO	Central Video Visitation		9,300				9,316			5.49
Agriculture	Hutcheson		559 N. Military Trail, West Palm Beach	19,121						19,121
Agriculture	Mounts	531 N. Military Trail, West Palm Beach	6,800				6,800	6,800	5.35	5.35

**Table D-2 (Continued)**  
**Public Buildings Inventory, Allocated Acreage**

Department <sup>(1)</sup>	Building <sup>(1)</sup>	Address <sup>(1)</sup>	Office SF	Ind SF	Ind Supp SF	Court SF	Total SF <sup>(1)</sup>	Total SF on Site <sup>(1)</sup>	Acreage <sup>(1)</sup>	Allocated Acreage <sup>(2)</sup>
Public Safety	4 Points - Consumer Aff.	50 S. Military Trail, West Palm Beach	7,369				7,369	54,554	6.54	0.88
Purchasing	4 Points		12,128				12,128			1.45
Small Business Asst.	4 Points		2,987				2,987			0.36
Multiple Use	4 Points Common		1,144				1,144			0.14
Supervisor of Elections	20 S Military	240 S. Military Trail, West Palm Beach	39,003				39,003	39,003	4.83	4.83
Public Safety	EOC	20 S. Military Trail, West Palm Beach	38,686				38,686	38,686	4.51	4.51
Multiple Use	EOC Tower		N/A							-
Tax Collector	Lake Worth	3551 S. Military Trail, Lake Worth	6,220				6,220	6,220	0.65	0.65
PBSO	District 6 Substation	7894 S. Jog Road, Boynton Beach	16,300				16,300	16,300	3.62	3.62
PBSO	District 4 HQ	14925 Cumberland Drive, Delray Beach	11,000				11,000	16,000	3.01	2.07
Property Appraiser	South County		5,000				5,000			0.94
Multiple Use	Boca Raton Tower	7941 Glades Road, Boca Raton					N/A	N/A	28.64	-
Multiple Use	Cabana Colony	12180 Alt A1A, Palm Beach Gardens	2,000				2,000	4,874	0.47	0.19
Multiple Use	Building 509	3323 Belvedere Road, West Palm Beach	7,500				7,500	176,421	12.21	0.52
Community Services	Westgate Community	3691 Oswego Ave, West Palm Beach	5,405				5,405	21,272	9.38	2.38
Multiple Use	Airport Center - Bldg. 1	100 Australian Ave, West Palm Beach	62,000				62,000	N/A	35.81	8.30
Multiple Use	Airport Center - Bldg. 2		62,000				62,000			8.30
Medical Examiner	CJC	3228 Gun Club Road, West Palm Beach	13,301				13,301	1,083,606	81.27	0.82
PBSO	CJC - Impound Lot						N/A			4.50
PBSO	CJC - Impound Lot B						N/A			0.06
PBSO	CJC - A		210,000				210,000			12.93
PBSO	CJC - Fuel						N/A			-
PBSO	CJC - Motor Pool			60,000			60,000			3.69
PBSO	CJC-Motor Pool Land						N/A			10.00
PBSO	Main Jail		800,305				800,305			49.27
PBSO	Forensic Sciences and Technology		3075 Gun Club Road, West Palm Beach	59,600	27,400	12,000				99,000
Community Services	Mid-County Senior Ctr	3680 Lake Worth Road, Lake Worth	26,000				26,000	N/A	12.15	7.22
Multiple Use	Boynton Beach Tower	515 NW 14th Court, Boynton Beach					N/A	N/A	4.68	-
Community Services	Belle Glade Assessment Center	341 NW 11th Street, Belle Glade	3,640					3,640	0.97	0.97
Courthouse	South	200 W. Atlantic Ave, Delray Beach				150,000	150,000	150,000	6.46	6.46
Multiple Use	South Cty Parking Garage	11 SW 2nd Ave, Delray Beach			140,819		140,819	140,819	2.90	2.90
Multiple Use	South EMS Tower	345 S Congress Ave, Delray Beach					N/A	N/A	0.88	-
FDO	FMD South	345 S. Congress Ave, Delray Beach	3,762	3,000			6,762	99,561	13.41	0.91
PBSO	District 4 Fleet			2,635			2,635			0.36
Public Health	Delray Clinic		33,874				33,874			4.56
Public Safety	South County Youth		6,290				6,290			0.85
Multiple Use	South County Gov't Ctr		50,000				50,000			6.74

**Table D-2 (Continued)**  
**Public Buildings Inventory, Allocated Acreage**

Department <sup>(1)</sup>	Building <sup>(1)</sup>	Address <sup>(1)</sup>	Office SF	Ind SF	Ind Supp SF	Court SF	Total SF <sup>(1)</sup>	Total SF on Site <sup>(1)</sup>	Acreage <sup>(1)</sup>	Allocated Acreage <sup>(2)</sup>
PZB	South County	451 S. Congress Avenue, Delray Beach	2,600				2,600	6,602	1.48	0.58
Tax Collector	South County	501 S. Congress Ave, Delray Beach	12,343				12,343	12,343	4.60	4.60
Public Affairs	Graphics - Repump	1701 S. Jog Road, Greenacres		4,000			4,000	4,000	1.65	1.65
Multiple Use	Hepburn St	600 N. Hepburn Ave., Jupiter		4,086			4,086	4,086	0.30	0.30
Community Services	Jupiter Health	6401 W. Indiantown Road, Jupiter	3,300				3,300	24,274	8.62	1.17
Public Health	Jupiter Health Center		4,434				4,434			1.57
Community Services	West Jupiter Comm		4,600				4,600			1.63
FDO	Jupiter Fuel	14185 Military Trail, Jupiter					N/A	N/A	18.61	-
Community Services	CAC - 1699 Wingfield	1699 Wingfield Street, Lake Worth	4,654				4,654	N/A	67.56	6.48
PBSO	Marine Unit	6970 N. Ocean Blvd, Ocean Ridge		2,000			2,000	3,305	5.69	3.44
Community Services	Non-Congregate Shelter	1749 E. Main Street, Pahokee	28,878					28,878	2.78	2.78
		1759 E. Main Street, Pahokee							0.31	0.31
Engineering	R&B - West County	580 N. State Market Road, Pahokee		7,900			7,900	12,074	2.60	1.70
FDO	Fleet - West & Fuel			4,174			4,174			0.90
Multiple Use	Pahokee Tower	640 N State Market Road, Pahokee					N/A	N/A	2.10	-
Courthouse	North	3188 PGA Blvd, Palm Beach Gardens				68,524	68,524	103,637	9.77	6.46
Multiple Use	North County Gov't Ctr		35,113				35,113			3.31
PBSO	Maine Unit @ Phil Foster	900 E. Blue Heron Blvd, Riviera Beach	2,100				2,100	8,144	7.07	1.82
Public Health	NE Health Center	825 Avenue P, Riviera Beach	14,210				14,210	18,498	3.89	2.99
Community Services	Mayme Fredrick	1440 Dr. Martin Luther King Jr Blvd, Riviera Beach	19,000				19,000	19,000	4.34	4.34
Multiple Use	Bill Bailey Community Ctr.	1101 Dr. Martin Luther King Jr. Blvd W, Belle Glade	23,613				23,613	23,613	0.20	0.20
Multiple Use	Midwestern	200 Civic Center Way, Royal Palm Beach	19,968				19,968	19,968	3.50	3.50
FDO	North County Fuel	8130 N Jog Road, West Palm Beach					N/A	18,500	6.00	-
FDO	FMD North			5,000			5,000			1.62
PBSO	District 3 HQ		12,000				12,000			3.89
PBSO	District 3 - Fleet			1,500			1,500			0.49
Community Services	Central HRC/Lewis Ctr	1000 45th Street, West Palm Beach	34,631				34,631	34,631	3.97	3.97
Multiple Use	North EMS Tower	1130 45th Street, Riviera Beach					N/A	N/A	3.41	-
Public Safety	High Ridge Family	1200 45th Street, West Palm Beach	31,800				31,800	41,556	32.71	25.03
Public Safety	Youth Services Bureau		9,756				9,756			7.68
Community Services	810 Datura	810 Datura Street, West Palm Beach	29,650				29,650	29,650	0.87	0.87
Courthouse	Judicial Center Parking Garage	505 Banyan Blvd, West Palm Beach			524,782		524,782	524,782	6.08	6.08
Courthouse	Main	205 N. Dixie Hwy, West Palm Beach				698,561	698,561	706,561	4.96	4.91
Clerk	Courthouse - 7th Flr			8,000			8,000			0.06
FDO	Gov't Center Parking		14,490	11,435			25,925			
Public Affairs	Parking Garage	215 N. Olive Avenue, West Palm Beach	2,130				2,130	264,159	1.74	0.01
Multiple Use	Gov't Ctr Parking Garage				236,104		236,104			1.55
Courthouse	SA/PD	401 N. Dixie Hwy, West Palm Beach	165,000				165,000	165,000	2.68	2.68

**Table D-2 (Continued)**  
**Public Buildings Inventory, Allocated Acreage**

Department <sup>(1)</sup>	Building <sup>(1)</sup>	Address <sup>(1)</sup>	Office SF	Ind SF	Ind Supp SF	Court SF	Total SF <sup>(1)</sup>	Total SF on Site <sup>(1)</sup>	Acreage <sup>(1)</sup>	Allocated Acreage <sup>(2)</sup>
Multiple Use	Block D Parking	315 3rd Street, West Palm Beach					N/A	N/A	3.05	-
Multiple Use	Government Center	301 N. Olive Ave, West Palm Beach	301,851				301,851	332,784	3.22	2.92
Multiple Use	1916 Courthouse		30,933				30,933			0.30
Clerk	Park Place	429 Park Place, West Palm Beach	796	10,680			11,476	11,476	0.83	0.83
Multiple Use	Connemara Tower	5420 N Ocean Drive, Riviera Beach					N/A	N/A	N/A	-
Multiple Use	Jupiter Tower	8021 W Indiantown Road, Jupiter					N/A	N/A	N/A	-
Public Health	Lantana Clinic	1199 W. Lantana Road, Lantana	33,874				33,874	N/A	144.11	7.25
PBSO	K-9 Training <sup>(3)</sup>	8100 Forest Hill Blvd, West Palm Beach	5,105				5,105	5,105	N/A	N/A
<b>Building Totals</b>			<b>3,657,761</b>	<b>463,684</b>	<b>1,452,691</b>	<b>953,711</b>	<b>6,486,274</b>		<b>1,699.03</b>	<b>621.68</b>

- 1) Source: Palm Beach County
  - 2) Calculated as the ratio of total square feet to total square feet on site multiplied by acreage
  - 3) Acreage is excluded as facility is part of Okeehetee Park
- N/A -- Not available or not used

**Appendix E**  
**Transportation Impact Fee:**  
**Demand Component**

# Appendix E: Transportation Demand Component

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This appendix presents the detailed calculations for the demand component of the transportation impact fee update.

## Interstate & Toll Facility Adjustment Factor

Table E-1 presents the interstate and toll facility adjustment factor used in the calculation of the transportation impact fee. This variable is based on data from the Southeast Regional Planning Model (SERPM) v8 model, specifically the 2045 vehicle-miles of travel. It should be noted that this adjustment factor excludes all external-to-external trips, which represent traffic that goes through the study area, but does not necessarily stop in the study area. This traffic is excluded from the analysis since it does not come from development within the county. The I/T adjustment factor is used to reduce the VMT that the transportation impact fee charges for each land use.

**Table E-1**  
**Interstate/Toll Facility Adjustment Factor**

Facility Type	VMT (2045)	% VMT
Interstate/Toll Facilities	13,006,912	34.8%
Other Roads	24,385,907	65.2%
<b>Total</b>	<b>37,392,819</b>	<b>100.0%</b>

Source: SERPM v8, 2045 Cost Feasible Plan

## Florida Studies Trip Characteristics Database

The Florida Studies Trip Characteristics Database includes approximately 345 studies on 40 different residential and non-residential land uses collected over the last 30 years. Data from these studies include trip generation, trip length, and percent new trips for each land use. This information has been used in the development of impact/multi-modal/mobility fees and the creation of land use plan category trip characteristics for communities throughout Florida and the U.S.

Benesch estimates trip generation rates for all land uses in an impact fee schedule using data from studies in the Florida Studies Database and the Institute of Transportation Engineers' (ITE) *Trip Generation* reference report (11<sup>th</sup> edition). In instances, when both ITE *Trip Generation* reference report (11<sup>th</sup> edition) and Florida Studies trip generation rate (TGR) data are available for a particular land use, the data is typically blended together to increase the sample size and provide a more valid estimate of the average number of trips generated per unit of development.



If no Florida Studies data is available, only TGR data from the ITE reference report is used in the fee calculation.

The trip generation rate for each respective land use is calculated using machine counts that record daily traffic into and out of the site studied. The traffic count hoses are set at entrances to residential subdivisions for the residential land uses and at all access points for non-residential land uses.

The trip length information is obtained through origin-destination surveys that ask respondents where they came from prior to arriving at the site and where they intended to go after leaving the site. The results of these surveys were used to estimate average trip length by land use.

The percent new trip variable is based on assigning each trip collected through the origin-destination survey process a trip type (primary, secondary, diverted, and captured). The percent new trip variable is then calculated as 1 minus the percentage of trips that are captured. Benesch (formerly Tindale Oliver) has published an article entitled, *Measuring Travel Characteristics for Transportation Impact Fees*, ITE Journal, April 1991 on the data collecting methodology for trip characteristics studies.

**Table E-2**

**Land Use 151: Mini-Warehouse**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source	
Orange Co, FL	89.6	2006	-	-	1.23	-	-	-	-	Orange County	
Orange Co, FL	84.7	2006	-	-	1.39	-	-	-	-	Orange County	
Orange Co, FL	93.0	2006	-	-	1.51	-	-	-	-	Orange County	
Orange Co, FL	107.0	2007	-	-	1.45	-	-	-	-	Orange County	
Orange Co, FL	77.0	2009	-	-	2.18	-	-	-	-	Tindale Oliver	
Orange Co, FL	93.7	2012	-	-	1.15	-	-	-	-	Tindale Oliver	
Total Size	545.0		6								
ITE	880.0		16								
Blended total	1,425.0										
							<b>Average Trip Length:</b>	n/a			
							<b>Weighted Average Trip Length:</b>	n/a			
							Weighted Percent New Trip Average:			-	
							Weighted Average Trip Generation Rate:			1.47	
							ITE Average Trip Generation Rate:			1.45	
							Blend of FL Studies and ITE Average Trip Generation Rate:			1.46	

**Table E-3**

**Land Use 210: Single Family - Detached**

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sarasota Co, FL	76	Jun-93	70	70	10.03	-	6.00	-	60.18	Sarasota County
Sarasota Co, FL	79	Jun-93	86	86	9.77	-	4.40	-	42.99	Sarasota County
Sarasota Co, FL	135	Jun-93	75	75	8.05	-	5.90	-	47.50	Sarasota County
Sarasota Co, FL	152	Jun-93	63	63	8.55	-	7.30	-	62.42	Sarasota County
Sarasota Co, FL	193	Jun-93	123	123	6.85	-	4.60	-	31.51	Sarasota County
Sarasota Co, FL	97	Jun-93	33	33	13.20	-	3.00	-	39.60	Sarasota County
Sarasota Co, FL	282	Jun-93	146	146	6.61	-	8.40	-	55.52	Sarasota County
Sarasota Co, FL	393	Jun-93	207	207	7.76	-	5.40	-	41.90	Sarasota County
Hernando Co, FL	76	May-96	148	148	10.01	9a-6p	4.85	-	48.55	Tindale Oliver
Hernando Co, FL	128	May-96	205	205	8.17	9a-6p	6.03	-	49.27	Tindale Oliver
Hernando Co, FL	232	May-96	182	182	7.24	9a-6p	5.04	-	36.49	Tindale Oliver
Hernando Co, FL	301	May-96	264	264	8.93	9a-6p	3.28	-	29.29	Tindale Oliver
Charlotte Co, FL	135	Oct-97	230	-	5.30	9a-5p	7.90	-	41.87	Tindale Oliver
Charlotte Co, FL	142	Oct-97	245	-	5.20	9a-5p	4.10	-	21.32	Tindale Oliver
Charlotte Co, FL	150	Oct-97	160	-	5.00	9a-5p	10.80	-	54.00	Tindale Oliver
Charlotte Co, FL	215	Oct-97	158	-	7.60	9a-5p	4.60	-	34.96	Tindale Oliver
Charlotte Co, FL	257	Oct-97	225	-	7.60	9a-5p	7.40	-	56.24	Tindale Oliver
Charlotte Co, FL	345	Oct-97	161	-	7.00	9a-5p	6.60	-	46.20	Tindale Oliver
Charlotte Co, FL	368	Oct-97	152	-	6.60	9a-5p	5.70	-	37.62	Tindale Oliver
Charlotte Co, FL	383	Oct-97	516	-	8.40	9a-5p	5.00	-	42.00	Tindale Oliver
Charlotte Co, FL	441	Oct-97	195	-	8.20	9a-5p	4.70	-	38.54	Tindale Oliver
Charlotte Co, FL	1,169	Oct-97	348	-	6.10	9a-5p	8.00	-	48.80	Tindale Oliver
Collier Co, FL	90	Dec-99	91	-	12.80	8a-6p	11.40	-	145.92	Tindale Oliver
Collier Co, FL	400	Dec-99	389	-	7.80	8a-6p	6.40	-	49.92	Tindale Oliver
Lake Co, FL	49	Apr-02	170	-	6.70	7a-6p	10.20	-	68.34	Tindale Oliver
Lake Co, FL	52	Apr-02	212	-	10.00	7a-6p	7.60	-	76.00	Tindale Oliver
Lake Co, FL	126	Apr-02	217	-	8.50	7a-6p	8.30	-	70.55	Tindale Oliver
Pasco Co, FL	55	Apr-02	133	-	6.80	8a-6p	8.12	-	55.22	Tindale Oliver
Pasco Co, FL	60	Apr-02	106	-	7.73	8a-6p	8.75	-	67.64	Tindale Oliver
Pasco Co, FL	70	Apr-02	188	-	7.80	8a-6p	6.03	-	47.03	Tindale Oliver
Pasco Co, FL	74	Apr-02	188	-	8.18	8a-6p	5.95	-	48.67	Tindale Oliver
Pasco Co, FL	189	Apr-02	261	-	7.46	8a-6p	8.99	-	67.07	Tindale Oliver
Marion Co, FL	102	Apr-02	167	-	8.02	7a-6p	5.10	-	40.90	Kimley-Horn & Associates
Marion Co, FL	105	Apr-02	169	-	7.23	7a-6p	7.22	-	52.20	Kimley-Horn & Associates
Marion Co, FL	124	Apr-02	170	-	6.04	7a-6p	7.29	-	44.03	Kimley-Horn & Associates
Marion Co, FL	132	Apr-02	171	-	7.87	7a-6p	7.00	-	55.09	Kimley-Horn & Associates
Marion Co, FL	133	Apr-02	209	-	8.04	7a-6p	4.92	-	39.56	Kimley-Horn & Associates
Citrus Co, FL	111	Oct-03	273	-	8.66	7a-6p	7.70	-	66.68	Tindale Oliver
Citrus Co, FL	231	Oct-03	155	-	5.71	7a-6p	4.82	-	27.52	Tindale Oliver
Citrus Co, FL	306	Oct-03	146	-	8.40	7a-6p	3.94	-	33.10	Tindale Oliver
Citrus Co, FL	364	Oct-03	345	-	7.20	7a-6p	9.14	-	65.81	Tindale Oliver
Citrus Co, FL	374	Oct-03	248	-	12.30	7a-6p	6.88	-	84.62	Tindale Oliver
Lake Co, FL	42	Dec-06	122	-	11.26	-	5.56	-	62.61	Tindale Oliver
Lake Co, FL	51	Dec-06	346	-	18.22	-	9.46	-	172.36	Tindale Oliver
Lake Co, FL	59	Dec-06	144	-	12.07	-	10.79	-	130.24	Tindale Oliver
Lake Co, FL	90	Dec-06	194	-	9.12	-	5.78	-	52.71	Tindale Oliver
Lake Co, FL	239	Dec-06	385	-	7.58	-	8.93	-	67.69	Tindale Oliver
Hernando Co, FL	232	Apr-07	516	-	8.02	7a-6p	8.16	-	65.44	Tindale Oliver
Hernando Co, FL	95	Apr-07	256	-	8.08	7a-6p	5.88	-	47.51	Tindale Oliver
Hernando Co, FL	90	Apr-07	338	-	7.13	7a-6p	5.86	-	41.78	Tindale Oliver
Hernando Co, FL	58	Apr-07	153	-	6.16	7a-6p	8.39	-	51.68	Tindale Oliver
Collier Co, FL	74	Mar-08	503	-	12.81	7a-6p	3.05	-	39.07	Tindale Oliver
Collier Co, FL	97	Mar-08	512	-	8.78	7a-6p	11.29	-	99.13	Tindale Oliver
Collier Co, FL	315	Mar-08	1,347	-	6.97	7a-6p	6.55	-	45.65	Tindale Oliver
Collier Co, FL	42	Mar-08	314	-	9.55	7a-6p	10.98	-	104.86	Tindale Oliver
<b>Total Size</b>	<b>10,380</b>		<b>55</b>	<b>13,130</b>		<b>Average Trip Length:</b>	<b>6.83</b>			
						<b>Weighted Average Trip Length:</b>	<b>6.62</b>			
						<b>Weighted Average Trip Generation Rate:</b>			<b>7.81</b>	

**Table E-4**

**LUC 220/221/222: Multi-Family/Apartment**

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sarasota Co, FL	212	Jun-93	42	42	5.78	-	5.20	-	30.06	Sarasota County
Sarasota Co, FL	243	Jun-93	36	36	5.84	-	-	-	-	Sarasota County
Marion Co, FL	214	Apr-02	175	175	6.84	-	4.61	-	31.53	Kimley-Horn & Associates
Marion Co, FL	240	Apr-02	174	174	6.96	-	3.43	-	23.87	Kimley-Horn & Associates
Marion Co, FL	288	Apr-02	175	175	5.66	-	5.55	-	31.41	Kimley-Horn & Associates
Marion Co, FL	480	Apr-02	175	175	5.73	-	6.88	-	39.42	Kimley-Horn & Associates
Marion Co, FL	500	Apr-02	170	170	5.46	-	5.94	-	32.43	Kimley-Horn & Associates
Lake Co, FL	250	Dec-06	135	135	6.71	-	5.33	-	35.76	Tindale Oliver
Lake Co, FL	157	Dec-06	265	265	13.97	-	2.62	-	36.60	Tindale Oliver
Lake Co, FL	169	Dec-06	212	-	8.09	-	6.00	-	48.54	Tindale Oliver
Lake Co, FL	226	Dec-06	301	-	6.74	-	2.17	-	14.63	Tindale Oliver
Hernando Co, FL	312	Apr-07	456	-	4.09	-	5.95	-	24.34	Tindale Oliver
Hernando Co, FL	176	Apr-07	332	-	5.38	-	5.24	-	28.19	Tindale Oliver
<b>Total Size</b>	<b>3,467</b>		<b>13</b>	<b>2,648</b>		<b>Average Trip Length:</b>	<b>4.91</b>			
						<b>Weighted Average Trip Length:</b>	<b>5.21</b>			

**Table E-5**

**Land Use 240: Mobile Home Park**

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Marion Co, FL	67	Jul-91	22	22	5.40	48hrs.	2.29	-	12.37	Tindale Oliver
Marion Co, FL	82	Jul-91	58	58	10.80	24hr.	3.72	-	40.18	Tindale Oliver
Marion Co, FL	137	Jul-91	22	22	3.10	24hr.	4.88	-	15.13	Tindale Oliver
Sarasota Co, FL	996	Jun-93	181	181	4.19	-	4.40	-	18.44	Sarasota County
Sarasota Co, FL	235	Jun-93	100	100	3.51	-	5.10	-	17.90	Sarasota County
Marion Co, FL	188	Apr-02	147	-	3.51	24hr.	5.48	-	19.23	Kimley-Horn & Associates
Marion Co, FL	227	Apr-02	173	-	2.76	24hr.	8.80	-	24.29	Kimley-Horn & Associates
Marion Co, FL	297	Apr-02	175	-	4.78	24hr.	4.76	-	22.75	Kimley-Horn & Associates
Hernando Co, FL	1,892	May-96	425	425	4.13	9a-6p	4.13	-	17.06	Tindale Oliver
Total Size	4,121		9	1,303			<b>Average Trip Length: 4.84</b>			
							<b>Weighted Average Trip Length: 4.60</b>			

Weighted Average Trip Generation Rate: 4.17

**Table E-6**

**Land Use 251: Senior Adult Housing - Single Family**

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Lakeland, FL	67	3/28-4/2/90	26	24	3.50	9am-4pm	2.44	-	8.54	Tindale Oliver
Marion Co, FL	778	Apr-02	175	-	2.96	24hr.	3.49	-	10.33	Kimley-Horn & Associates
Marion Co, FL	877	Apr-02	209	-	2.91	24hr.	5.90	-	17.17	Kimley-Horn & Associates
Marion Co, FL	1,054	Apr-02	173	-	3.65	24hr.	6.00	-	21.90	Kimley-Horn & Associates
Marion Co, FL	3,076	Apr-02	198	-	2.63	24hr.	5.16	-	13.57	Kimley-Horn & Associates
Marion Co, FL	3,625	Apr-02	164	-	2.50	24hr.	5.83	-	14.58	Kimley-Horn & Associates
Total Size	9,477		6	945			<b>Average Trip Length: 4.80</b>			
ITE	9,690		15				<b>Weighted Average Trip Length: 5.42</b>			

Weighted Average Trip Generation Rate: 2.75  
ITE Average Trip Generation Rate: 4.31  
Blend of FL Studies and ITE Average Trip Generation Rate: 3.54

**Table E-7**

**Land Use 252: Senior Adult Housing - Multi-Family**

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sun City Center, FL	208	Oct-91	726	726	2.46	24hr.	-	-	-	Tindale Oliver
Total Size	208		1				<b>Average Trip Length: -</b>			
ITE	432		6				<b>Weighted Average Trip Length: -</b>			

Weighted Average Trip Generation Rate: 2.46  
ITE Average Trip Generation Rate: 3.24  
Blend of FL Studies and ITE Average Trip Generation Rate: 2.99

**Table E-8**

**Land Use 253: Congregate Care Facility/Assisted Living Facility**

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Park, FL	72	Aug-89	25	19	3.50	9am-5pm	2.20	79.0	7.70	Tindale Oliver
Palm Harbor, FL	200	Oct-89	58	40	-	9am-5pm	3.40	69.0	-	Tindale Oliver
Total Size	272		2	83			<b>Average Trip Length: 2.80</b>			
ITE	720		4				<b>Weighted Average Trip Length: 3.08</b>			

Weighted Percent New Trip Average: 71.6

**Table E-9**

**ITE LUC 251, 252 & 253 (Use for Accessory Apt/Grooms Quarters)**

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Lakeland, FL	67	3/28-4/2/90	26	24	3.50	9am-4pm	2.44	N/A	8.54	Tindale-Oliver & Associates
Marion Co, FL	778	Apr-02	175	-	2.96	24hr.	3.49	N/A	10.33	Kimley-Horn & Associates
Marion Co, FL	877	Apr-02	209	-	2.91	24hr.	5.90	N/A	17.17	Kimley-Horn & Associates
Marion Co, FL	1,054	Apr-02	173	-	3.65	24hr.	6.00	N/A	21.90	Kimley-Horn & Associates
Marion Co, FL	3,076	Apr-02	198	-	2.63	24hr.	5.16	N/A	13.57	Kimley-Horn & Associates
Marion Co, FL	3,625	Apr-02	164	-	2.50	24hr.	5.83	N/A	14.58	Kimley-Horn & Associates
Sun City Center, FL	208	Oct-91	726	726	2.46	24hr.	3.28	-	8.07	Tindale-Oliver & Associates
Pinellas Park, FL	72	Aug-89	25	19	3.50	9am-5pm	2.20	79.0	7.70	Tindale-Oliver & Associates
Palm Harbor, FL	200	Oct-89	58	40	-	9am-5pm	3.40	69.0	-	Tindale-Oliver & Associates
Total Size	9,957		9	1,754			<b>Average Trip Length: n/a</b>			
ITE (LUC 251)	9,690		15				<b>Weighted Average Trip Length: n/a</b>			

Weighted Average Trip Generation Rate: 2.75  
ITE Average Trip Generation Rate (LUC 251): 4.31  
ITE Average Trip Generation Rate (LUC 252): 3.24  
ITE Average Trip Generation Rate (LUC 253): 2.21  
Blend of FL Studies and ITE Average Trip Generation Rate: 3.48

**Table E-10**  
**Land Use 310: Hotel**

Location	Size (Rooms)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	174	Aug-89	134	106	12.50	7-11a/3-7p	6.30	79.0	62.21	Tindale Oliver
Pinellas Co, FL	114	Oct-89	30	14	7.30	12-7p	6.20	47.0	21.27	Tindale Oliver
Orange Co, FL	123	1997	-	-	6.32	-	-	-	-	Orange County
Orange Co, FL	120	1997	-	-	5.27	-	-	-	-	Orange County
Orange Co, FL	146	1997	-	-	7.61	-	-	-	-	Orange County
Orange Co, FL	252	1997	-	-	5.63	-	-	-	-	Orange County
Orange Co, FL	172	1997	-	-	6.36	-	-	-	-	Orange County
Orange Co, FL	170	1997	-	-	6.06	-	-	-	-	Orange County
Orange Co, FL	128	1997	-	-	6.10	-	-	-	-	Orange County
Orange Co, FL	200	1997	-	-	4.56	-	-	-	-	Orange County
Orange Co, FL	112	1998	-	-	2.78	-	-	-	-	Orange County
Orange Co, FL	130	1998	-	-	9.12	-	-	-	-	Orange County
Orange Co, FL	106	1998	-	-	7.34	-	-	-	-	Orange County
Orange Co, FL	98	1998	-	-	7.32	-	-	-	-	Orange County
Orange Co, FL	120	1998	-	-	5.57	-	-	-	-	Orange County
Orange Co, FL	70	1999	-	-	1.85	-	-	-	-	Orange County
Orange Co, FL	123	1999	-	-	4.81	-	-	-	-	Orange County
Orange Co, FL	123	1999	-	-	3.70	-	-	-	-	Orange County
Orange Co, FL	211	2000	-	-	2.23	-	-	-	-	Orange County
Orange Co, FL	144	2000	-	-	7.32	-	-	-	-	Orange County
Orange Co, FL	105	2001	-	-	5.25	-	-	-	-	Orange County
Orange Co, FL	891	2005	-	-	5.69	-	-	-	-	Orange County
Orange Co, FL	1,584	2005	-	-	5.88	-	-	-	-	Orange County
Orange Co, FL	210	2006	-	-	4.88	-	-	-	-	Orange County
Orange Co, FL	1,499	2006	-	-	4.69	-	-	-	-	Orange County
Orange Co, FL	144	-	-	-	4.74	-	-	-	-	Orange County
Orange Co, FL	148	-	-	-	7.61	-	-	-	-	Orange County
Orange Co, FL	160	-	-	-	6.19	-	-	-	-	Orange County
Orange Co, FL	130	-	-	-	4.29	-	-	-	-	Orange County
Orange Co, FL	130	-	-	-	3.40	-	-	-	-	Orange County
Orange Co, FL	144	-	-	-	7.66	-	-	-	-	Orange County
Orange Co, FL	100	-	-	-	7.37	-	-	-	-	Orange County
Orange Co, FL	190	-	-	-	4.71	-	-	-	-	Orange County
Orange Co, FL	1,501	2011	-	-	3.50	-	-	-	-	Tindale Oliver
Orange Co, FL	174	2011	-	-	7.03	-	-	-	-	Tindale Oliver
Orange Co, FL	238	2014	-	-	4.05	-	-	-	-	Tindale Oliver
Total Size	10,184		36	164	<b>Average Trip Length:</b>		<b>6.25</b>			
ITE	1,036		7		<b>Weighted Average Trip Length:</b>		<b>6.26</b>			
Blended total	11,220				Weighted Percent New Trip Average:		66.3			
								Weighted Average Trip Generation Rate:	5.31	
								ITE Average Trip Generation Rate:	7.99	
								<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>5.56</b>	

**Table E-11**

**Land Use 320: Motel**

Location	Size (Rooms)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	48	Oct-89	46	24	-	10a-2p	2.80	65.0	-	Tindale Oliver
Pinellas Co, FL	54	Oct-89	32	22	-	12p-7p	3.80	69.0	-	Tindale Oliver
Pinellas Co, FL	120	Oct-89	26	22	-	2p-7p	5.20	84.6	-	Tindale Oliver
Total Size	222		3	104	<b>Average Trip Length:</b>		<b>3.93</b>			
ITE	654		6		<b>Weighted Average Trip Length:</b>		<b>4.34</b>			
								Weighted Percent New Trip Average:	76.6	

**Table E-12**

**Land Use 445: Movie Theater**

Location	Size (Screens)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	8	Oct-89	151	116	113.10	2p-8p	2.70	77.0	235.13	Tindale Oliver
Pinellas Co, FL	12	Sep-89	122	116	63.40	2p-8p	1.90	95.0	114.44	Tindale Oliver
Total Size	20		2	273	<b>Average Trip Length:</b>		<b>2.30</b>			
ITE	6		1		<b>Weighted Average Trip Length:</b>		<b>2.22</b>			
Blended total	26				Weighted Percent New Trip Average:		87.8			
								Weighted Average Trip Generation Rate:	83.28	
								ITE Average Trip Generation Rate:	220.00	
								<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>114.83</b>	

**Table E-13**

**Land Use 492: Health/Fitness Club**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	33	31	-	-	7.90	94.0	-	Kimley-Horn & Associates
Total Size			1	33	<b>Average Trip Length:</b>		<b>n/a</b>			
ITE	37		8		Percent New Trip Average:		94.0			

**Table E-14**

**Land Use 565: Day Care Center**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	5.6	Aug-89	94	66	66.99	7a-6p	1.90	70.0	89.10	Tindale Oliver
Pinellas Co, FL	10.0	Sep-89	179	134	66.99	7a-6p	2.10	75.0	105.51	Tindale Oliver
Tampa, FL	-	Mar-86	28	25	-	-	2.60	89.0	-	Kimley-Horn & Associates
Total Size	15.6		3	301			<b>Average Trip Length: 2.20</b>			
ITE	135.0		27				<b>Weighted Average Trip Length: 2.03</b>			
Blended total	150.6							73.2		
								Weighted Average Trip Generation Rate:		66.99
								ITE Average Trip Generation Rate:		47.62
								<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>		<b>49.63</b>

**Table E-15**

**Land Use 620: Nursing Home**

Location	Size (Beds)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Lakeland, FL	120	Mar-90	74	66	2.86	11a-4p	2.59	89.0	6.59	Tindale Oliver
Total Size	120		1	74			<b>Average Trip Length: 2.59</b>			
ITE	480		3				<b>Weighted Average Trip Length: 2.59</b>			
Blended total	600							89.0		
								Weighted Average Trip Generation Rate:		2.86
								ITE Average Trip Generation Rate:		3.06
								<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>		<b>3.02</b>

**Table E-16**

**Land Use 640: Animal Hospital/Veterinary Clinic**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
St. Petersburg, FL	4.0	-	-	-	21.50	-	-	-	-	Tindale Oliver
Clearwater, FL	3.0	Sep-89	-	-	44.00	-	1.90	70.0	-	Tindale Oliver
Clearwater, FL	2.0	Aug-89	-	-	-	-	1.90	70.0	-	Tindale Oliver
Total Size	7.0		3	-			<b>Average Trip Length: 1.90</b>			
ITE	18.0		6				<b>Weighted Average Trip Length: 1.90</b>			
Blended total	25.0							70.0		
								Weighted Average Trip Generation Rate:		31.14
								ITE Average Trip Generation Rate:		21.50
								<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>		<b>24.20</b>

**Table E-17**

**Land Use 710: General Office Building**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sarasota Co, FL	14.3	Jun-93	14	14	46.85	-	11.30	-	529.41	Sarasota County
Gwinnett Co, GA	98.0	Dec-92	-	-	4.30	-	5.40	-	-	Street Smarts
Gwinnett Co, GA	180.0	Dec-92	-	-	3.60	-	5.90	-	-	Street Smarts
Pinellas Co, FL	187.0	Oct-89	431	388	18.49	7a-5p	6.30	90.0	104.84	Tindale Oliver
St. Petersburg, FL	262.8	Sep-89	291	274	-	7a-5p	3.40	94.0	-	Tindale Oliver
Total Size	742.1		5	736			<b>Average Trip Length: 6.46</b>			
ITE	11,286.0		66				<b>Weighted Average Trip Length: 5.15</b>			
								92.3		
								Weighted Percent New Trip Average:		

**Table E-18**

**Land Use 720: Medical-Dental Office Building**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	33	26	-	-	6.00	79.0	-	Kimley-Horn & Associates
Palm Harbor, FL	14.6	Oct-89	104	76	33.98	9a-5p	6.30	73.0	156.27	Tindale Oliver
St. Petersburg, FL	-	Nov-89	34	30	57.20	9a-4p	1.20	88.0	-	Tindale Oliver
Hernando Co, FL	58.4	May-96	390	349	28.52	9a-6p	6.47	89.5	165.09	Tindale Oliver
Hernando Co, FL	28.0	May-96	202	189	49.75	9a-6p	6.06	93.8	282.64	Tindale Oliver
Charlotte Co, FL	11.0	Oct-97	-	186	49.50	9a-5p	4.60	92.1	209.67	Tindale Oliver
Charlotte Co, FL	28.0	Oct-97	-	186	31.00	9a-5p	3.60	81.6	91.04	Tindale Oliver
Charlotte Co, FL	30.4	Oct-97	-	324	39.80	9a-5p	3.30	83.5	109.68	Tindale Oliver
Citrus Co, FL	38.9	Oct-03	-	168	32.26	8-6p	6.80	97.1	213.03	Tindale Oliver
Citrus Co, FL	10.0	Nov-03	-	340	40.56	8-630p	6.20	92.4	232.33	Tindale Oliver
Citrus Co, FL	5.3	Dec-03	-	20	29.36	8-5p	5.25	95.2	146.78	Tindale Oliver
Orange Co, FL	50.6	2009	-	-	26.72	-	-	-	-	Orange County
Orange Co, FL	23.5	2010	-	-	16.58	-	-	-	-	Tindale Oliver
Total Size	298.6		13	763			<b>Average Trip Length: 5.07</b>			
ITE	270.0		18				<b>Weighted Average Trip Length: 5.55</b>			
Blended total	568.6							88.9		
								Weighted Percent New Trip Average:		
								Average Trip Generation Rate:		32.59
								ITE Average Trip Generation Rate:		36.00
								<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>		<b>34.21</b>

**Table E-19**

**LUC 720: Small Medical/Dental Office Building: 10,000 sf or Less**

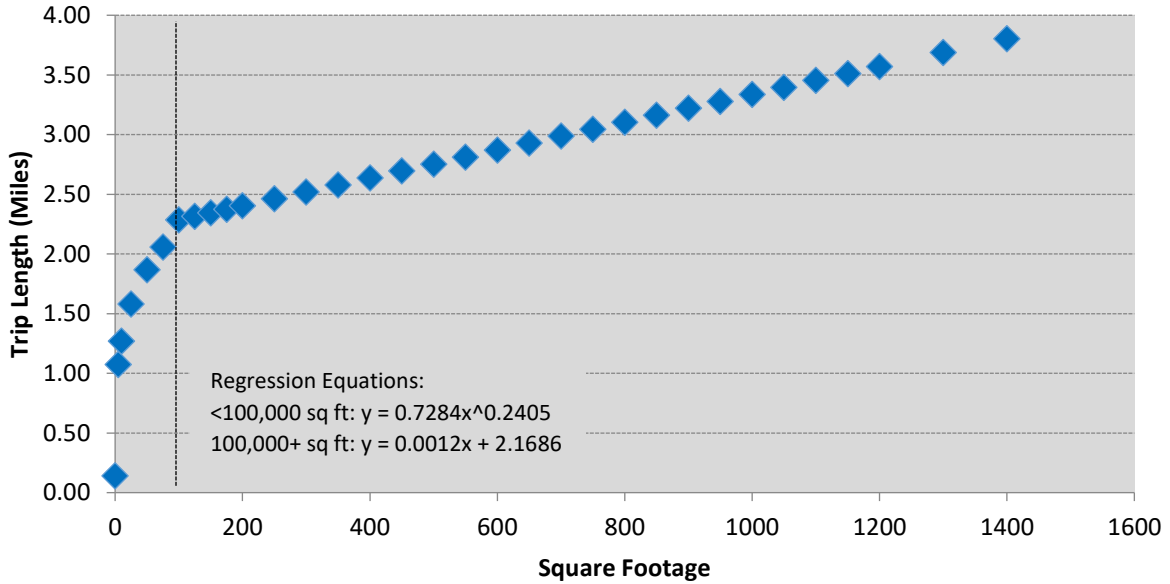
Site	Size (1,000 sf)	Tues., Jan 11		Wedn., Jan 12		Thur., Jan 13		TOTAL		AVERAGE		AVERAGE (per 1,000 sf)		
		IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	TOTAL
Site 1	2.100	35	35	22	22	13	13	70	70	23.33	23.33	11.11	11.11	22.22
Site 2	3.000	40	40	52	52	53	53	145	145	48.33	48.33	16.11	16.11	32.22
Site 3	2.000	28	28	19	21	24	26	71	75	23.67	25.00	11.84	12.50	24.34
Site 4	1.000	30	30	52	52	57	57	139	139	46.33	46.33	46.33	46.33	92.66
Site 5	3.024	31	32	43	43	24	24	98	99	32.67	33.00	10.80	10.91	21.71
Site 6	1.860	22	24	19	17	11	11	52	52	17.33	17.33	9.32	9.32	18.64
<b>Average</b>												<b>17.59</b>	<b>17.71</b>	<b>35.30</b>
<b>Average (excluding Site 4)</b>												<b>11.84</b>	<b>11.99</b>	<b>23.83</b>

**Table E-20**

**Land Use 820/821/822: Shopping Center/Plaza**

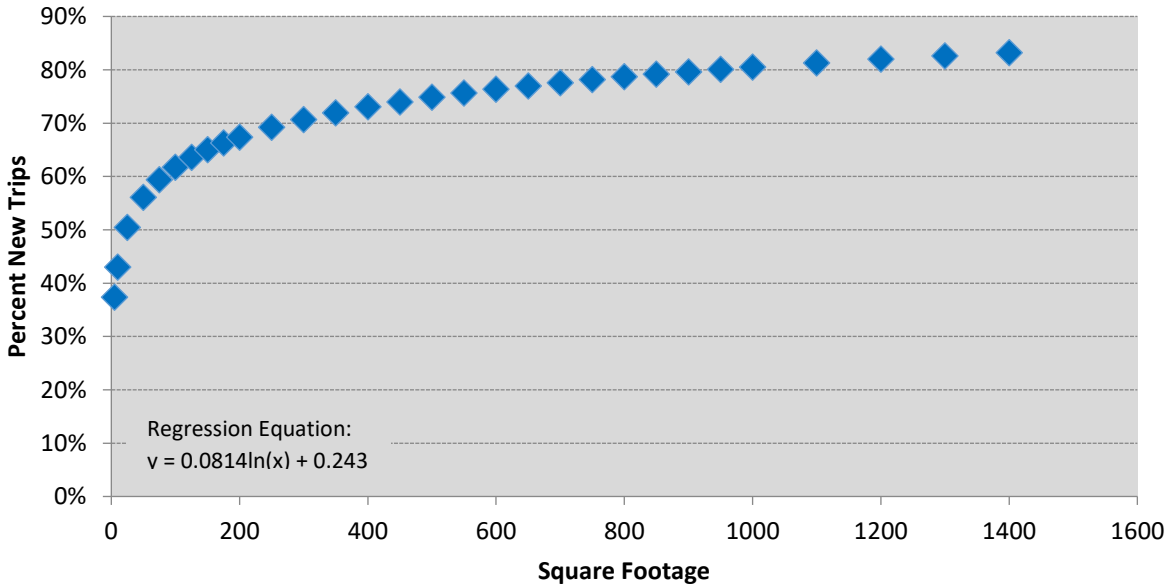
Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	527	348	-	-	-	66.0	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	170	-	-	-	1.70	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	354	269	-	-	-	76.0	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	144	-	-	-	2.50	-	-	Kimley-Horn & Associates
St. Petersburg, FL	1,192.0	Aug-89	384	298	-	11a-7p	3.60	78.0	-	Tindale Oliver
St. Petersburg, FL	132.3	Sep-89	400	368	77.00	10a-7p	1.80	92.0	127.51	Tindale Oliver
Largo, FL	425.0	Aug-89	160	120	26.73	10a-6p	2.30	75.0	46.11	Tindale Oliver
Dunedin, FL	80.5	Sep-89	276	210	81.48	9a-5p	1.40	76.0	86.69	Tindale Oliver
Pinellas Park, FL	696.0	Sep-89	485	388	-	9a-6p	3.20	80.0	-	Tindale Oliver
Seminole, FL	425.0	Oct-89	674	586	-	-	-	87.0	-	Tindale Oliver
Hillsborough Co, FL	134.0	Jul-91	-	-	-	-	1.30	74.0	-	Tindale Oliver
Hillsborough Co, FL	151.0	Jul-91	-	-	-	-	1.30	73.0	-	Tindale Oliver
Collier Co, FL	-	Aug-91	68	64	-	-	3.33	94.1	-	Tindale Oliver
Collier Co, FL	-	Aug-91	208	154	-	-	2.64	74.0	-	Tindale Oliver
Sarasota/Bradenton, FL	109.0	Sep-92	300	185	-	12a-6p	-	61.6	-	King Engineering Associates, Inc.
Ocala, FL	133.4	Sep-92	300	192	-	12a-6p	-	64.0	-	King Engineering Associates, Inc.
Sarasota Co, FL	110.0	Jun-93	58	58	122.14	-	3.20	-	-	Sarasota County
Sarasota Co, FL	146.1	Jun-93	65	65	51.53	-	2.80	-	-	Sarasota County
Sarasota Co, FL	157.5	Jun-93	57	57	79.79	-	3.40	-	-	Sarasota County
Sarasota Co, FL	191.0	Jun-93	62	62	66.79	-	5.90	-	-	Sarasota County
Hernando Co, FL	107.8	May-96	608	331	77.60	9a-6p	4.68	54.5	197.85	Tindale Oliver
Charlotte Co, FL	88.0	Oct-97	-	-	73.50	9a-5p	1.80	57.1	75.56	Tindale Oliver
Charlotte Co, FL	191.9	Oct-97	-	-	72.00	9a-5p	2.40	50.9	87.97	Tindale Oliver
Charlotte Co, FL	51.3	Oct-97	-	-	43.00	9a-5p	2.70	51.8	60.08	Tindale Oliver
Lake Co, FL	67.8	Apr-01	246	177	102.60	-	3.40	71.2	248.37	Tindale Oliver
Lake Co, FL	72.3	Apr-01	444	376	65.30	-	4.50	59.0	173.37	Tindale Oliver
Pasco Co, FL	65.6	Apr-02	222	-	145.64	9a-5p	1.46	46.9	99.62	Tindale Oliver
Pasco Co, FL	75.8	Apr-02	134	-	38.23	9a-5p	2.36	58.2	52.52	Tindale Oliver
Citrus Co, FL	185.0	Oct-03	-	784	55.84	8a-6p	2.40	88.1	118.05	Tindale Oliver
Citrus Co, FL	91.3	Nov-03	-	390	54.50	8a-6p	1.60	88.0	76.77	Tindale Oliver
<b>Total Size</b>	<b>5,079.5</b>		<b>30</b>	<b>6,346</b>			<b>Average Trip Length: 2.71</b>			

**Figure E-1**  
**LUC 820: Retail/Shopping Center – Florida Curve Trip Length Regression**



Source: Regression analysis based on FL Studies data for LUC 820

**Figure E-2**  
**LUC 820: Retail/Shopping Center – Florida Curve Percent New Trips Regression**



Source: Regression analysis based on FL Studies data for LUC 820

**Table E-21**

**Land Use 840/841: New/Used Automobile Sales**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
St.Petersburg, FL	43.0	Oct-89	152	120	-	9a-5p	4.70	79.0	-	Tindale Oliver
Clearwater, FL	43.0	Oct-89	136	106	29.40	9a-5p	4.50	78.0	103.19	Tindale Oliver
Orange Co, FL	13.8	1997	-	-	35.75	-	-	-	-	Orange County
Orange Co, FL	34.4	1998	-	-	23.45	-	-	-	-	Orange County
Orange Co, FL	66.3	2001	-	-	28.50	-	-	-	-	Orange County
Orange Co, FL	39.1	2002	-	-	10.48	-	-	-	-	Orange County
Orange Co, FL	116.7	2003	-	-	22.18	-	-	-	-	Orange County
Orange Co, FL	51.7	2007	-	-	40.34	-	-	-	-	L-TEC
Orange Co, FL	36.6	-	-	-	15.17	-	-	-	-	Orange County
Orange Co, FL	216.4	2008	-	-	13.45	-	-	-	-	Orange County
Total Size	618.0		10	288	<b>Average Trip Length: 4.60</b>					
ITE (840)	648.0		18		<b>Weighted Average Trip Length: 4.60</b>					
ITE (841)	28.0		14		Weighted Percent New Trip Average: 78.5					
Blended total	1,294.0				Weighted Average Trip Generation Rate: 21.04					
					ITE Average Trip Generation Rate (LUC 840): 27.84					
					ITE Average Trip Generation Rate (LUC 841): 27.06					
					<b>Blend of FL Studies and ITE Average Trip Generation Rate: 24.58</b>					

**Table E-22**

**Land Use 851: Convenience Market**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	80	-	-	-	1.10	-	-	Kimley-Horn & Associates
Largo, FL	2.5	8/15,25/89	171	116	634.80	-	1.20	68.0	518.00	Tindale Oliver
Clearwater, FL	2.5	Aug-89	237	64	690.80	-	1.60	27.0	298.43	Tindale Oliver
Clearwater, FL	2.1	Nov-89	143	50	635.24	24hr.	1.60	35.0	355.73	Tindale Oliver
Marion Co, FL	2.5	Jun-91	94	43	787.20	48hrs.	1.52	46.2	552.80	Tindale Oliver
Marion Co, FL	2.5	Jun-91	74	20	714.00	48hrs.	0.75	27.0	144.59	Tindale Oliver
Collier Co, FL	-	Aug-91	146	36	-	-	2.53	24.7	-	Tindale Oliver
Collier Co, FL	-	Aug-91	148	38	-	-	1.08	25.7	-	Tindale Oliver
Collier Co, FL	-	Aug-91	148	84	-	-	1.11	56.8	-	Tindale Oliver
Gwinnett Co, GA	2.9	12/13-18/92	-	-	-	-	2.30	48.0	-	Street Smarts
Gwinnett Co, GA	3.2	12/13-18/92	-	-	-	-	-	37.0	-	Street Smarts
Total Size	18.2		11	1,241	<b>Average Trip Length: 1.48</b>					
ITE	24.0		8		<b>Weighted Average Trip Length: 1.52</b>					
Blended total	42.2				Weighted Percent New Trip Average: 41.3					
	36.1				Average Trip Generation Rate: 694.30					
					ITE Average Trip Generation Rate: 762.28					
					<b>Blend of FL Studies and ITE Average Trip Generation Rate: 739.50</b>					

**Table E-23**

**Land Use 880/881: Pharmacy with and without Drive-Through Window**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pasco Co, FL	11.1	Apr-02	138	38	88.97	-	2.05	27.5	50.23	Tindale Oliver
Pasco Co, FL	12.0	Apr-02	212	90	122.16	-	2.04	42.5	105.79	Tindale Oliver
Pasco Co, FL	15.1	Apr-02	1192	54	97.96	-	2.13	28.1	58.69	Tindale Oliver
Total Size	38.2		3	1,542	<b>Average Trip Length: 2.07</b>					
ITE (LUC 880)	66.0		6		<b>Weighted Average Trip Length: 2.08</b>					
ITE (LUC 881)	208.0		16		Weighted Percent New Trip Average: 32.4					
Blended total	312.2				Average Trip Generation Rate: 103.03					
					ITE Average Trip Generation Rate (LUC 880): 90.08					
					ITE Average Trip Generation Rate (LUC 881): 108.40					
					<b>Blend of FL Studies and ITE Average Trip Generation Rate: 103.86</b>					

**Table E-24**

**Land Use 890: Furniture Store**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	15.0	7/28-30/92	64	34	-	-	4.63	52.5	-	Tindale Oliver
Tampa, FL	16.9	Jul-92	68	39	-	-	7.38	55.7	-	Tindale Oliver
Total Size	31.90		2	132	<b>Average Trip Length: 6.01</b>					
ITE	779.0		19		<b>Weighted Average Trip Length: 6.09</b>					
Blended total	810.90				Weighted Percent New Trip Average: 54.2					



**Table E-25**

**Land Use 912: Drive-In Bank**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	77	-	-	-	2.40	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	211	-	-	-	-	54.0	-	Kimley-Horn & Associates
Clearwater, FL	0.4	Aug-89	113	52	-	9a-6p	5.20	46.0	-	Tindale Oliver
Largo, FL	2.0	Sep-89	129	94	-	-	1.60	73.0	-	Tindale Oliver
Seminole, FL	4.5	Oct-89	-	-	-	-	-	-	-	Tindale Oliver
Marion Co, FL	2.3	Jun-91	69	29	-	24hr.	1.33	42.0	-	Tindale Oliver
Marion Co, FL	3.1	Jun-91	47	32	-	24hr.	1.75	68.1	-	Tindale Oliver
Marion Co, FL	2.5	Jul-91	57	26	-	48hrs.	2.70	45.6	-	Tindale Oliver
Collier Co, FL	-	Aug-91	162	96	-	24hr.	0.88	59.3	-	Tindale Oliver
Collier Co, FL	-	Aug-91	116	54	-	-	1.58	46.6	-	Tindale Oliver
Collier Co, FL	-	Aug-91	142	68	-	-	2.08	47.9	-	Tindale Oliver
Hernando Co, FL	5.4	May-96	164	41	-	9a-6p	2.77	24.7	-	Tindale Oliver
Marion Co, FL	2.4	Apr-02	70	-	-	24hr.	3.55	54.6	-	Kimley-Horn & Associates
Marion Co, FL	2.7	May-02	50	-	246.66	24hr.	2.66	40.5	265.44	Kimley-Horn & Associates
Total Size	25.2		14	1,407			<b>Average Trip Length: 2.38</b>			
ITE	114.0		19				<b>Weighted Average Trip Length: 2.46</b>			
Blended total	139.2						Weighted Percent New Trip Average:	46.2		
	116.7						Weighted Average Trip Generation Rate:		246.66	
							ITE Average Trip Generation Rate:		100.35	
							<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>		<b>103.73</b>	

**Table E-26**

**Land Use 931: Fine-Dining/Quality Restaurant**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	76	62	-	-	2.10	82.0	-	Kimley-Horn & Associates
St. Petersburg, FL	7.5	Oct-89	177	154	-	11a-2p/4-8p	3.50	87.0	-	Tindale Oliver
Clearwater, FL	8.0	Oct-89	60	40	110.63	10a-2p/5-9p	2.80	67.0	207.54	Tindale Oliver
Total Size	15.5		3	313			<b>Average Trip Length: 2.80</b>			
ITE	90.0		10				<b>Weighted Average Trip Length: 3.14</b>			
Blended total	105.5						Weighted Percent New Trip Average:	76.7		
	98.0						Weighted Average Trip Generation Rate:		110.63	
							ITE Average Trip Generation Rate:		83.84	
							<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>		<b>86.03</b>	

**Table E-27**

**Land Use 932: High-Turnover (Sit-Down) Restaurant**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Hernando Co, FL	6.2	1996	242	175	187.51	9a-6p	2.76	72.5	375.00	Tindale Oliver
Hernando Co, FL	8.2	1996	154	93	102.71	9a-6p	4.15	60.2	256.43	Tindale Oliver
St. Petersburg, FL	5.0	1989	74	68	132.60	1130-7p	2.00	92.0	243.98	Tindale Oliver
Kenneth City, FL	5.2	1989	236	176	127.88	4p-730p	2.30	75.0	220.59	Tindale Oliver
Pasco Co, FL	5.2	2002	114	88	82.47	9a-6p	3.72	77.2	236.81	Tindale Oliver
Pasco Co, FL	5.8	2002	182	102	116.97	9a-6p	3.49	56.0	228.77	Tindale Oliver
Orange Co, FL	5.0	1996	-	-	135.68	-	-	-	-	Orange County
Orange Co, FL	9.7	1996	-	-	132.32	-	-	-	-	Orange County
Orange Co, FL	11.2	1998	-	-	18.76	-	-	-	-	Orange County
Orange Co, FL	7.0	1998	-	-	126.40	-	-	-	-	Orange County
Orange Co, FL	4.6	1998	-	-	129.23	-	-	-	-	Orange County
Orange Co, FL	7.4	1998	-	-	147.44	-	-	-	-	Orange County
Orange Co, FL	6.7	1998	-	-	82.58	-	-	-	-	Orange County
Orange Co, FL	11.3	2000	-	-	95.33	-	-	-	-	Orange County
Orange Co, FL	7.2	2000	-	-	98.06	-	-	-	-	Orange County
Orange Co, FL	11.4	2001	-	-	91.67	-	-	-	-	Orange County
Orange Co, FL	5.6	2001	-	-	145.59	-	-	-	-	Orange County
Orange Co, FL	5.5	-	-	-	100.18	-	-	-	-	Orange County
Orange Co, FL	11.3	-	-	-	62.12	-	-	-	-	Orange County
Orange Co, FL	10.4	-	-	-	31.77	-	-	-	-	Orange County
Orange Co, FL	5.9	-	-	-	147.74	-	-	-	-	Orange County
Orange Co, FL	8.9	2008	-	-	52.69	-	-	-	-	Orange County
Orange Co, FL	9.7	2010	-	-	105.84	-	-	-	-	Orange County
Orange Co, FL	9.5	2013	-	-	40.46	-	-	-	-	Orange County
Orange Co, FL	11.0	2015	-	-	138.39	-	-	-	-	Orange County
Total Size	194.9		25	1,102			<b>Average Trip Length: 3.07</b>			
ITE	250.0		50				<b>Weighted Average Trip Length: 3.17</b>			
Blended total	444.9						Weighted Percent New Trip Average:	70.8		
							Weighted Average Trip Generation Rate:		98.67	
							ITE Average Trip Generation Rate:		107.20	
							<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>		<b>103.46</b>	

**Table E-28**

**Land Use 934: Fast Food Restaurant with Drive-Through Window**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	61	-	-	-	2.70	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	306	-	-	-	-	65.0	-	Kimley-Horn & Associates
Pinellas Co, FL	2.20	Aug-89	81	48	502.80	11a-2p	1.70	59.0	504.31	Tindale Oliver
Pinellas Co, FL	4.30	Oct-89	456	260	660.40	1 day	2.30	57.0	865.78	Tindale Oliver
Tarpon Springs, FL	-	Oct-89	233	114	-	7a-7p	3.60	49.0	-	Tindale Oliver
Marion Co, FL	1.60	Jun-91	60	32	962.50	48hrs	0.91	53.3	466.84	Tindale Oliver
Marion Co, FL	4.00	Jun-91	75	46	625.00	48hrs	1.54	61.3	590.01	Tindale Oliver
Collier Co, FL	-	Aug-91	66	44	-	-	1.91	66.7	-	Tindale Oliver
Collier Co, FL	-	Aug-91	118	40	-	-	1.17	33.9	-	Tindale Oliver
Hernando Co, FL	5.43	May-96	136	82	311.83	9a-6p	1.68	60.2	315.27	Tindale Oliver
Hernando Co, FL	3.13	May-96	168	82	547.34	9a-6p	1.59	48.8	425.04	Tindale Oliver
Orange Co, FL	8.93	1996	-	-	377.00	-	-	-	-	Orange County
Lake Co, FL	2.20	Apr-01	376	252	934.30	-	2.50	74.6	1742.47	Tindale Oliver
Lake Co, FL	3.20	Apr-01	171	182	654.90	-	-	47.8	-	Tindale Oliver
Lake Co, FL	3.80	Apr-01	188	137	353.70	-	3.30	70.8	826.38	Tindale Oliver
Pasco Co, FL	2.66	Apr-02	100	46	283.12	9a-6p	-	46.0	-	Tindale Oliver
Pasco Co, FL	2.96	Apr-02	486	164	515.32	9a-6p	2.72	33.7	472.92	Tindale Oliver
Pasco Co, FL	4.42	Apr-02	168	120	759.24	9a-6p	1.89	71.4	1024.99	Tindale Oliver

Total Size	48.8	18	4,463	<b>Average Trip Length: 2.11</b>	
ITE	213.0	71		<b>Weighted Average Trip Length: 2.05</b>	
Blended total	261.8			Weighted Percent New Trip Average: 57.9	
	34.0			Weighted Average Trip Generation Rate: 530.19	
				ITE Average Trip Generation Rate: 467.48	
				<b>Blend of FL Studies and ITE Average Trip Generation Rate: 479.17</b>	

**Table E-29**

**Land Use 942: Automobile Care Center**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	5.5	Sep-89	34	30	37.64	9a-5p	2.40	88.0	79.50	Tindale Oliver
Jacksonville, FL	2.3	2/3-4/90	124	94	-	9a-5p	3.07	76.0	-	Tindale Oliver
Jacksonville, FL	2.3	2/3-4/90	110	74	-	9a-5p	2.96	67.0	-	Tindale Oliver
Jacksonville, FL	2.4	2/3-4/90	132	87	-	9a-5p	2.32	66.0	-	Tindale Oliver
Lakeland, FL	5.2	Mar-90	24	14	-	9a-4p	1.36	59.0	-	Tindale Oliver
Lakeland, FL	-	Mar-90	54	42	-	9a-4p	2.44	78.0	-	Tindale Oliver
Orange Co, FL	25.0	Nov-92	41	39	-	2-6p	4.60	41	-	LCE, Inc.
Orange Co, FL	36.6	-	-	-	15.17	-	-	-	-	Orange County
Orange Co, FL	7.0	-	-	-	46.43	-	-	-	-	Orange County

Total Size	86.2	9	519	<b>Average Trip Length: 2.74</b>	
ITE	102.0	6		<b>Weighted Average Trip Length: 3.62</b>	
Blended total	188.2			Weighted Percent New Trip Average: 72.2	
	151.1			Weighted Average Trip Generation Rate: 22.14	
				ITE Average Trip Generation Rate (adjusted): 31.10	
				<b>Blend of FL Studies and ITE Average Trip Generation Rate: 28.19</b>	

**Table E-30**

**Land Use 944/945: Convenience Store/Gas Station**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	0.6	Nov-89	70	14	-	8am-5pm	1.90	23.0	-	Tindale Oliver
Collier Co, FL	-	Aug-91	168	40	-	-	1.01	23.8	-	Tindale Oliver

Total Size	0.6	2	238	<b>Average Trip Length: 1.46</b>	
				<b>Weighted Average Trip Length: 1.90</b>	
				Weighted Percent New Trip Average: 23.0	

**Convenience Store/Gas Station (ITE LUC 945) - Mid-Size Blend**

ITE	48	Conv. Store 2,000 to 3,999 sf:	265.12
ITE	5	Conv. Store 4,000 to 5,499 sf:	257.13
	53	<b>Blend of ITE Average Trip Generation Rates for Convenience Store/Gas Station 2,000 to 5,499 sf:</b>	<b>264.38</b>

**Table E-31**

**Land Use 947: Self-Service Car Wash**

Location	Size (Bays)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	10	Nov-89	111	84	-	8am-5pm	2.00	76.0	-	Tindale Oliver
Clearwater, FL	-	Nov-89	177	108	-	10am-5pm	1.30	61.0	-	Tindale Oliver
Collier Co, FL	11	Dec-09	304	-	30.24	-	2.50	57.0	-	Tindale Oliver
Collier Co, FL	8	Jan-09	186	-	22.75	-	1.96	72.0	-	Tindale Oliver

Total Size	29	4	778	<b>Average Trip Length: 1.94</b>	
Total Size (TGR)	19	2		<b>Weighted Average Trip Length: 2.18</b>	
ITE	5	1		Weighted Percent New Trip Average: 67.7	
Blended total	24			Weighted Average Trip Generation Rate: 27.09	
				ITE Average Trip Generation Rate: 108.00	
				<b>Blend of FL Studies and ITE Average Trip Generation Rate: 43.94</b>	

### Demand Variable Changes

Since the last demand component update, the trip generation rate (TGR), trip length (TL), and percent new trips (PNT) has changed for several land uses. Tables E-32 through E-35 present the change in each variable for each land use for this 2022 update. Note that these tables compare the change in demand variables used in the previous update study, not necessarily those demand variables that are being utilized for the currently adopted transportation impact fee rates.

**Table E-32**  
**Percent Change in Gross VMT of Transportation Impact Fee Land Uses**

ITE LUC	Land Use	Unit	Gross VMT			Explanation
			2018	2022	%	
<b>RESIDENTIAL:</b>						
210	Single Family (Detached)	du	25.85	25.85	0.0%	No change
220	Multi-Family (Low-Rise); 1-3 levels	du	16.12	17.56	8.9%	TGR update, see Table E-33
221/222	Multi-Family (Mid/High-Rise); 4+ levels	du	16.12	11.83	-26.6%	TGR update, see Table E-33
240	Mobile Home Park	du	9.59	9.59	0.0%	No change
251	Senior Adult Housing (Single Family)	du	n/a	9.59	n/a	New land use
252	Senior Adult Housing (Multi-Family)	du	n/a	6.49	n/a	New land use
254	Assisted Living Facility	bed	2.95	2.88	-2.4%	TGR update, see Table E-33
n/a	Accessory Apartment (Mother-in-Law/Grooms Quarters)	du	7.88	9.07	15.1%	TGR update, see Table E-33
<b>LODGING:</b>						
310	Hotel	room	13.14	11.49	-12.6%	TGR update, see Table E-33
320	Motel	room	9.41	5.60	-40.5%	TGR update, see Table E-33
<b>RECREATION:</b>						
411	Public Park	acre	n/a	1.81	n/a	New land use
430	Golf Course	hole	106.47	90.50	-15.0%	TGR update, see Table E-33
445	Movie Theater	screen	104.16	112.17	7.7%	TGR update, see Table E-33
491	Racquet/Tennis Club	court	93.67	67.07	-28.4%	TGR update, see Table E-33
<b>INSTITUTIONS:</b>						
520	Elementary School (Private)	student	2.22	3.01	35.6%	TGR & TL update, see Tables E-33 and E-34
522	Middle/Junior High School (Private)	student	3.13	2.78	-11.2%	TGR, TL, & PNT update, see Tables E-33, E-34, and E-35
525	High School (Private)	student	3.31	2.89	-12.7%	TGR & TL update, see Tables E-33 and E-34
560	Church/Synagogue	1,000 sf	15.99	13.44	-15.9%	TGR & TL update, see Tables E-33 and E-34
565	Day Care Center	1,000 sf	53.26	36.77	-31.0%	TGR update, see Table E-33
566	Cemetery	acre	14.87	17.93	20.6%	TGR & PNT update, see Tables E-33 and E-35
<b>MEDICAL:</b>						
610	Hospital	1,000 sf	33.69	27.81	-17.5%	TGR & PNT update, see Tables E-33 and E-35
620	Nursing Home	bed	3.18	3.48	9.4%	TGR update, see Table E-33
640	Animal Hospital/Veterinary Clinic	1,000 sf	21.81	16.09	-26.2%	TGR update, see Table E-33
<b>OFFICE:</b>						
710	General Office 50,000 sf and less	1,000 sf	36.72	25.68	-30.1%	Office tiering removed
	General Office 50,001 to 100,000 sf	1,000 sf	31.10	25.68	-17.4%	Office tiering removed
	General Office 100,001 to 200,000 sf	1,000 sf	26.34	25.68	-2.5%	Office tiering removed
	General Office 200,001 to 400,000 sf	1,000 sf	22.29	25.68	15.2%	Office tiering removed
	General Office greater than 400,000 sf	1,000 sf	20.23	25.68	26.9%	Office tiering removed
720	Medical Office 10,000 sq ft or less	1,000 sf	58.85	58.85	0.0%	No change
720	Medical Office greater than 10,000 sq ft	1,000 sf	85.75	84.49	-1.5%	TGR update, see Table E-33
<b>RETAIL:</b>						
817	Nursery (Garden Center)	acre	56.60	21.40	-62.2%	TL & PNT update, see Tables E-34 and E-35
820	Retail/Shopping Center 50,000 sf and less	1,000 sf	45.32	19.34	-57.3%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center 50,001 to 200,000 sf	1,000 sf	42.84	37.33	-12.9%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center 200,001 to 400,000 sf	1,000 sf	40.28	38.86	-3.5%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center 400,001 to 600,000 sf	1,000 sf	39.56	38.86	-1.8%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center 600,001 to 800,000 sf	1,000 sf	40.16	38.86	-3.2%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center greater than 800,001 sf	1,000 sf	41.03	38.86	-5.3%	Retail/shopping center tiering re-alignment
840/841	New/Used Auto Sales	1,000 sf	51.33	44.66	-13.0%	TGR update, see Table E-33
848	Tire Store	1,000 sf	32.41	36.09	11.4%	TGR update, see Table E-33
851	Convenience Market	1,000 sf	n/a	230.43	n/a	New land use
880/881	Pharmacy/Drug Store with & without Drive-Thru	1,000 sf	31.94	34.56	8.2%	TGR update, see Table E-33
882	Marijuana Dispensary	1,000 sf	n/a	70.26	n/a	New land use
890	Furniture Store	1,000 sf	8.32	10.36	24.5%	TGR update, see Table E-33
<b>SERVICES:</b>						
912	Bank/Savings Drive-In	1,000 sf	90.15	58.69	-34.9%	TGR update, see Table E-33
931	Fine-Dining/Quality Restaurant	1,000 sf	110.13	104.00	-5.6%	TGR update, see Table E-33
932	High-Turn Over Restaurant	1,000 sf	131.22	116.43	-11.3%	TGR update, see Table E-33
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	303.79	284.87	-6.2%	TGR update, see Table E-33
941	Quick Lubrication Vehicle Shop	bay	52.13	52.13	0.0%	No change
944	Gas Station w/Convenience Market <2,000 sq ft	fuel pos.	34.38	37.58	9.3%	TGR update, see Table E-33
945	Gas Station w/Convenience Market 2,000-5,499 sq ft	fuel pos.	34.38	57.77	68.0%	TGR update, see Table E-33
	Gas Station w/Convenience Market 5,500+ sq ft	fuel pos.	34.38	75.55	119.7%	TGR update, see Table E-33
947	Self-Service Car Wash	bay	32.57	32.57	0.0%	No change
<b>INDUSTRIAL:</b>						
110	General Light Industrial	1,000 sf	16.51	11.54	-30.1%	TGR update, see Table E-33
150	Warehousing	1,000 sf	8.43	4.05	-52.0%	TGR update, see Table E-33
151	Mini-Warehouse	1,000 sf	3.07	2.36	-23.1%	TGR & TL update, see Tables E-33 and E-34

Gross VMT = TGR \* TL \* PNT / 2

Individual variables are shown in Tables E-33 through E-35

Table E-33

Percent Change in Trip Generation Rate of Transportation Impact Fee Land Uses

ITE LUC	Land Use	Unit	Trip Generation Rate			Explanation
			2018	2022	%	
<b>RESIDENTIAL:</b>						
210	Single Family (Detached)	du	7.81	7.81	0.0%	No change
220	Multi-Family (Low-Rise); 1-3 levels	du	6.32	6.74	6.6%	Re-alignment of multi-family uses in ITE 11th Edition
221/222	Multi-Family (Mid/High-Rise); 4+ levels	du	6.32	4.54	-28.2%	Re-alignment of multi-family uses in ITE 11th Edition
240	Mobile Home Park	du	4.17	4.17	0.0%	No change
251	Senior Adult Housing (Single Family)	du	n/a	3.54	n/a	New land use
252	Senior Adult Housing (Multi-Family)	du	n/a	2.99	n/a	New land use
254	Assisted Living Facility	bed	2.66	2.60	-2.3%	Updated TGR in ITE 11th Edition
n/a	Accessory Apartment (Mother-in-Law/Grooms Quarters)	du	3.09	3.48	12.6%	Updated TGRs for LUCs 251/252/253 in ITE 11th Edition
<b>LODGING:</b>						
310	Hotel	room	6.36	5.56	-12.6%	Additional FL Studies added and updated TGR in ITE 11th Edition
320	Motel	room	5.63	3.35	-40.5%	Updated TGR in ITE 11th Edition
<b>RECREATION:</b>						
411	Public Park	acre	n/a	0.78	n/a	New land use
430	Golf Course	hole	35.74	30.38	-15.0%	Updated TGR in ITE 11th Edition
445	Movie Theater	screen	106.63	114.83	7.7%	Updated TGR in ITE 11th Edition
491	Racquet/Tennis Club	court	38.70	27.71	-28.4%	Updated TGR in ITE 11th Edition
<b>INSTITUTIONS:</b>						
520	Elementary School (Private)	student	1.29	2.27	76.0%	Updated TGR in ITE 11th Edition
522	Middle/Junior High School (Private)	student	1.62	2.10	29.6%	Updated TGR in ITE 11th Edition
525	High School (Private)	student	1.71	1.94	13.5%	Updated TGR in ITE 11th Edition
560	Church/Synagogue	1,000 sf	9.11	7.60	-16.6%	Updated TGR in ITE 11th Edition
565	Day Care Center	1,000 sf	71.88	49.63	-31.0%	Updated TGR in ITE 11th Edition
566	Cemetery	acre	4.73	6.02	27.3%	Updated TGR in ITE 11th Edition
<b>MEDICAL:</b>						
610	Hospital	1,000 sf	13.22	10.77	-18.5%	Updated TGR in ITE 11th Edition
620	Nursing Home	bed	2.76	3.02	9.4%	Updated TGR in ITE 11th Edition
640	Animal Hospital/Veterinary Clinic	1,000 sf	32.80	24.20	-26.2%	Additional FL Studies added and updated TGR in ITE 11th Edition
<b>OFFICE:</b>						
710	General Office 50,000 sf and less	1,000 sf	15.50	10.84	-30.1%	Updated TGR in ITE 11th Edition, removal of tiering
	General Office 50,001 to 100,000 sf	1,000 sf	13.13	10.84	-17.4%	Updated TGR in ITE 11th Edition, removal of tiering
	General Office 100,001 to 200,000 sf	1,000 sf	11.12	10.84	-2.5%	Updated TGR in ITE 11th Edition, removal of tiering
	General Office 200,001 to 400,000 sf	1,000 sf	9.41	10.84	15.2%	Updated TGR in ITE 11th Edition, removal of tiering
	General Office greater than 400,000 sf	1,000 sf	8.54	10.84	26.9%	Updated TGR in ITE 11th Edition, removal of tiering
720	Medical Office 10,000 sq ft or less	1,000 sf	23.83	23.83	0.0%	No change
720	Medical Office greater than 10,000 sq ft	1,000 sf	34.72	34.21	-1.5%	Updated TGR in ITE 11th Edition
<b>RETAIL:</b>						
817	Nursery (Garden Center)	acre	108.10	108.10	0.0%	No change
820	Retail/Shopping Center 50,000 sf gla and less	1,000 sf gla	86.56	54.45	-37.1%	Re-alignment of retail/shopping center in ITE 11th Edition
	Retail/Shopping Center 50,001 to 200,000 sf gla	1,000 sf gla	53.28	67.52	26.7%	Re-alignment of retail/shopping center in ITE 11th Edition
	Retail/Shopping Center 200,001 to 400,000 sf gla	1,000 sf gla	41.80	37.01	-11.5%	Re-alignment of retail/shopping center in ITE 11th Edition
	Retail/Shopping Center 400,001 to 600,000 sf gla	1,000 sf gla	36.27	37.01	2.0%	Re-alignment of retail/shopping center in ITE 11th Edition
	Retail/Shopping Center 600,001 to 800,000 sf gla	1,000 sf gla	32.80	37.01	12.8%	Re-alignment of retail/shopping center in ITE 11th Edition
	Retail/Shopping Center greater than 800,001 sf gla	1,000 sf gla	30.33	37.01	22.0%	Re-alignment of retail/shopping center in ITE 11th Edition
840/841	New/Used Auto Sales	1,000 sf	28.25	24.58	-13.0%	Additional FL Studies added and updated TGR in ITE 11th Edition
848	Tire Store	1,000 sf	24.87	27.69	11.3%	Updated TGR in ITE 11th Edition
851	Convenience Market	1,000 sf	n/a	739.50	n/a	New land use
880/881	Pharmacy/Drug Store with & without Drive-Thru	1,000 sf	95.96	103.86	8.2%	Updated TGR in ITE 11th Edition
882	Marijuana Dispensary	1,000 sf	n/a	211.12	n/a	New land use
890	Furniture Store	1,000 sf	5.06	6.30	24.5%	Updated TGR in ITE 11th Edition
<b>SERVICES:</b>						
912	Bank/Savings Drive-In	1,000 sf	159.34	103.73	-34.9%	Updated TGR in ITE 11th Edition
931	Fine-Dining/Quality Restaurant	1,000 sf	91.10	86.03	-5.6%	Updated TGR in ITE 11th Edition
932	High-Turn Over Restaurant	1,000 sf	116.60	103.46	-11.3%	Additional FL Studies added and updated TGR in ITE 11th Edition
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	511.00	479.17	-6.2%	Updated TGR in ITE 11th Edition
941	Quick Lubrication Vehicle Shop	bay	40.00	40.00	0.0%	No change
944	Gas Station w/Convenience Market <2,000 sq ft	fuel pos.	157.33	172.01	9.3%	Re-alignment of gas station w/ conv. market uses in ITE 11th Edition
945	Gas Station w/Convenience Market 2,000-5,499 sq ft	fuel pos.	157.33	264.38	68.0%	Re-alignment of gas station w/ conv. market uses in ITE 11th Edition
	Gas Station w/Convenience Market 5,500+ sq ft	fuel pos.	157.33	345.75	119.8%	Re-alignment of gas station w/ conv. market uses in ITE 11th Edition
947	Self-Service Car Wash	bay	43.94	43.94	0.0%	No change
<b>INDUSTRIAL:</b>						
110	General Light Industrial	1,000 sf	6.97	4.87	-30.1%	Updated TGR in ITE 11th Edition
150	Warehousing	1,000 sf	3.56	1.71	-52.0%	Updated TGR in ITE 11th Edition
151	Mini-Warehouse	1,000 sf	2.15	1.46	-32.1%	Additional FL Studies added and updated TGR in ITE 11th Edition

Table E-34

Percent Change in Trip Length of Transportation Impact Fee Land Uses

ITE LUC	Land Use	Unit	Trip Length			Explanation
			2018	2022	%	
<b>RESIDENTIAL:</b>						
210	Single Family (Detached)	du	6.62	6.62	0.0%	No change
220	Multi-Family (Low-Rise); 1-3 levels	du	5.10	5.21	2.2%	No change
221/222	Multi-Family (Mid/High-Rise); 4+ levels	du	5.10	5.21	2.2%	No change
240	Mobile Home Park	du	4.60	4.60	0.0%	No change
251	Senior Adult Housing (Single Family)	du	n/a	5.42	n/a	New land use
252	Senior Adult Housing (Multi-Family)	du	n/a	4.34	n/a	New land use
254	Assisted Living Facility	bed	3.08	3.08	0.0%	No change
n/a	Accessory Apartment (Mother-in-Law/Grooms Quarters)	du	5.10	5.21	2.2%	No change
<b>LODGING:</b>						
310	Hotel	room	6.26	6.26	0.0%	No change
320	Motel	room	4.34	4.34	0.0%	No change
<b>RECREATION:</b>						
411	Public Park	acre	n/a	5.15	n/a	New land use
430	Golf Course	hole	6.62	6.62	0.0%	No change
445	Movie Theater	screen	2.22	2.22	0.0%	No change
491	Racquet/Tennis Club	court	5.15	5.15	0.0%	No change
<b>INSTITUTIONS:</b>						
520	Elementary School (Private)	student	4.30	3.31	-23.0%	Updated to use 50% of LUC 210 per review of travel demand models
522	Middle/Junior High School (Private)	student	4.30	3.31	-23.0%	Updated to use 50% of LUC 210 per review of travel demand models
525	High School (Private)	student	4.30	3.31	-23.0%	Updated to use 50% of LUC 210 per review of travel demand models
560	Church/Synagogue	1,000 sf	3.90	3.93	0.8%	Updated to use the midpoint of LUC 710 and LUC 820 (App. C)
565	Day Care Center	1,000 sf	2.03	2.03	0.0%	No change
566	Cemetery	acre	6.62	6.62	0.0%	No change
<b>MEDICAL:</b>						
610	Hospital	1,000 sf	6.62	6.62	0.0%	No change
620	Nursing Home	bed	2.59	2.59	0.0%	No change
640	Animal Hospital/Veterinary Clinic	1,000 sf	1.90	1.90	0.0%	No change
<b>OFFICE:</b>						
710	General Office 50,000 sf and less	1,000 sf	5.15	5.15	0.0%	No change
	General Office 50,001 to 100,000 sf	1,000 sf	5.15	5.15	0.0%	No change
	General Office 100,001 to 200,000 sf	1,000 sf	5.15	5.15	0.0%	No change
	General Office 200,001 to 400,000 sf	1,000 sf	5.15	5.15	0.0%	No change
	General Office greater than 400,000 sf	1,000 sf	5.15	5.15	0.0%	No change
720	Medical Office 10,000 sq ft or less	1,000 sf	5.55	5.55	0.0%	No change
720	Medical Office greater than 10,000 sq ft	1,000 sf	5.55	5.55	0.0%	No change
<b>RETAIL:</b>						
817	Nursery (Garden Center)	acre	1.87	1.07	-42.8%	Updated to use 5,000 sf measurement (ITE 11th avg. size) from Figure E-1
820	Retail/Shopping Center 50,000 sf and less	1,000 sf	1.87	1.48	-20.9%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center 50,001 to 200,000 sf	1,000 sf	2.40	1.94	-19.2%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center 200,001 to 400,000 sf	1,000 sf	2.64	2.80	6.1%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center 400,001 to 600,000 sf	1,000 sf	2.87	2.80	-2.4%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center 600,001 to 800,000 sf	1,000 sf	3.10	2.80	-9.7%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center greater than 800,001 sf	1,000 sf	3.34	2.80	-16.2%	Retail/shopping center tiering re-alignment
840/841	New/Used Auto Sales	1,000 sf	4.60	4.60	0.0%	No change
848	Tire Store	1,000 sf	3.62	3.62	0.0%	No change
851	Convenience Market	1,000 sf	n/a	1.52	n/a	New land use
880/881	Pharmacy/Drug Store with & without Drive-Thru	1,000 sf	2.08	2.08	0.0%	No change
882	Marijuana Dispensary	1,000 sf	n/a	2.08	n/a	New land use
890	Furniture Store	1,000 sf	6.09	6.09	0.0%	No change
<b>SERVICES:</b>						
912	Bank/Savings Drive-In	1,000 sf	2.46	2.46	0.0%	No change
931	Fine-Dining/Quality Restaurant	1,000 sf	3.14	3.14	0.0%	No change
932	High-Turn Over Restaurant	1,000 sf	3.17	3.17	0.0%	No change
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	2.05	2.05	0.0%	No change
941	Quick Lubrication Vehicle Shop	bay	3.62	3.62	0.0%	No change
944	Gas Station w/Convenience Market <2,000 sq ft	fuel pos.	1.90	1.90	0.0%	No change
945	Gas Station w/Convenience Market 2,000-5,499 sq ft	fuel pos.	1.90	1.90	0.0%	No change
	Gas Station w/Convenience Market 5,500+ sq ft	fuel pos.	1.90	1.90	0.0%	No change
947	Self-Service Car Wash	bay	2.18	2.18	0.0%	No change
<b>INDUSTRIAL:</b>						
110	General Light Industrial	1,000 sf	5.15	5.15	0.0%	No change
150	Warehousing	1,000 sf	5.15	5.15	0.0%	No change
151	Mini-Warehouse	1,000 sf	3.10	3.51	13.2%	Updated to use the midpoint of LUC 710 and LUC 820 (<50k sq ft)

Table E-35

Percent Change in Percent New Trips of Transportation Impact Fee Land Uses

ITE LUC	Land Use	Unit	Percent New Trips			Explanation
			2018	2022	%	
<b>RESIDENTIAL:</b>						
210	Single Family (Detached)	du	100%	100%	0.0%	No change
220	Multi-Family (Low-Rise); 1-3 levels	du	100%	100%	0.0%	No change
221/222	Multi-Family (Mid/High-Rise); 4+ levels	du	100%	100%	0.0%	No change
240	Mobile Home Park	du	100%	100%	0.0%	No change
251	Senior Adult Housing (Single Family)	du	n/a	100%	n/a	New land use
252	Senior Adult Housing (Multi-Family)	du	n/a	100%	n/a	New land use
254	Assisted Living Facility	bed	72%	72%	0.0%	No change
n/a	Accessory Apartment (Mother-in-Law/Grooms Quarters)	du	100%	100%	0.0%	No change
<b>LODGING:</b>						
310	Hotel	room	66%	66%	0.0%	No change
320	Motel	room	77%	77%	0.0%	No change
<b>RECREATION:</b>						
411	Public Park	acre	n/a	90%	n/a	New land use
430	Golf Course	hole	90%	90%	0.0%	No change
445	Movie Theater	screen	88%	88%	0.0%	No change
491	Racquet/Tennis Club	court	94%	94%	0.0%	No change
<b>INSTITUTIONS:</b>						
520	Elementary School (Private)	student	80%	80%	0.0%	No change
522	Middle/Junior High School (Private)	student	90%	80%	-11.1%	Updated to be the same as LUC 520
525	High School (Private)	student	90%	90%	0.0%	No change
560	Church/Synagogue	1,000 sf	90%	90%	0.0%	No change
565	Day Care Center	1,000 sf	73%	73%	0.0%	No change
566	Cemetery	acre	95%	90%	-5.3%	Updated; based on LUC 710, similar to Church/Synagogue
<b>MEDICAL:</b>						
610	Hospital	1,000 sf	77%	78%	1.3%	Updated to use the midpoint of LUC 310 and LUC 710
620	Nursing Home	bed	89%	89%	0.0%	No change
640	Animal Hospital/Veterinary Clinic	1,000 sf	70%	70%	0.0%	No change
<b>OFFICE:</b>						
710	General Office 50,000 sf and less	1,000 sf	92%	92%	0.0%	No change
	General Office 50,001 to 100,000 sf	1,000 sf	92%	92%	0.0%	No change
	General Office 100,001 to 200,000 sf	1,000 sf	92%	92%	0.0%	No change
	General Office 200,001 to 400,000 sf	1,000 sf	92%	92%	0.0%	No change
	General Office greater than 400,000 sf	1,000 sf	92%	92%	0.0%	No change
720	Medical Office 10,000 sq ft or less	1,000 sf	89%	89%	0.0%	No change
720	Medical Office greater than 10,000 sq ft	1,000 sf	89%	89%	0.0%	No change
<b>RETAIL:</b>						
817	Nursery (Garden Center)	acre	56%	37%	-33.9%	Updated to use 5,000 sf measurement (ITE 11th avg. size) from Figure E-2
820	Retail/Shopping Center 50,000 sf and less	1,000 sf	56%	48%	-14.3%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center 50,001 to 200,000 sf	1,000 sf	67%	57%	-14.9%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center 200,001 to 400,000 sf	1,000 sf	73%	75%	2.7%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center 400,001 to 600,000 sf	1,000 sf	76%	75%	-1.3%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center 600,001 to 800,000 sf	1,000 sf	79%	75%	-5.1%	Retail/shopping center tiering re-alignment
	Retail/Shopping Center greater than 800,001 sf	1,000 sf	81%	75%	-7.4%	Retail/shopping center tiering re-alignment
840/841	New/Used Auto Sales	1,000 sf	79%	79%	0.0%	No change
848	Tire Store	1,000 sf	72%	72%	0.0%	No change
851	Convenience Market	1,000 sf	n/a	41%	n/a	New land use
880/881	Pharmacy/Drug Store with & without Drive-Thru	1,000 sf	32%	32%	0.0%	No change
882	Marijuana Dispensary	1,000 sf	n/a	32%	n/a	New land use
890	Furniture Store	1,000 sf	54%	54%	0.0%	No change
<b>SERVICES:</b>						
912	Bank/Savings Drive-In	1,000 sf	46%	46%	0.0%	No change
931	Fine-Dining/Quality Restaurant	1,000 sf	77%	77%	0.0%	No change
932	High-Turn Over Restaurant	1,000 sf	71%	71%	0.0%	No change
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	58%	58%	0.0%	No change
941	Quick Lubrication Vehicle Shop	bay	72%	72%	0.0%	No change
944	Gas Station w/Convenience Market <2,000 sq ft	fuel pos.	23%	23%	0.0%	No change
	Gas Station w/Convenience Market 2,000-5,499 sq ft	fuel pos.	23%	23%	0.0%	No change
945	Gas Station w/Convenience Market 5,500+ sq ft	fuel pos.	23%	23%	0.0%	No change
	Self-Service Car Wash	bay	68%	68%	0.0%	No change
<b>INDUSTRIAL:</b>						
110	General Light Industrial	1,000 sf	92%	92%	0.0%	No change
150	Warehousing	1,000 sf	92%	92%	0.0%	No change
151	Mini-Warehouse	1,000 sf	92%	92%	0.0%	No change

**Appendix F**  
**Transportation Impact Fee:**  
**Cost Component**



## Appendix F: Transportation - Cost Component

This appendix presents the detailed calculations for the cost component of the transportation impact fee update. Supporting data and estimates are provided for all cost variables, including:

- Design
- Right-of-Way
- Construction
- Construction Engineering & Inspection
- Roadway Capacity

### *Urban-Design vs. Rural-Design*

Due to limited construction data for roadways with open drainage/rural-design characteristics, the cost per lane mile for these types of roads was calculated using an adjustment factor. This factor was based on the rural-to-urban design cost ratio from the most recent District 7 Long Range Estimates provided by FDOT (this data was not available for FDOT District 4). Based on the LRE, the costs for open drainage roadway capacity expansion (new road construction or lane addition) are approximately 76 percent of the construction costs for curb & gutter/urban-design roadway improvements.

**Table F-1**  
**Urban/Rural-Design Cost Factor**

Improvement	Construction Cost per Lane Mile		
	Open Drainage Rural Design	Curb & Gutter Urban Design	Ratio
0-2 Lanes	\$4,154,560	\$6,452,541	64%
0-4 Lanes	\$3,436,336	\$4,522,773	76%
0-6 Lanes	\$2,908,194	\$3,656,522	80%
2-4 Lanes	\$4,672,853	\$5,700,393	82%
4-6 Lanes	\$5,076,988	\$6,269,771	81%
<b>Average</b>	<b>\$4,049,786</b>	<b>\$5,320,400</b>	<b>76%</b>

Source: FDOT District 7 Long Range Estimates, 2021

## ***Design***

### County Roadways

The design cost factor is estimated as a percentage of the construction cost per lane mile. This factor is determined based on a review of design-to-construction cost ratios from recent projects in Palm Beach County and from cost data obtained from other Florida jurisdictions. For local estimates, the design-to-construction ratios ranged from 11 percent to 19 percent, with a weighted average of 14 percent (Table F-2). For county roadways throughout Florida, the design factors ranged from six (6) percent to 13 percent with a weighted average of 10 percent (Table F-3). For purposes of this study, the design cost for county roads is calculated at **10 percent** of the construction cost per lane mile, providing a conservative estimate when compared to recent local improvements.

### State Roadways

Similarly, the design cost factor for state roads was estimated as a percentage of the construction cost per lane mile. This factor was determined based on a review of the design-to-construction cost ratios obtained from other Florida jurisdictions. As shown in Table F-3, recent design factors ranged from 10 percent to 11 percent with a weighted average of 11 percent. For purposes of this study, the design cost for state roads was calculated at **11 percent** of the construction cost per lane mile.

**Table F-2  
Design Cost Factor – Palm Beach County Local Roadway Improvements**

County	Description	From	To	Year	Feature	Section Design	Design Cost	Construction Cost	Design-to-Construction Ratio
<b>ONGOING/FUTURE</b>									
Palm Beach	Roebuck Road	Jog Road	Haverhill Road	2018	2L to 5L	Urban	\$827,267	\$5,154,028	16.1%
Palm Beach	Lyons Road	Clint Moore Road	north of LWDD L-39 Canal	2018	2L to 4L	Urban	\$593,853	\$3,163,022	18.8%
Palm Beach	Hood Rd	East of FL Turnpike	W of Central Blvd	2019	2L to 4L	Urban	\$1,341,106	\$12,686,954	10.6%
Palm Beach	Silver Beach Rd	East of Congress Ave	Old Dixie/Pre. Barack Obama Hwy	2019	2L to 3L	Urban	\$822,723	\$4,478,355	18.4%
<b>TOTAL</b>							<b>\$3,584,949</b>	<b>\$25,482,359</b>	<b>14.1%</b>

Source: Palm Beach County

**Table F-3  
Design Cost Factor for County Roads – Other Florida Jurisdictions**

Year	County	County Roadways (Cost per Lane Mile)			State Roadways (Cost per Lane Mile)		
		Design	Constr.	Design Ratio	Design	Constr.	Design Ratio
2013	Hernando	\$198,000	\$1,980,000	10%	\$222,640	\$2,024,000	11%
2013	Charlotte	\$220,000	\$2,200,000	10%	\$240,000	\$2,400,000	10%
2014	Indian River	\$159,000	\$1,598,000	10%	\$196,000	\$1,776,000	11%
2015	Collier	\$270,000	\$2,700,000	10%	\$270,000	\$2,700,000	10%
2015	Brevard	\$242,000	\$2,023,000	12%	\$316,000	\$2,875,000	11%
2015	Sumter	\$210,000	\$2,100,000	10%	\$276,000	\$2,505,000	11%
2015	Marion	\$167,000	\$2,668,000	6%	\$227,000	\$2,060,000	11%
2015	Palm Beach	\$224,000	\$1,759,000	13%	\$333,000	\$3,029,000	11%
2017	St. Lucie	\$220,000	\$2,200,000	10%	\$341,000	\$3,100,000	11%
2017	Clay	\$239,000	\$2,385,000	10%	-	-	-
2019	Collier	\$385,000	\$3,500,000	11%	-	-	-
2019	Sumter	\$315,000	\$2,862,000	11%	\$370,000	\$3,365,000	11%
2020	Indian River	\$291,000	\$2,647,000	11%	\$395,000	\$3,593,000	11%
2020	Hillsborough	\$484,000	\$4,036,000	12%	\$486,000	\$4,421,000	11%
2020	Hernando	\$232,000	\$2,108,000	11%	\$348,000	\$3,163,000	11%
2021	Manatee	\$308,000	\$2,800,000	11%	-	-	-
2021	Flagler	\$258,000	\$2,582,000	10%	-	-	-
	<b>Average</b>	<b>\$257,000</b>	<b>\$2,451,000</b>	<b>10%</b>	<b>\$309,000</b>	<b>\$2,847,000</b>	<b>11%</b>

(a)

(b)

Source: Recent impact fee studies conducted throughout Florida

## ***Right-of-Way***

The ROW cost reflects the total cost of the acquisitions along a corridor that was necessary to have sufficient cross-section width to widen an existing road or, in the case of new road construction, build a new road.

### County Roadways

For impact fee purposes, the ROW cost for county roads is estimated as a percentage of the construction cost per lane mile. To determine the ROW cost factor, Benesch conducted a review of recent local ROW acquisitions along capacity expansion projects in Palm Beach County and reviewed ROW-to-construction cost ratios from other Florida jurisdictions. As shown in Table F-4, ROW cost estimates from three Palm Beach County improvements ranged from less than 1 percent to 70 percent, with a weighted average construction cost ratio of approximately 15 percent.

As shown in Table F-5, the ROW-to-construction factor for other Florida jurisdictions ranged from 10 percent to 60 percent with an average of 38 percent.

Based on a review of these two data sets and discussions with County representatives, ROW costs are calculated at approximately **15 percent** of the construction costs, which provides a conservative estimate.

### State Roadways

For purposes of this update study, the ROW-to-construction ratio for county roads or **15 percent** was also estimated for state roads construction. This represents a conservative estimate when compared to the average state road ROW-to-construction ratio of 41 percent (see Table F-5) from other Florida jurisdictions.

**Table F-4**  
**Right-of-Way Cost Factor – Palm Beach County Local Roadway Improvements**

County	Description	From	To	Year	Feature	Section Design	Right-of-Way Cost	Construction Cost	ROW-to-Construction Ratio
<b>ONGOING/FUTURE</b>									
Palm Beach	Roebuck Road	Jog Road	Haverhill Road	2018	2L to 5L	Urban	\$19,872	\$5,154,028	0.4%
Palm Beach	Hood Rd	East of FL Turnpike	W of Central Blvd	2019	2L to 4L	Urban	\$138,717	\$12,686,954	1.1%
Palm Beach	Silver Beach Rd	East of Congress Ave	Old Dixie/Pre. Barack Obama Hwy	2019	2L to 3L	Urban	\$3,125,440	\$4,478,355	69.8%
<b>TOTAL</b>							<b>\$3,284,029</b>	<b>\$22,319,337</b>	<b>14.7%</b>

Source: Palm Beach County

**Table F-5**  
**Right-of-Way Cost Factor for County Roads – Other Florida Jurisdictions**

Year	County	County Roadways (Cost per Lane Mile)			State Roadways (Cost per Lane Mile)		
		ROW	Constr.	ROW Ratio	ROW	Constr.	ROW Ratio
2013	Hernando	\$811,800	\$1,980,000	41%	\$890,560	\$2,024,000	44%
2013	Charlotte	\$1,034,000	\$2,200,000	47%	\$1,128,000	\$2,400,000	47%
2014	Indian River	\$656,000	\$1,598,000	41%	\$781,000	\$1,776,000	44%
2015	Collier	\$863,000	\$2,700,000	32%	\$863,000	\$2,700,000	32%
2015	Brevard	\$708,000	\$2,023,000	35%	\$1,006,000	\$2,785,000	36%
2015	Sumter	\$945,000	\$2,100,000	45%	\$1,127,000	\$2,505,000	45%
2015	Marion	\$1,001,000	\$1,668,000	60%	\$1,236,000	\$2,060,000	60%
2015	Palm Beach	\$721,000	\$1,759,000	41%	\$1,333,000	\$3,029,000	44%
2017	St. Lucie	\$990,000	\$2,200,000	45%	\$1,395,000	\$3,100,000	45%
2017	Clay	\$954,000	\$2,385,000	40%	-	-	-
2018	Collier	\$1,208,000	\$3,500,000	35%	\$1,208,000	\$3,500,000	35%
2019	Sumter	\$1,202,000	\$2,862,000	42%	\$1,447,000	\$3,365,000	43%
2020	Indian River	\$529,000	\$2,647,000	20%	\$718,000	\$3,593,000	20%
2020	Hillsborough	\$1,448,000	\$2,897,000	50%	\$1,448,000	\$2,897,000	50%
2020	Hernando	\$844,000	\$2,108,000	40%	\$1,265,000	\$3,163,000	40%
2021	Manatee	\$1,120,000	\$2,800,000	40%	-	-	-
2021	Flagler	\$258,000	\$2,582,000	10%	-	-	-
	<b>Average</b>	<b>\$899,576</b>	<b>\$2,353,471</b>	<b>38%</b>	<b>\$1,131,826</b>	<b>\$2,778,357</b>	<b>41%</b>

(a)

(b)

Source: Recent impact fee studies conducted throughout Florida

## **Construction**

### County Roadways

A review of construction cost data for local county roadway capacity expansion projects included four ongoing/future improvements provided by Palm Beach County (curb & gutter design):

- Roebuck Road from Jog Road to Haverhill Road
- Lyons Road from Clint Moore Road to North of LWDD L-39 Canal
- Hood Road from East of Florida Turnpike to West of Central Boulevard
- Silver Beach Road from East of Congress Avenue to Old Dixie/President Barack Obama Highway

As shown in Table F-6, these improvements ranged from \$1.66 million to \$6.68 million per lane mile with a weighted average construction cost of approximately \$3.49 million per lane mile. Though these have a wide range of costs, discussions with County representatives confirmed that \$3.49 is reasonable for impact fee calculation purposes.

In addition to local data, a review of recently bid projects (from 2013 to 2020) throughout the state of Florida was conducted. As shown in Table F-7, a total of 37 projects from 14 different counties (excluding Palm Beach County) were identified with a weighted average cost of approximately \$3.11 million per lane mile. These counties were then grouped into “urban” and “suburban/rural” counties, with the data from urban counties (Hillsborough and Orange)<sup>3</sup> having 12 projects, averaging \$3.68 million per lane mile. When compared to these statewide bids, the local improvements average a slightly lower cost per lane mile for construction.

Based on this review, the construction cost for county roads (urban design; curb & gutter) was estimated at **\$3.50 million** per lane mile for use in the transportation impact fee calculation.

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<sup>3</sup> Broward, Hillsborough, Miami-Dade, Orange and Palm Beach County are considered “urban”, though not all have recent cost data available

**Table F-6  
Construction Cost – Palm Beach County Local Roadway Improvements**

County	Description	From	To	Year	Feature	Section Design	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile
<b>ONGOING/FUTURE</b>											
Palm Beach	Roebuck Road	Jog Road	Haverhill Road	2018	2L to 5L	Urban	1.00	3	3.10	\$5,154,028	\$1,662,590
Palm Beach	Lyons Road	Clint Moore Road	north of LWDD L-39 Canal	2018	2L to 4L	Urban	0.70	2	1.40	\$3,163,022	\$2,259,301
Palm Beach	Hood Rd	East of FL Turnpike	W of Central Blvd	2019	2L to 4L	Urban	1.20	2	1.90	\$12,686,954	\$6,677,344
Palm Beach	Silver Beach Rd	East of Congress Ave	Old Dixie/Pre. Barack Obama Hwy	2019	2L to 3L	Urban	0.90	1	0.90	\$4,478,355	\$4,975,950
<b>TOTAL</b>								<b>Total:</b>	<b>7.30</b>	<b>\$25,482,359</b>	<b>\$3,490,734</b>

Source: Palm Beach County

**Table F-7  
Construction Cost for County Roads – Improvements from Other Florida Jurisdictions**

County	County Classification	District	Description	From	To	Year	Feature	Design	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile
<b>URBAN Counties; Curb &amp; Gutter</b>													
Orange	Urban	5	Rouse Rd	Lake Underhill Rd	SR 50	2013	2 to 4	Urban	1.55	2	3.10	\$7,592,408	\$2,449,164
Orange	Urban	5	Lake Underhill Rd	Goldenrod Rd	Chickasaw Tr	2013	2 to 4	Urban	0.69	2	1.38	\$6,371,855	\$4,617,286
Hillsborough	Urban	7	Bruce B. Downs Blvd, Seg. B/C	Palm Springs Blvd	Pebble Creek Dr	2013	4 to 8	Urban	3.36	4	13.44	\$51,855,535	\$3,858,299
Orange	Urban	5	CR 535 Seg. F	Overstreet Rd	Fossick Rd	2014	2 to 4	Urban	0.60	2	1.20	\$3,263,746	\$2,719,788
Hillsborough	Urban	7	Boyette Rd, Ph. III	Donneymoor Dr	Bell Shoals Rd	2014	2 to 4	Urban	1.84	2	3.68	\$25,720,068	\$6,989,149
Orange	Urban	5	International Dr	Westwood Blvd	Westwood Blvd	2015	4 to 6	Urban	2.20	2	4.40	\$16,775,875	\$3,812,699
Orange	Urban	5	Reams Rd	Delmar Ave	Taborfield Ave	2017	2 to 4	Urban	0.36	2	0.72	\$3,409,584	\$4,735,533
Orange	Urban	5	Destination Pkwy 1B/2A	Tradeshaw Blvd	Lake Cay	2017	2 to 4	Urban	0.78	2	1.56	\$6,110,403	\$3,916,925
Hillsborough	Urban	7	Bruce B. Downs Blvd, Seg. A	Bearss Ave	Palm Springs Blvd	2017	4 to 8	Urban	3.56	4	14.24	\$37,155,153	\$2,609,210
Hillsborough	Urban	7	Bruce B. Downs Blvd, Seg. D	Pebble Creek Dr	Pasco Co. Line	2018	4 to 8	Urban	1.36	4	5.44	\$17,755,778	\$3,263,930
Orange	Urban	5	Holden Ave	John Young Pkwy	Orange Blossom Tr	2019	0/2 to 4	Urban	1.24	2/4	3.50	\$18,798,771	\$5,371,077
Orange	Urban	5	Boggy Creek Rd N	South Access Rd	Wetherbee Rd	2019	2 to 4	Urban	1.29	2	2.58	\$8,585,774	\$3,327,819
<b>Total (2013-2020); Urban Counties ONLY</b>									<b>Count:</b>	<b>12</b>	<b>55.24</b>	<b>\$203,394,950</b>	<b>\$3,682,023</b>
<b>SUBURBAN/RURAL Counties; Curb &amp; Gutter</b>													
Brevard	Suburban/Rural	5	Babcock St	S. of Foundation Park Blvd	Malabar Rd	2013	2 to 4	Urban	12.40	2	24.80	\$56,000,000	\$2,258,065
Collier	Suburban/Rural	1	Collier Blvd (CR 951)	Golden Gate Blvd	Green Blvd	2013	4 to 6	Urban	2.00	2	4.00	\$17,122,640	\$4,280,660
Marion	Suburban/Rural	5	SW 110th St	US 41	SW 200th Ave	2013	0 to 2	Urban	0.11	2	0.22	\$438,765	\$1,994,386
Marion	Suburban/Rural	5	NW 35th St	NW 35th Avenue Rd	NW 27th Ave	2013	0 to 4	Urban	0.50	4	4.60	\$8,616,236	\$1,873,095
Marion	Suburban/Rural	5	NW 35th St	NW 27th Ave	US 441	2013	2 to 4	Urban	1.30	2			
Sumter	Suburban/Rural	5	C-466A, Ph. III	US 301 N	Powell Rd	2013	2 to 3/4	Urban	1.10	2	2.20	\$4,283,842	\$1,947,201
Collier	Suburban/Rural	1	Golden Gate Blvd	Wilson Blvd	Desoto Blvd	2014	2 to 4	Urban	2.40	2	4.80	\$16,003,504	\$3,334,063
Brevard	Suburban/Rural	5	St. Johns Heritage Pkwy	SE of I-95 Intersection	US 192 (Space Coast Pkwy)	2014	0 to 2	Sub-Urb	3.11	2	6.22	\$16,763,567	\$2,695,107
Sarasota	Suburban/Rural	1	Bee Ridge Rd	Mauna Loa Blvd	Iona Rd	2014	2 to 4	Urban	2.68	2	5.36	\$14,066,523	\$2,624,351
St. Lucie	Suburban/Rural	4	W Midway Rd (CR 712)	Selvitz Rd	South 25th St	2014	2 to 4	Urban	1.00	2	2.00	\$6,144,000	\$3,072,000
Lake	Suburban/Rural	5	N. Hancock Rd Ext.	Old 50	Gatewood Dr	2014	0/2 to 4	Urban	1.50	2/4	5.00	\$8,185,574	\$1,637,115
Polk	Suburban/Rural	1	CR 655 & CR 559A	Pace Rd & N of CR 559A	N. of CR 559A & SR 599	2014	2 to 4	Urban	2.60	2	5.20	\$10,793,552	\$2,075,683
Volusia	Suburban/Rural	5	Howland Blvd	Courtland Blvd	N. of SR 415	2014	2 to 4	Urban	2.08	2	4.16	\$11,110,480	\$2,670,788
Polk	Suburban/Rural	1	Ernie Caldwell Blvd	Pine Tree Tr	US 17/92	2015	0 to 4	Urban	2.41	4	9.64	\$19,535,391	\$2,026,493
Volusia	Suburban/Rural	5	LPGA Blvd	Jimmy Ann Dr/Grand Reserve	Derbyshire Rd	2016	2 to 4	Urban	0.68	2	1.36	\$3,758,279	\$2,763,440
St. Lucie	Suburban/Rural	4	W Midway Rd (CR 712)	W. of South 25th St	E. of SR 5 (US 1)	2016	2 to 4	Urban	1.77	2	3.54	\$24,415,701	\$6,897,091
Marion	Suburban/Rural	5	NW/NE 35th St, Ph. 1a	US 441	600' E. of W Anthony Rd	2016	2 to 4	Urban	0.30	2	0.60	\$1,770,250	\$2,950,417
Manatee	Suburban/Rural	1	44th Ave East	19th St Court East	30th St East	2016	0 to 4	Urban	0.90	4	3.60	\$11,019,228	\$3,060,897
Volusia	Suburban/Rural	5	Howland Blvd	Providence Blvd	Elkcam Blvd	2017	2 to 4	Urban	2.15	2	4.30	\$10,850,000	\$2,523,256
Volusia	Suburban/Rural	5	Orange Camp Rd	MLK Blvd	I-4 in DeLand	2017	2 to 4	Urban	0.75	2	1.50	\$10,332,000	\$6,888,000
Lake	Suburban/Rural	5	CR 466A, Ph. IIIA	Poinsettia Ave	Century Ave	2018	2 to 4	Urban	0.42	2	0.84	\$3,062,456	\$3,645,781
Lee	Suburban/Rural	1	Alico Rd	Ben Hill Griffin Pkwy	E. of Airport Haul Rd	2018	2 to 4	Urban	1.78	2	3.56	\$18,062,562	\$5,073,753
Lee	Suburban/Rural	1	Homestead Rd	S. of Sunrise Blvd	N. of Alabama Rd	2018	2 to 4	Urban	2.25	2	4.50	\$14,041,919	\$3,120,426
Manatee	Suburban/Rural	1	45th St East	44th Ave East	SR 70	2018	2 to 4	Urban	1.10	2	2.20	\$7,476,126	\$3,398,239
Hernando	Suburban/Rural	7	Cortez Blvd Frontage Rd @ I-75			2020	0 to 2	Urban	0.62	2	1.24	\$2,064,688	\$1,665,071
<b>Total (2013-2020); Suburban/Rural Counties ONLY</b>									<b>Count:</b>	<b>25</b>	<b>105.44</b>	<b>\$295,917,283</b>	<b>\$2,806,499</b>
<b>URBAN &amp; SUBURBAN/RURAL Counties; Curb &amp; Gutter</b>													
<b>Total (2013-2020); Urban &amp; Suburban/Rural Counties</b>									<b>Count:</b>	<b>37</b>	<b>160.68</b>	<b>\$499,312,233</b>	<b>\$3,107,495</b>

Source: Data obtained from each respective county (Building and Public Works Departments)



### State Roadways

A review of construction cost data for local state roadway capacity expansion projects included one recent improvement in Palm Beach County:

- SR 80 from West of Lion County Safari Road to Forest Hill Boulevard

As shown in Table F-8, had a construction cost of \$2.28 million per lane mile. Due to this small sample size, additional data was reviewed.

In addition to local data, a review of recently bid projects (from 2013 to 2020) throughout Florida was conducted. As shown in Table F-8, a total of 63 projects from 31 different counties (excluding Palm Beach County) were identified with a weighted average cost of approximately \$4.24 million per lane mile. These counties were then grouped into “urban” and “suburban/rural” counties, with the data from urban counties (Broward, Hillsborough, Miami-Dade, Orange and Palm Beach) having 19 projects, averaging \$4.69 million per lane mile. Including the Palm Beach County project with the other urban county data, the resulting weighted average construction cost is approximately \$4.40 million per lane mile.

Based on this review, the construction cost for state roads (urban design; curb & gutter) was estimated at **\$4.40 million** per lane mile for use in the transportation impact fee calculation.

**Table F-8  
Construction Cost for State Roads – Other Florida Jurisdictions**

County	County Classification	District	Description	From	To	Year	Feature	Design	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile	
<b>URBAN Counties; Curb &amp; Gutter</b>														
Broward	Urban	4	Andrews Ave Ext.	NW 18th St	Copans Rd	2013	2 to 4	Urban	0.50	2	1.00	\$6,592,014	\$6,592,014	
Hillsborough	Urban	7	SR 41 (US 301)	S. of Tampa Bypass Canal	N. of Fowler Ave	2013	2 to 4	Sub-Urb	1.81	2	3.62	\$15,758,965	\$4,353,305	
Orange	Urban	5	SR 50 (Colonial Dr)	E. of CR 425 (Dean Rd)	E. of Old Cheney Hwy	2013	4 to 6	Urban	4.91	2	9.82	\$66,201,688	\$6,741,516	
Broward	Urban	4	SR 7 (US 441)	N. of Hallandale Beach	N. of Fillmore St	2014	4 to 6	Urban	1.79	2	3.58	\$30,674,813	\$8,568,384	
Broward	Urban	4	Andrews Ave Ext.	Pompano Park Place	S. of Atlantic Blvd	2014	2 to 4	Urban	0.36	2	0.72	\$3,177,530	\$4,413,236	
Miami-Dade	Urban	6	SR 823/NW 57th Ave	W. 65th St	W. 84th St	2014	4 to 6	Urban	1.00	2	2.00	\$17,896,531	\$8,948,266	
Miami-Dade	Urban	6	SR 823/NW 57th Ave	W. 53rd St	W. 65th St	2014	4 to 6	Urban	0.78	2	1.56	\$14,837,466	\$9,511,196	
Orange	Urban	5	SR 50	SR 429 (Western Beltway)	E. of West Oaks Mall	2014	4 to 6	Urban	2.56	2	5.12	\$34,275,001	\$6,694,336	
Orange	Urban	5	SR 15 (Hofner Rd)	Lee Vista Blvd	Conway Rd	2015	2 to 4	Urban	3.81	2	7.62	\$37,089,690	\$4,867,413	
Miami-Dade	Urban	6	SR 977/Krome Ave/SW 177th Ave	S of SW 136th St	S. of SR 94 (SW 88th St/Kendall Dr)	2016	0 to 4	Urban	3.50	4	14.00	\$32,129,013	\$2,294,930	
Broward	Urban	4	SW 30th Ave	Griffin Rd	SW 45th St	2016	2 to 4	Urban	0.24	2	0.48	\$1,303,999	\$2,716,665	
Hillsborough	Urban	7	SR 43 (US 301)	SR 674	S. of CR 672 (Balm Rd)	2016	2 to 6	Urban	3.77	4	15.08	\$43,591,333	\$2,890,672	
Miami-Dade	Urban	6	NW 87th Ave/SR 25 & SR 932	NW 74th St	NW 103rd St	2016	0 to 4	Urban	1.93	4	7.72	\$28,078,366	\$3,637,094	
Orange	Urban	5	SR 423 (John Young Pkwy)	SR 50 (Colonial Dr)	Shader Rd	2017	4 to 6	Urban	2.35	2	4.70	\$27,752,000	\$5,904,681	
Palm Beach	Urban	4	SR 80	W. of Lion County Safari Rd	Forest Hill Blvd	2018	4 to 6	Urban	7.20	2	14.40	\$32,799,566	\$2,277,748	
Miami-Dade	Urban	6	SR 847 (NW 47th Ave)	SR 860 (NW 183rd St)	N. of NW 199th St	2018	2 to 4	Urban	1.31	2	2.62	\$18,768,744	\$7,163,643	
Miami-Dade	Urban	6	SR 847 (NW 47th Ave)	N. of NW 199th St and S of NW 203 St	Premier Pkwy and N of S Snake CR Canal	2018	2 to 4	Urban	1.09	2	2.18	\$10,785,063	\$4,947,277	
Hillsborough	Urban	7	CR 580 (Sam Allen Rd)	W. of SR 39 (Paul Buchman Hwy)	E. of Park Rd	2018	2 to 4	Urban	2.02	2	4.04	\$23,444,444	\$5,803,080	
Orange	Urban	5	SR 414 (Maitland Blvd)	E. of I-4	E. of CR 427 (Maitland Ave)	2018	4 to 6	Urban	1.39	2	2.78	\$7,136,709	\$2,567,162	
Miami-Dade	Urban	6	SR 997 (Krome Ave)	SW 312 St	SW 232nd St	2019	2 to 4	Urban	3.64	2	7.28	\$30,374,141	\$4,172,272	
<b>Total (2013-2020); Urban Counties ONLY</b>										<b>Count:</b>	<b>20</b>	<b>110.32</b>	<b>\$482,667,076</b>	<b>\$4,375,155</b>
<b>Total (2013-2020); Urban Counties ONLY (excluding Palm Beach County)</b>										<b>Count:</b>	<b>19</b>	<b>95.92</b>	<b>\$449,867,510</b>	<b>\$4,690,028</b>
<b>SUBURBAN/RURAL Counties; Curb &amp; Gutter</b>														
Lee	Suburban/Rural	1	SR 78 (Pine Island)	Burnt Store Rd	W. of Chiquita Blvd	2013	2 to 4	Urban	1.94	2	3.88	\$8,005,048	\$2,063,157	
Brevard	Suburban/Rural	5	SR 507 (Babcock St)	Melbourne Ave	Fee Ave	2013	2 to 4	Urban	0.55	2	1.10	\$5,167,891	\$4,698,083	
Lee	Suburban/Rural	1	US 41 Business	Littleton Rd	SR 739	2013	2 to 4	Urban	1.23	2	2.46	\$8,488,393	\$3,450,566	
Brevard	Suburban/Rural	5	Apollo Blvd	Sarno Rd	Eau Gallie Blvd	2013	2 to 4	Urban	0.74	2	1.48	\$10,318,613	\$6,972,036	
Okeechobee	Suburban/Rural	1	SR 70	NE 34th Ave	NE 80th Ave	2014	2 to 4	Urban	3.60	2	7.20	\$23,707,065	\$3,292,648	
Martin	Suburban/Rural	4	CR 714/Indian St	Turnpike/Martin Downs Blvd	W. of Mapp Rd	2014	2 to 4	Urban	1.87	2	3.74	\$14,935,957	\$3,993,571	
Pinellas	Suburban/Rural	7	43rd St Extension	S. of 118th Ave	40th St	2014	0 to 4	Urban	0.49	4	1.96	\$4,872,870	\$2,486,158	
Nassau	Suburban/Rural	2	SR 200 (A1A)	W. of Still Quarters Rd	W. of Ruben Ln	2014	4 to 6	Urban	3.05	2	6.10	\$18,473,682	\$3,028,472	
Charlotte	Suburban/Rural	1	US 41 (SR 45)	Enterprise Dr	Sarasota County Line	2014	4 to 6	Urban	3.62	2	7.24	\$31,131,016	\$4,299,864	
Duval	Suburban/Rural	2	SR 243 (JIA N Access)	Airport Rd	Pelican Park (I-95)	2014	0 to 2	Urban	2.60	2	5.20	\$14,205,429	\$2,731,813	
Desoto	Suburban/Rural	1	US 17	CR 760A (Nocatee)	Heard St	2014	2 to 4	Urban	4.40	2	8.80	\$29,584,798	\$3,361,909	
Hendry	Suburban/Rural	1	SR 82 (Immokalee Rd)	Lee County Line	Collier County Line	2015	2 to 4	Urban	1.27	2	2.54	\$7,593,742	\$2,989,662	
Sarasota	Suburban/Rural	1	SR 45A (US 41) (Venice Bypass)	Gulf Coast Blvd	Bird Bay Dr W	2015	4 to 6	Urban	1.14	2	2.28	\$16,584,224	\$7,273,782	
Clay	Suburban/Rural	2	SR 21	S. of Branan Field	Old Jennings Rd	2015	4 to 6	Urban	1.45	2	2.90	\$15,887,487	\$5,478,444	
Putnam	Suburban/Rural	2	SR 15 (US 17)	Horse Landing Rd	N. Boundary Rd	2015	2 to 4	Urban	1.99	2	3.98	\$13,869,804	\$3,484,875	
Osceola	Suburban/Rural	5	SR 500 (US 192/441)	Eastern Ave	Nova Rd	2015	4 to 6	Urban	3.18	2	6.36	\$16,187,452	\$2,545,197	
Osceola	Suburban/Rural	5	SR 500 (US 192/441)	Aeronautical Blvd	Budinger Ave	2015	4 to 6	Urban	3.94	2	7.88	\$34,256,621	\$4,347,287	
Lake	Suburban/Rural	5	SR 25 (US 27)	N. of Boggy Marsh Rd	N. of Lake Louisa Rd	2015	4 to 6	Sub-Urb	6.52	2	13.03	\$37,503,443	\$2,878,238	
Seminole	Suburban/Rural	5	SR 15/600	Shepard Rd	Lake Mary Blvd	2015	4 to 6	Urban	3.63	2	7.26	\$42,712,728	\$5,883,296	
St. Lucie	Suburban/Rural	4	SR 614 (Indrio Rd)	W. of SR 9 (I-95)	E. of SR 607 (Emerson Ave)	2016	2 to 4	Urban	3.80	2	7.60	\$22,773,660	\$2,996,534	
Seminole	Suburban/Rural	5	SR 46	Mellonville Ave	E. of SR 415	2016	2 to 4	Urban	2.83	2	5.66	\$26,475,089	\$4,677,578	
St. Lucie	Suburban/Rural	4	CR 712 (Midway Rd)	W. of S. 25th St	E. of SR 5 (US 1)	2016	2 to 4	Urban	1.77	2	3.54	\$24,415,701	\$6,897,091	
Citrus	Suburban/Rural	7	SR 55 (US 19)	W. Green Acres St	W. Jump Ct	2016	4 to 6	Urban	2.07	2	4.14	\$27,868,889	\$6,731,616	
Walton	Suburban/Rural	3	SR 30 (US 98)	Emerald Bay Dr	Tang-o-mar Dr	2016	4 to 6	Urban	3.37	2	6.74	\$42,140,000	\$6,252,226	
Duval	Suburban/Rural	2	SR 201	S. of Baldwin	N. of Baldwin (Bypass)	2016	0 to 4	Urban	4.11	4	16.44	\$50,974,795	\$3,100,657	
Hardee	Suburban/Rural	1	SR 35 (US 17)	S. of W. 9th St	N. of W. 3rd St	2016	0 to 4	Urban	1.11	4	4.44	\$14,067,161	\$3,168,280	

**Table F-8 (continued)**  
**Construction Cost for State Roads – Other Florida Jurisdictions**

County	County Classification	District	Description	From	To	Year	Feature	Design	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile	
<b><i>SUBURBAN/RURAL Counties; Curb &amp; Gutter</i></b>														
Alachua	Suburban/Rural	2	SR 20 (SE Hawthorne Rd)	E. of US 301	E. of Putnam Co. Line	2017	2 to 4	Urban	1.70	2	3.40	\$11,112,564	\$3,268,401	
Okaloosa	Suburban/Rural	3	SR 30 (US 98)	CR 30F (Airport Rd)	E. of Walton Co. Line	2017	4 to 6	Urban	3.85	2	7.70	\$33,319,378	\$4,327,192	
Bay	Suburban/Rural	3	SR 390 (St. Andrews Blvd)	E. of CR 2312 (Baldwin Rd)	Jenks Ave	2017	2 to 6	Urban	1.33	4	5.32	\$14,541,719	\$2,733,406	
Pasco	Suburban/Rural	7	SR 54	E. of CR 577 (Curley Rd)	E. of CR 579 (Morris Bridge Rd)	2017	2 to 4/6	Urban	4.50	2/4	11.80	\$41,349,267	\$3,504,175	
Lake	Suburban/Rural	5	SR 46 (US 441)	W. of SR 500	E. of Round Lake Rd	2017	2 to 6	Urban	2.23	4	8.92	\$27,677,972	\$3,102,912	
Wakulla	Suburban/Rural	3	SR 369 (US 19)	N. of SR 267	Leon Co. Line	2018	2 to 4	Urban	2.24	2	4.48	\$15,646,589	\$3,492,542	
St. Lucie	Suburban/Rural	4	SR 713 (Kings Hwy)	S. of SR 70	SR 9 (I-95) Overpass	2018	2 to 4	Urban	3.42	2	6.84	\$45,162,221	\$6,602,664	
Citrus	Suburban/Rural	7	SR 55 (US 19)	W. Jump Ct	CR 44 (W Fort Island Tr)	2018	4 to 6	Urban	4.81	2	9.62	\$50,444,444	\$5,243,705	
Sarasota	Suburban/Rural	1	SR 45A (US 41) (Venice Bypass)	Center Rd	Gulf Coast Blvd	2018	4 to 6	Urban	1.19	2	2.38	\$15,860,000	\$6,663,866	
Seminole	Suburban/Rural	5	SR 46	Orange Blvd	N. Oregon St (Wekiva Section 7B)	2019	4 to 6	Urban	1.30	2	2.60	\$17,848,966	\$6,864,987	
Duval	Suburban/Rural	2	Jax National Cemetery Access Rd	Lannie Rd	Arnold Rd	2019	0 to 2	Urban	3.26	2	6.52	\$11,188,337	\$1,716,003	
Pasco	Suburban/Rural	7	SR 52	W. of Suncoast Pkwy	E. of SR 45 (US 41)	2019	4 to 6	Urban	4.64	2	9.28	\$45,307,439	\$4,882,267	
Hernando	Suburban/Rural	7	SR 50	Windmere Rd	E of US 301	2019	4 to 6	Urb/Rural	5.60	2	11.20	\$52,736,220	\$4,708,591	
Hernando	Suburban/Rural	7	CR 578 (County Line Rd)	Suncoast Pkwy	US 41 @ Ayers Rd	2019	0 to 4	Urban	1.49	4	5.96	\$20,155,312	\$3,381,764	
Putnam	Suburban/Rural	2	SR 20	Alachua/Putnam Co. Line	SW 56th Ave	2019	2 to 4	Urban	6.95	2	13.90	\$45,290,778	\$3,258,329	
Bay	Suburban/Rural	3	SR 390 (St. Andrews Blvd)	SR 368 (23rd St)	E of CR 2312 (Baldwin Rd)	2019	2 to 6	Urban	2.47	4	9.88	\$41,711,427	\$4,221,804	
Lake	Suburban/Rural	5	SR 500 (US 441)	Lake Ella Rd	Avenida Central	2020	4 to 6	Urban	4.08	2	8.16	\$44,960,000	\$5,509,804	
Polk	Suburban/Rural	1	SR 542 (Dundee Rd)	MP 2.685	MP 6.211	2020	2 to 4	Urban	3.52	2	7.04	\$43,563,143	\$6,187,946	
<b>Total (2013-2020); Suburban/Rural Counties ONLY</b>										<b>Count:</b>	<b>44</b>	<b>278.95</b>	<b>\$1,140,077,334</b>	<b>\$4,087,031</b>
<b><i>URBAN &amp; SUBURBAN/RURAL Counties; Curb &amp; Gutter</i></b>														
<b>Total (2013-2020); Urban &amp; Suburban/Rural Counties</b>										<b>Count:</b>	<b>64</b>	<b>389.27</b>	<b>\$1,622,744,410</b>	<b>\$4,168,686</b>
<b>Total (2013-2020); Urban &amp; Suburban/Rural Counties (excluding Palm Beach County)</b>										<b>Count:</b>	<b>63</b>	<b>374.87</b>	<b>\$1,589,944,844</b>	<b>\$4,241,323</b>

Source: Florida Department of Transportation Contracts Administration Department, Bid Tabulations

## Construction Engineering/Inspection

### County Roadways

The CEI cost factor for county roads was estimated as a percentage of the construction cost per lane mile. This factor was determined based on a review of CEI-to-construction cost ratios from other Florida jurisdictions. As shown in Table F-9, recent CEI factors ranged from three (3) percent to 17 percent with a weighted average of nine (9) percent. For purposes of this study, the CEI cost for county roads is calculated at **nine (9) percent** of the construction cost per lane mile.

### State Roadways

The CEI cost factor for state roads was estimated as a percentage of the construction cost per lane mile. This factor was determined based on a review of CEI-to-construction cost ratios from other Florida jurisdictions. As shown in Table F-9, recent CEI factors ranged from 10 percent to 11 percent with a weighted average of 11 percent. For purposes of this study, the CEI cost for county roads is calculated at **11 percent** of the construction cost per lane mile.

**Table F-9**  
**CEI Cost Factor for County Roads – Other Florida Jurisdictions**

Year	County	County Roadways (Cost per Lane Mile)			State Roadways (Cost per Lane Mile)		
		CEI	Constr.	CEI Ratio	CEI	Constr.	CEI Ratio
2013	Hernando	\$178,200	\$1,980,000	9%	\$222,640	\$2,024,000	11%
2013	Charlotte	\$220,000	\$2,200,000	10%	\$240,000	\$2,400,000	10%
2014	Indian River	\$143,000	\$1,598,000	9%	\$196,000	\$1,776,000	11%
2015	Collier	\$270,000	\$2,700,000	10%	\$270,000	\$2,700,000	10%
2015	Brevard	\$344,000	\$2,023,000	17%	\$316,000	\$2,875,000	11%
2015	Sumter	\$147,000	\$2,100,000	7%	\$250,000	\$2,505,000	10%
2015	Marion	\$50,000	\$1,668,000	3%	\$227,000	\$2,060,000	11%
2015	Palm Beach	\$108,000	\$1,759,000	6%	\$333,000	\$3,029,000	11%
2017	St. Lucie	\$198,000	\$2,200,000	9%	\$341,000	\$3,100,000	11%
2017	Clay	\$191,000	\$2,385,000	8%	-	-	n/a
2019	Collier	\$315,000	\$3,500,000	9%	\$385,000	\$3,500,000	11%
2019	Sumter	\$258,000	\$2,862,000	9%	\$370,000	\$3,365,000	11%
2020	Indian River	\$238,000	\$2,647,000	9%	\$395,000	\$3,593,000	11%
2020	Hillsborough	\$363,000	\$4,036,000	9%	\$486,000	\$4,421,000	11%
2020	Hernando	\$189,000	\$2,108,000	9%	\$348,000	\$3,163,000	11%
2021	Manatee	\$252,000	\$2,800,000	9%	-	-	-
2021	Flagler	\$232,000	\$2,582,000	9%	-	-	-
	<b>Average</b>	<b>\$217,424</b>	<b>\$2,420,471</b>	<b>9%</b>	<b>\$4,380,000</b>	<b>\$40,511,000</b>	<b>11%</b>

(a)

(b)

Source: Recent impact fee studies conducted throughout Florida

### Roadway Capacity

As shown in Table F-10, the average capacity per lane mile is based on the cost feasible projects in the 2045 Long Range Transportation Plan. This listing of projects reflects the mix of improvements that will yield the vehicle-miles of capacity (VMC) that will be built in Palm Beach County. The resulting vehicle-miles of capacity added and the lane miles added were used to develop the VMC added per lane mile that was used in the transportation impact fee calculation.

**Table F-10  
Palm Beach County 2045 Long Range Transportation Plan – Cost Feasible Plan**

L RTP#	Jurisdiction	Description	Improvement	Length	Lanes Added	Lane Miles Added	Section Design*	Initial Capacity	Future Capacity	Added Capacity	Vehicle Miles of Capacity Added
<b>TPA Cost Feasible List of Priority Projects</b>											
TPA001	State	Atlantic Ave from SR 7 to Lyons Rd	Widen 2L to 4L	1.10	2	2.20	Urban	16,200	35,500	19,300	21,230
TPA002	State	Atlantic Ave from Lyons Rd to Jog Rd	Widen 4L to 6L	2.50	2	5.00	Urban	32,400	50,000	17,600	44,000
TPA013	State	SR 7 from Okeechobee Blvd to 60th St	Widen 2L to 4L	4.46	2	8.92	Urban	24,200	65,600	41,400	184,644
TPA014	State	SR 7 from 60th St to Northlake Blvd	New 4L	4.00	4	16.00	Urban	0	65,600	65,600	262,400
<b>Palm Beach County Road Program in Collaboration with Affected Local Governments</b>											
PBC002	City/County	6th Ave S from I-95 to South A St	Widen 4L to 6L	0.20	2	0.40	Urban	29,160	45,000	15,840	3,168
PBC004	City/County	190th St North from 60th St N to Northern Terminus	New 4L	0.53	4	2.12	Rural	0	35,820	35,820	18,985
PBC005	City/County	45th St from E of Haverhill Rd to W of Military Trail	Widen 4/5L to 6L	0.51	2	1.02	Urban	29,160	45,000	15,840	8,078
PBC007	City/County	45th St from Village Blvd to I-95	Widen 6L to 8L	0.56	2	1.12	Urban	45,000	60,570	15,570	8,719
PBC010	City/County	60th St North from 190th St N to M-Canal	New 4L	2.00	4	8.00	Urban	0	35,820	35,820	71,640
PBC011	City/County	60th St North from M-Canal to Seminole Pratt Whitney Rd	Widen 2L to 4L	0.27	2	0.54	Urban	15,930	35,820	19,890	5,370
PBC012	City/County	60th St North from Seminole Pratt Whitney Rd to 140th Ave N	New 4L	2.75	4	11.00	Urban	0	35,820	35,820	98,505
PBC013	City/County	60th St North from W of 140th Ave N to Avocado Blvd	Widen 3L to 5L	0.48	2	0.96	Urban	15,930	35,820	19,890	9,547
PBC015	City/County	60th St North from Avocado Blvd to SR 7	Widen 3L to 5L	2.54	2	5.08	Urban	15,930	35,820	19,890	50,521
PBC019	City/County	Boca Rio Rd from Palmetto Park Rd to Glades Rd	Widen 2/3L to 5L	1.21	2	2.42	Urban	13,320	29,160	15,840	19,166
PBC021	City/County	Central Blvd from Indiantown Rd to Roebuck Rd	Widen 2/3L to 5L w/Bridge	0.99	2	1.98	Urban	13,320	29,160	15,840	15,682
PBC023	City/County	Clint Moore Rd from W of Lyons Rd to E of Lyons Rd	Widen 4L to 6L	1.10	2	2.20	Urban	30,780	45,000	14,220	15,642
PBC027	City/County	Coconut Blvd from S of Temple Blvd to S of Northlake Blvd	Widen 2L to 5L	1.15	2	2.30	Urban	14,580	31,950	17,370	19,976
PBC029	City/County	Congress Ave from Northlake Blvd to Alt A1A	New 3L	0.61	2	1.22	Urban	0	15,930	15,930	9,717
PBC030	City/County	Coral Ridge Dr from Glades Rd to Burt Aaronson Park Dr	New 2L	1.86	2	3.72	Rural	0	15,930	15,930	29,630
PBC032	City/County	Donald Ross Rd from Prosperity Farms Rd to Ellison Wilson Rd	Widen 4/5L to 6L	0.70	2	1.40	Urban	29,160	45,000	15,840	11,088
PBC033	City/County	Donald Ross Rd from Ellison Wilson Rd to US 1	Widen 4L to 6L	0.65	2	1.30	Urban	29,160	45,000	15,840	10,296
PBC035	City/County	Flavor Pict Rd from SR 7 to Lyons Rd	Widen 2L to 4L	1.00	2	2.00	Urban	15,930	35,820	19,890	19,890
PBC036	City/County	Flavor Pict Rd from Lyons Rd to Hagen Ranch Rd	New 4L w/Bridge	1.52	4	6.08	Urban	0	35,820	35,820	54,446
PBC040	City/County	Happy Hallow Rd from Smith Sundry Rd to Lyons Rd	New 2L	0.50	2	1.00	Rural	0	15,930	15,930	7,965
PBC043	City/County	Haverhill Rd from Okeechobee Blvd to Community Dr	Widen 5L to 6L	1.00	2	2.00	Urban	29,160	45,000	15,840	15,840
PBC044	City/County	High Ridge Rd from Gateway Blvd to Miner Rd	Widen 2L to 5L	0.56	2	1.12	Urban	15,930	35,820	19,890	11,138
PBC053	City/County	Kirk Rd from N of Forest Hill Blvd to Summit Blvd	Widen 2L to 3/5L	0.76	2	1.52	Urban	14,580	31,950	17,370	13,201
PBC123	City/County	Kirk Rd from Summit Blvd to Gun Club Rd	Widen 2L to 3/5L	0.77	2	1.54	Urban	14,580	31,950	17,370	13,375
PBC055	City/County	Lantana Rd from High Ridge Rd to Andrew Redding Rd	Widen 5L to 6L	0.57	2	1.14	Urban	35,820	53,910	18,090	10,311
PBC057	City/County	Linton Blvd from Jog Rd to Sims Rd	Widen 4L to 6L	1.00	2	2.00	Urban	29,160	45,000	15,840	15,840
PBC058	City/County	Linton Blvd from Sims Rd to Military Trail	Widen 5L to 6L	0.52	2	1.04	Urban	29,160	45,000	15,840	8,237
PBC060	City/County	Lyons Rd from SW 18th St to Glades Rd	Widen 4L to 6L	2.58	2	5.16	Urban	31,950	48,150	16,200	41,796
PBC061	City/County	Lyons Rd from Atlantic Ave to Flavor Pict Rd	Widen 2L to 4L	2.54	2	5.08	Urban	14,580	31,950	17,370	44,120
PBC062	City/County	Lyons Rd from Flavor Pict Rd to Boynton Beach Blvd	Widen 2L to 4L	2.62	2	5.24	Urban	14,580	31,950	17,370	45,509
PBC063	City/County	Lyons Rd from N of Lake Worth Rd to Stribling Way	New 2L	1.00	2	2.00	Urban	0	15,930	15,930	15,930
PBC067	City/County	Miner Rd from Military Trail to Lawrence Rd	New 3L	0.61	2	1.22	Urban	0	13,320	13,320	8,125
PBC069	City/County	Northlake Blvd from Seminole Pratt Whitney Rd to 140th Ave N	Widen 4L to 6L	2.00	2	4.00	Urban	29,160	45,000	15,840	31,680
PBC070	City/County	Northlake Blvd from Hall Blvd to Coconut Blvd	Widen 2L to 4L	2.46	2	4.92	Urban	15,930	35,820	19,890	48,929
PBC071	City/County	Northlake Blvd from 140th Ave N to Coconut Blvd	Widen 4L to 6L	1.45	2	2.90	Urban	35,820	53,910	18,090	26,231
PBC072	City/County	Northlake Blvd from Coconut Blvd to SR 7	Widen 4L to 6L	2.48	2	4.96	Urban	35,820	53,910	18,090	44,863
PBC073	City/County	Northlake Blvd from SR 7 to Beeline Hwy	Widen 4L to 6L	2.74	2	5.48	Urban	65,600	98,300	32,700	89,598
PBC083	City/County	Old Dixie Hwy from Yamato Rd to Linton Blvd	Widen 3L to 5L	3.14	2	6.28	Urban	15,930	35,820	19,890	62,455

Table F-10 (continued)

Palm Beach County 2045 Long Range Transportation Plan – Cost Feasible Plan

L RTP#	Jurisdiction	Description	Improvement	Length	Lanes Added	Lane Miles Added	Section Design*	Initial Capacity	Future Capacity	Added Capacity	Vehicle Miles of Capacity Added
<b>Palm Beach County Road Program in Collaboration with Affected Local Governments</b>											
PBC084	City/County	Old Dixie Hwy from Park Ave to Northlake Blvd	Widen 3L to 5L	0.77	2	1.54	Urban	15,930	35,820	19,890	15,315
PBC093	City/County	Park Ave West from Congress Ave to Old Dixie Hwy	New 3L	0.74	2	1.48	Urban	0	15,930	15,930	11,788
PBC094	City/County	Powerline Rd from Broward County Line to Palmetto Park Rd	Widen 4L to 6L	1.54	2	3.08	Urban	35,820	53,910	18,090	27,859
PBC100	City/County	Royal Palm Beach Blvd from N of Persimmon Blvd to N of 60th St	Widen 2L to 5L	1.00	2	2.00	Urban	15,930	35,820	19,890	19,890
PBC101	City/County	Royal Palm Beach from N of 60th St S of Orange Blvd	Widen 2L to 5L	1.00	2	2.00	Urban	15,930	35,820	19,890	19,890
PBC102	City/County	Orange Blvd from Coconut Blvd to Royal Palm Beach Blvd	Widen 2L to 5L	0.73	2	1.46	Urban	14,580	31,950	17,370	12,680
	City/County	Coconut Blvd from Orange Blvd to S of Temple Blvd	Widen 2L to 5L	1.00	2	2.00	Urban	14,580	31,950	17,370	17,370
PBC104	City/County	Seminole Pratt Whitney Rd from SR 80 to Okeechobee Blvd	Widen 4L to 6L	1.61	2	3.22	Urban	15,930	35,820	19,890	32,023
PBC105	City/County	Seminole Pratt Whitney Rd from Okeechobee Blvd to Sycamore Dr E	Widen 4L to 6L	2.11	2	4.22	Urban	29,160	45,000	15,840	33,422
PBC106	City/County	Seminole Pratt Whitney Rd from Sycamore Dr E to 60th St N	Widen 4L to 6L	1.90	2	3.80	Urban	29,160	45,000	15,840	30,096
PBC107	City/County	Seminole Pratt Whitney Rd from 60th St N to Orange Blvd	Widen 4L to 6L	1.33	2	2.66	Urban	35,820	53,910	18,090	24,060
PBC108	City/County	Seminole Pratt Whitney Rd from Orange Blvd to Northlake Blvd	Widen 4L to 6L	2.21	2	4.42	Urban	35,820	53,910	18,090	39,979
PBC109	City/County	Seminole Pratt Whitney Rd from Northlake Blvd to 100th Lane North	Widen 2L to 4L	0.89	2	1.78	Urban	24,400	62,900	38,500	34,265
PBC110	City/County	Seminole Pratt Whitney Rd from 100th Lane North to Avenir	New 4L	1.77	4	7.08	Urban	0	62,900	62,900	111,333
PBC111	City/County	Seminole Pratt Whitney Rd from Avenir to SR 710/Beeline Hwy	New 4L	3.60	4	14.40	Urban	0	62,900	62,900	226,440
PBC112	City/County	Sims Rd from Linton Blvd to Atlantic Ave	New 3L	1.28	2	2.56	Urban	0	15,930	15,930	20,390
PBC113	City/County	Summit Blvd from E of Florida Mango to W of I-95	Widen 4L to 5L	0.55	2	1.10	Urban	29,160	45,000	15,840	8,712
PBC116	City/County	Yamato Rd from W of Lyons Rd to W of Turnpike	Widen 4L to 6L	0.95	2	1.90	Urban	29,160	45,000	15,840	15,048
<b>Total (All Roads):</b>						<b>206.28</b>					2,248,043
<b>City/County Roads:</b>						<b>174.16</b>		<b>84% (a)</b>			<b>1,735,769</b>
<b>State Roads:</b>						<b>32.12</b>		<b>16% (b)</b>			<b>512,274</b>
<b>Curb &amp; Gutter (Urban):</b>						199.44		<b>97% (c)</b>			-
<b>Open Drainage (Rural):</b>						6.84		<b>3% (d)</b>			-

Source: Palm Beach County 2045 LRTP Cost Feasible Plan with additional detail provided by Palm Beach County

\*urban = curb & gutter; rural = open drainage

**Appendix G**  
**Transportation Impact Fee:**  
**Credit Component**



# Appendix G: Transportation - Credit Component

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This appendix presents the detailed calculations for the credit component. Local fuel taxes that are collected in Palm Beach County are listed below, along with a few pertinent characteristics of each.

## 1. Constitutional Fuel Tax (2¢/gallon)

- Tax applies to every net gallon of motor and diesel fuel sold within a county. Collected in accordance with Article XII, Section 9 (c) of the Florida Constitution.
- The State allocated 80 percent of this tax to Counties after first withholding amounts pledged for debt service on bonds issued pursuant to provisions of the State Constitution for road and bridge purposes.
- The 20 percent surplus can be used to support the road construction program within the county.
- Counties are not required to share the proceeds of this tax with their municipalities.

## 2. County Fuel Tax (1¢/gallon)

- Tax applies to every net gallon of motor and diesel fuel sold within a county.
- Primary purpose of these funds is to help reduce a County's reliance on ad valorem taxes.
- Proceeds are to be used for transportation-related expenses, including the reduction of bond indebtedness incurred for transportation purposes. Authorized uses include acquisition of rights-of-way; the construction, reconstruction, operation, maintenance, and repair of transportation facilities, roads, bridges, bicycle paths, and pedestrian pathways; or the reduction of bond indebtedness incurred for transportation purposes.
- Counties are not required to share the proceeds of this tax with their municipalities.

## 3. Ninth-Cent Fuel Tax (1¢/gallon)

- Tax applies to every net gallon of motor and diesel fuel sold within a county.
- Proceeds may be used to fund transportation expenditures.
- To accommodate statewide equalization, this tax is automatically levied on diesel fuel in every county, regardless of whether a County is levying the tax on motor fuel at all.
- Counties are not required to share the proceeds of this tax with their municipalities.

## 4. 1<sup>st</sup> Local Option Tax (up to 6¢/gallon)

- Tax applies to every net gallon of motor and diesel fuel sold within a county.

- Proceeds may be used to fund transportation expenditures.
- To accommodate statewide equalization, all six cents are automatically levied on diesel fuel in every county, regardless of whether a county is levying the tax on motor fuel at all or at the maximum rate.
- Proceeds are distributed to a county and its municipalities according to a mutually agreed upon distribution ratio, or by using a formula contained in the Florida Statutes.

#### 5. 2<sup>nd</sup> Local Option Tax (up to 5¢/gallon)

- Tax applies to every net gallon of motor fuel sold within a county.
- Proceeds may be used to fund transportation expenditures needed to meet requirements of the capital improvements element of an adopted Local Government Comprehensive Plan.
- Proceeds are distributed to a county and its municipalities according to a mutually agreed upon distribution ratio, or by using a formula contained in the Florida Statutes.

Each year, the Florida Legislature’s Office of Economic and Demographic Research (EDR) produces the *Local Government Financial Information Handbook*, which details the estimated local government revenues for the upcoming fiscal year. Included in this document are the estimated distributions of the various fuel tax revenues for each county in the state. The 2020-21 data represent projected fuel tax distributions to Palm Beach County for the current fiscal year. Table G-1 shows the distribution per penny for each of the fuel levies, and then the calculation of the weighted average for the value of a penny of fuel tax. The weighting procedure takes into account the differing amount of revenues generated for the various types of fuel taxes. It is estimated that approximately \$5.36 million of annual revenue will be generated for the County from one penny of fuel tax in Palm Beach County. For use in the impact fee calculation, the fuel tax revenue data is used to calculate the value per penny (per gallon of fuel) that is used to estimate the “equivalent pennies” of other revenue sources used to fund transportation.

Revenues from other sources, such as sales tax, grants, etc. are converted to gas tax equivalent using this dollar value as a conversion factor. This conversion is needed to be able to relate associate funding to travel by each land use.

**Table G-1**  
**Estimated Fuel Tax Distribution Allocated to Capital Programs for**  
**Palm Beach County & Municipalities, FY 2020-21<sup>(1)</sup>**

Tax	Amount of Levy per Gallon	Total Distribution	Distribution per Penny
Constitutional Fuel Tax	\$0.02	\$11,703,028	\$5,851,514
County Fuel Tax	\$0.01	\$5,155,222	\$5,155,222
9th Cent Fuel Tax	\$0.01	\$5,946,390	\$5,946,390
1st Local Option (1-6 cents)	\$0.06	\$33,606,092	\$5,601,015
2nd Local Option (1-5 cents)	\$0.05	\$24,056,308	\$4,811,262
<b>Total</b>	<b>\$0.15</b>	<b>\$80,467,040</b>	
<b>Weighted Average per Penny<sup>(2)</sup></b>			<b>\$5,364,469</b>

1) Source: Florida Legislature’s Office of Economic and Demographic Research,  
<http://edr.state.fl.us/content/local-government/reports/-->

2) The weighted average distribution per penny is calculated by taking the sum of the total distribution and dividing that value by the sum of the total levies per gallon (multiplied by 100)

***Capital Expansion Credit***

A revenue credit for the annual expenditures on roadway capacity-expansion projects in Palm Beach County is presented below. The components of the credit are as follows:

- County capital project funding
- State capital project funding

The annual expenditures from each revenue source are converted to equivalent fuel tax pennies to be able to create a connection between travel by each land use and non-impact fee revenue contributions.

County Capital Project Funding

A review of Palm Beach County’s 5-year planned expenditures shows that transportation projects are primarily being funded by roadway impact fees with reserve revenues being used for several smaller projects. As shown in Table G-2, a total fuel tax equivalent revenue credit of 0.3 pennies was given for transportation capacity-expansion projects funded with non-impact fee revenues.

**Table G-2  
County Fuel Tax Equivalent Pennies**

Source	Cost of Projects	Number of Years	Annual Average	Revenue from 1 Penny <sup>(2)</sup>	Equivalent Pennies <sup>(3)</sup>
Projected CIP Expenditures (FY 2021-2025) <sup>(1)</sup>	\$8,700,000	5	\$1,740,000	\$5,364,469	<b>\$0.003</b>

1) Source: Table G-4

2) Source: Table G-1

3) Cost of projects divided by number of years divided by revenue from 1 penny (Item 2) divided by 100

**State Capital Project Funding**

In the calculation of the equivalent pennies of fuel tax from the State, funding on transportation capacity-expansion projects spanning a 15-year period (from FY 2012 to FY 2026) were reviewed. This included capacity expansion projects such as lane additions, new road construction, intersection improvements, interchanges, traffic signal projects, and other capacity-addition projects. The use of a 15-year period, for purposes of developing a state credit for roadway capacity expansion projects, results in a stable credit, as it accounts for the volatility in FDOT spending in the county over short periods of time.

The total cost of the transportation capacity-expansion projects for the “historical” periods and the “future” period:

- FY 2012-2016 work plan equates to 5.4 pennies
- FY 2017-2021 work plan equates to 5.3 pennies
- FY 2022-2026 work plan equates to 12.3 pennies

The combined weighted average over the 15-year period of state expenditure for capacity-expansion roadway projects results in a total of 7.7 equivalent pennies. Table G-3 documents this calculation. The specific projects that were used in the equivalent penny calculations are summarized in Table G-5.

**Table G-3  
State Fuel Tax Equivalent Pennies**

Source	Cost of Projects	Number of Years	Annual Average	Revenue from 1 Penny <sup>(2)</sup>	Equivalent Pennies <sup>(3)</sup>
Projected Work Program (FY 2022-2026) <sup>(1)</sup>	\$330,133,289	5	\$66,026,658	\$5,364,469	\$0.123
Historical Work Program (FY 2017-2021) <sup>(1)</sup>	\$142,981,114	5	\$28,596,223	\$5,364,469	\$0.053
Historical Work Program (FY 2012-2016) <sup>(1)</sup>	<u>\$144,156,114</u>	<u>5</u>	<u>\$28,831,223</u>	\$5,364,469	\$0.054
<b>Total</b>	<b>\$617,270,517</b>	<b>15</b>	<b>\$41,151,368</b>	<b>\$5,364,469</b>	<b>\$0.077</b>

1) Source: Table G-5

2) Source: Table G-1

3) Cost of projects (Item 1) divided by number of years divided by revenue from 1 penny (Item 2) divided by 100

**Table G-4**  
**Palm Beach County – Adopted Capital Improvement Plan, FY 2021-2025**

Project Title	Improvement	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Total
<b>Large Capital Projects</b>							
Recording Fees - Countywide	Right of Way Acquisitions	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$100,000
Reserve - Intersections - Countywide	Intersection Improvements	\$1,300,000	\$1,300,000	\$200,000	\$300,000	\$1,000,000	\$4,100,000
Reserve - Right of Way - Countywide	Right of Way Acquisitions	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$1,500,000
Reserve - Traffic Signals - Countywide	Design and Install Traffic Signals	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$3,000,000
<b>TOTAL</b>		<b>\$2,220,000</b>	<b>\$2,220,000</b>	<b>\$1,120,000</b>	<b>\$1,220,000</b>	<b>\$1,920,000</b>	<b>\$8,700,000</b>

Source: Palm Beach County Adopted Capital Improvement Plan, FY 2021-2025

**Table G-5**  
**Florida Department of Transportation, District 4 – Palm Beach Work Program FY 2012 to FY 2026**

ID	Description	Wkmx Description	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total
229253-3	PALM BEACH COUNTY COMPUTER SIGNAL OPERATIONS	TRAFFIC CONTROL DEVICES/SYSTEM	\$500,000	\$499,999	\$500,000	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,999,999
229567-2	SR-806/ATLANTIC AVE FROM W. OF TURNPIKE TO E. OF JOG ROAD	ADD LANES & RECONSTRUCT	\$2,497	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,497
229658-3	SR-806/ATLANTIC AVE FROM W. OF LYONS RD TO STARKEY RD	ADD LANES & RECONSTRUCT	\$27,897	\$17,995	\$146,595	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$192,487
229658-4	SR-806/ATLANTIC AVE FROM WEST OF SR-7/US-441 TO EAST OF LYONS ROAD	ADD LANES & RECONSTRUCT	\$0	\$0	\$0	\$0	\$37,862	\$1,533,184	\$20,147	\$1,069,737	\$497,632	\$1,330,443	\$1,882,776	\$5,457,750	\$14,590,882	\$0	\$0	\$26,420,413
229664-2	SR-7 FROM SR-704/OKEECHOBEE BLVD TO NORTHLAKE BLVD	NEW ROAD CONSTRUCTION	\$354,224	\$125,007	\$364,132	\$324,958	\$739,186	\$897,709	\$2,050,348	\$3,063,624	\$449,137	\$17,280	\$0	\$0	\$0	\$0	\$0	\$8,385,605
229664-3	SR-7 FROM 60TH STREET TO NORTH LAKE BLVD.	NEW ROAD CONSTRUCTION	\$0	\$0	\$246,631	\$478,693	\$43,429	\$376,985	\$2,625,060	\$533,225	\$344,074	\$23,073	\$0	\$100,000	\$0	\$0	\$0	\$4,771,170
229664-4	SR-7 FROM SR-704/OKEECHOBEE BLVD TO 60TH STREET	ADD LANES & RECONSTRUCT	\$0	\$0	\$0	\$0	\$0	\$0	\$161,115	\$8,580	\$13,006	\$0	\$0	\$0	\$0	\$0	\$0	\$182,701
229664-6	SR-7 FROM 60TH STREET TO NORTH LAKE BLVD	NEW ROAD CONSTRUCTION	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$610,452	\$2,236,810	\$58,260,005	\$0	\$0	\$2,841,453	\$0	\$63,948,720
229664-7	SR-7 FROM SR-704/OKEECHOBEE BLVD TO 60TH STREET	ADD LANES & RECONSTRUCT	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$477,401	\$0	\$20,573,630	\$0	\$0	\$0	\$0	\$21,051,031
229755-1	SR-704/OKEECHOBEE BL FROM W OF CLEARLAKE BRDG TO AUSTRAL AVE/TAMARIND	ADD TURN LANE(S)	\$2,034	\$119,383	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$121,417
229765-2	PALM BEACH CO/JPA INSTALL TRAFFIC DEVICES	TRAFFIC CONTROL DEVICES/SYSTEM	\$13,294	\$6,661	\$233	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,188
229771-1	SR-786/PGA BLVD @ SR-811 /FEC RR W OF I-95 TO FAIRCHILD	INTERCHANGE (NEW)	\$523	\$38,663	\$2,227,858	\$1,064,406	\$802,506	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,133,956
229842-3	BOCA SIGNAL SYSTEM TRAFFIC SIGNAL EQUIPMENT UPGRADES	TRAFFIC CONTROL DEVICES/SYSTEM	\$150,076	\$150,015	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300,091
229892-2	CR-807/CONGRESS AVE FROM LANTANA RD TO S. OF MALALEUCA LANE	ADD LANES & RECONSTRUCT	\$689	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$689
229895-1	SR-710/BEEELINE HWY FROM DIXIE HWY TO SR-5/US-1/RIVIERA BCH	NEW ROAD CONSTRUCTION	\$80	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$80
229895-2	SR-710(PORT OF PBC) CONNECTION TO SR-5/US-1	PD&E/EMO STUDY	\$28,256	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$28,256
229896-1	SR-710/BEEELINE HWY FROM WEST OF AUSTRALIAN AVE TO OLD DIXIE HWY	ADD LANES & RECONSTRUCT	\$3,771,164	\$5,066,516	\$5,716,550	\$510,488	\$17,984,662	\$376,540	\$173,610	\$92,366	\$4,911	\$350	\$0	\$0	\$0	\$0	\$0	\$33,697,157
229897-1	SR-710/BEEELINE HWY FROM MILITARY TRAIL TO W. OF CONGRESS AVE	ADD LANES & RECONSTRUCT	\$0	\$0	\$0	\$5,010	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,010
229897-2	SR-710/BEEELINE HWY FROM W. OF CONGRESS AVE TO W. OF AUSTRALIAN AVE	ADD LANES & RECONSTRUCT	\$14,413,279	\$818,946	\$140,847	\$2,416	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,375,488
231276-1	SR-811/DIXIE HWY FROM BROW/PLM BCH CO LINE TO SW 18 ST/BOCA	ADD LANES & RECONSTRUCT	\$14,526	\$22,107	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$36,633
233166-2	SR-808/GLADES ROAD FROM SR-7 TO SR-5/US-1	INTERSECTION IMPROVEMENT	\$37,418	\$19,747	\$25,127	\$1,312,001	\$34,902	\$3,783,073	\$206,464	\$111,020	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,529,752
406143-4	WIDEN TURN LANE FROM SR704 WB ONTO THE ON-RAMP FOR TPK (SR91), 1TO2LNS	ADD TURN LANE(S)	\$0	\$0	\$0	\$0	\$0	\$0	\$3,082	\$452,698	\$67,454	\$7,537	\$34,500	\$9,976,780	\$2,406,309	\$0	\$0	\$12,948,360
406144-7	MAINLINE WIDENING CO ST RISK ANALYSIS LANTANA TO LAKE WORTH RD	PRELIM ENG FOR FUTURE CAPACITY	\$0	\$68,523	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$68,523
408198-3	BOCA RATON ATMS ELECTRONIC COUNTER	TRAFFIC CONTROL DEVICES/SYSTEM	\$312,084	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$312,084
412489-4	ITS EQUIPMENT FOR TRAFFIC MANAGEMENT SYSTEM OPTICOM SYSTEM	TRAFFIC CONTROL DEVICES/SYSTEM	\$0	\$79,288	\$336	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$79,624
412489-5	ITS EQUIPMENT TRAFFIC MANAGEMENT SYSTEM OPTICOM	TRAFFIC CONTROL DEVICES/SYSTEM	\$0	\$0	\$15,972	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,972
412489-6	ITS EQUIPMENT TRAFFIC MANAGEMENT SYSTEM OPTICOM	TRAFFIC CONTROL DEVICES/SYSTEM	\$0	\$0	\$19,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,000
412489-7	SR-704/OKEECHOBEE BLVD. FROM TAMARIND AVE TO N. FLAGLER DRIVE	ATMS - ARTERIAL TRAFFIC MGMT	\$0	\$0	\$28,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$28,500
412489-8	SR-A1A @ FLAGLER DRIVE	TRAFFIC CONTROL DEVICES/SYSTEM	\$0	\$0	\$0	\$15,972	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,972
413841-1	SR-806/ATLANTIC AVE FROM VIA FLORA TO E. OF CONGRESS AVE	ADD TURN LANE(S)	\$87	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$87
416525-2	PALM BEACH COUNTY ATMS DESIGN GROUP 3	TRAFFIC CONTROL DEVICES/SYSTEM	\$49,270	\$6,107	\$2,107	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$57,484
416526-1	SR-5/US-1 FROM S. GLADES RD TO N. OF YAMATO RD(BOCA)	PD&E/EMO STUDY	\$48,911	\$3,778	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$52,689
417062-2	SR-708/BLUE HERON BL @ CONGRESS AVE PHASE II	ADD TURN LANE(S)	\$219,684	\$614,637	\$57,598	\$53	\$63	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$892,035
417737-1	PALM BCH ITS ITS FACILITY-OPERATIONS	TRAFFIC MANAGEMENT CENTERS	\$39,250	\$55,013	\$5,642	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$99,905
417737-2	PALM BEACH TMC STAFFING	ITS COMMUNICATION SYSTEM	\$1,053,262	\$1,053,262	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,106,524
419251-1	SR-710/BEEELINE HWY FROM NORTHLAKE BLVD TO SR-708/BLUE HERON BLVD	ADD LANES & RECONSTRUCT	\$0	\$0	\$0	\$3,771,288	\$63,790	\$1,386,294	\$709,168	\$157,859	\$2,443,679	\$2,318,781	\$141,919,227	\$1,397,054	\$0	\$1,000,000	\$0	\$155,167,140
419345-1	SR-80 FROM CR-880 TO FOREST HILL BLVD	PD&E/EMO STUDY	\$33,164	\$52	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33,216
419345-2	SR-80 FROM W OF LION COUNTRY SAFARI RD TO FOREST HILL/CRESTWOOD BLVD.	ADD LANES & REHABILITATE PVMNT	\$2,359,628	\$32,337	\$635,637	\$844,988	\$586,159	\$3,926,319	\$36,667,689	\$1,986,791	\$666,684	\$287,451	\$0	\$0	\$0	\$0	\$0	\$47,993,683
419348-1	SR-710 FROM PBC/MARTIN CO /LINE TO CONGRESS AVE	PD&E/EMO STUDY	\$925	\$15,566	\$4,531	\$152,372	\$77,238	\$288	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250,920
422768-1	SR-7 @ SR-80/SOUTHERN BLVD BRIDGE #930409 & 410	BRIDGE-REHAB AND ADD LANES	\$0	\$410,872	\$211,802	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$622,674
425960-1	PALM BEACH COUNTY PUSH BUTTON-CONTRACT FOR SIGNALIZATION	TRAFFIC CONTROL DEVICES/SYSTEM	\$42,660	\$11,391	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$54,051
425960-2	PALM BEACH COUNTY PUSH-BUTTON CONTRACT FOR SIGNALIZATION	TRAFFIC CONTROL DEVICES/SYSTEM	\$0	\$567,456	\$88,056	\$54,876	\$802	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$711,190
425960-3	PALM BEACH COUNTY PUSH-BUTTON CONTRACT FOR SIGNALIZATION	TRAFFIC CONTROL DEVICES/SYSTEM	\$0	\$0	\$0	\$1,217,923	\$157,697	\$69,151	\$28,743	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,473,514
425960-4	PALM BEACH COUNTY PUSH-BUTTON CONTRACT FOR SIGNALIZATION	TRAFFIC CONTROL DEVICES/SYSTEM	\$0	\$0	\$0	\$0	\$0	\$483,888	\$24,380	\$68,934	\$1,569	\$852	\$0	\$0	\$0	\$0	\$0	\$579,623
425960-5	PALM BEACH COUNTY PUSH-BUTTON CONTRACT FOR SIGNALIZATION	TRAFFIC CONTROL DEVICES/SYSTEM	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,151,517	\$1,031,445	\$199,929	\$0	\$0	\$0	\$0	\$0	\$2,382,891
425960-6	PALM BEACH COUNTY PUSH-BUTTON CONTRACT FOR SIGNALIZATION	TRAFFIC CONTROL DEVICES/SYSTEM	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,239,698	\$0	\$0	\$0	\$0	\$0	\$1,239,698
427709-1	SR 80 DEDICATED LANE CONVERSION AT TOLL PLAZA	ITS COMMUNICATION SYSTEM	\$672,127	\$15,936	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$688,063
427713-1	WEST PALM BEACH TOLL PLAZA DEDICATED LANE CON VERSION (MP 99)	ITS COMMUNICATION SYSTEM	\$376,655	\$12,850	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$389,505
427802-1	PALM BEACH CNTY JPA SIGNAL MAINTENANCE & OPS ON SHS	TRAFFIC SIGNALS	\$793,417	\$822,084	\$849,955	\$892,556	\$923,019	\$952,217	\$985,906	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,219,154
427802-2	CITY OF BOCA RATON SIGNAL MAINTENANCE & OPS ON SHS	TRAFFIC SIGNALS	\$78,545	\$80,900	\$81,881	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$241,326
427802-3	PALM BEACH COUNTY SIGNAL MAINTENANCE & OPERATIONS ON STATE HWY SYSTEM	TRAFFIC SIGNALS	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,424,838	\$2,730,995	\$2,501,112	\$2,700,467	\$2,706,985	\$2,679,343	\$2,759,723	\$2,842,514	\$21,345,977
427802-4	CITY OF BOCA RATON SIGNAL MAINTENANCE & OPERATIONS ON STATE HWY SYSTEM	TRAFFIC SIGNALS	\$0	\$0	\$0	\$86,465	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$86,465
427802-5	CITY OF BOCA RATON SIGNAL MAINTENANCE & OPS ON STATE HWY SYSTEM	TRAFFIC SIGNALS	\$0	\$0	\$0	\$0	\$144,400	\$211,227	\$216,958	\$223,170	\$252,908	\$2,196	\$0	\$0	\$0	\$0	\$0	\$1,050,859



Table G-6 illustrates the funding distribution for planned transportation capacity projects over the next five years. Unlike earlier tables, this distribution includes County impact fee funding. This distribution suggests that the County will be funding 32 percent of future capacity project costs while the State will fund the remainder. This distribution is applied to the County and State transportation costs to determine the weighted average cost per lane mile estimate for roadway construction.

**Table G-6**  
**Future 5-Year Planned Expenditures for Palm Beach County**

Credit	5-Yr Planned Expenditures	Percentage of Total
County Revenues <sup>(1)</sup>	\$157,840,000	<b>32%</b>
State Revenues <sup>(2)</sup>	\$330,133,289	<b>68%</b>
<b>Total</b>	<b>\$487,973,289</b>	<b>100%</b>

1) Source: Palm Beach County FY 2021-2025 Capital Improvement Plan  
 2) Source: FDOT, District 4; FY 2022-2026

**Table G-7**  
**Average Motor Fuel Efficiency – Excluding Interstate Travel**

Travel			
Vehicle Miles of Travel (VMT) @			
	22.2	6.6	
Other Arterial Rural	330,556,000,000	48,306,000,000	378,862,000,000
Other Rural	304,008,000,000	29,577,000,000	333,585,000,000
Other Urban	1,587,592,000,000	94,800,000,000	1,682,392,000,000
<b>Total</b>	<b>2,222,156,000,000</b>	<b>172,683,000,000</b>	<b>2,394,839,000,000</b>

Percent VMT	
@ 22.2 mpg	@ 6.6 mpg
87%	13%
91%	9%
94%	6%
<b>93%</b>	<b>7%</b>

Fuel Consumed			
	Gallons @ 22.2 mpg	Gallons @ 6.6 mpg	
Other Arterial Rural	14,889,909,910	7,319,090,909	22,209,000,819
Other Rural	13,694,054,054	4,481,363,636	18,175,417,690
Other Urban	71,513,153,153	14,363,636,364	85,876,789,517
<b>Total</b>	<b>100,097,117,117</b>	<b>26,164,090,909</b>	<b>126,261,208,026</b>

Total Mileage and Fuel	
<b>2,394,839</b>	<b>miles (millions)</b>
<b>126,261</b>	<b>gallons (millions)</b>
<b>18.97</b>	<b>mpg</b>

Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2019*, Section V, Table VM-1  
 Annual Vehicle Distance Traveled in Miles and Related Data - 2019 by Highway Category and Vehicle Type  
<http://www.fhwa.dot.gov/policyinformation/statistics.cfm>



**Table G-8**

**Annual Vehicle Distance Traveled in Miles and Related Data (2019) – By Highway Category and Vehicle Type<sup>1/</sup>**

Revised: November 2020								TABLE VM-1		
YEAR	ITEM	LIGHT DUTY VEHICLES SHORT WB <sup>(2)</sup>	MOTOR-CYCLES	BUSES	LIGHT DUTY VEHICLES LONG WB <sup>(2)</sup>	SINGLE-UNIT TRUCKS <sup>(3)</sup>	COMBINATION TRUCKS	SUBTOTALS		ALL MOTOR VEHICLES
								ALL LIGHT VEHICLES <sup>(2)</sup>	SINGLE-UNIT 2-AXLE 6-TIRE OR MORE AND COMBINATION TRUCKS	
	Motor-Vehicle Travel (millions of vehicle-miles):									
2019	Interstate Rural	148,257	1,175	1,717	48,499	10,887	51,110	<b>196,755</b>	<b>61,997</b>	261,644
2019	Other Arterial Rural	234,142	2,607	2,339	96,414	18,238	30,068	<b>330,556</b>	<b>48,306</b>	383,808
2019	Other Rural	210,062	2,835	1,980	93,946	17,043	12,534	<b>304,008</b>	<b>29,577</b>	338,401
2019	All Rural	592,461	6,618	6,036	238,859	46,168	93,712	831,319	139,880	983,853
2019	Interstate Urban	404,357	2,558	2,683	100,785	19,926	45,444	<b>505,142</b>	<b>65,371</b>	575,753
2019	Other Urban	1,257,491	10,512	9,261	330,101	58,652	36,149	<b>1,587,592</b>	<b>94,800</b>	1,702,166
2019	All Urban	1,661,848	13,070	11,944	430,886	78,578	81,593	2,092,734	160,171	2,277,919
2019	Total Rural and Urban <sup>(5)</sup>	2,254,309	19,688	17,980	669,744	124,746	175,305	2,924,053	300,050	3,261,772
2019	Number of motor vehicles registered <sup>(2)</sup>	194,348,815	8,596,314	995,033	59,465,369	10,160,433	2,925,210	253,814,184	13,085,643	276,491,174
2019	Average miles traveled per vehicle	11,599	2,290	18,070	11,263	12,278	59,929	11,520	22,930	11,797
2019	Person-miles of travel (millions) <sup>(4)</sup>	3,765,896	22,846	381,176	1,128,489	124,746	175,305	4,894,385	300,050	5,598,457
2019	Fuel consumed (thousand gallons)	93,420,373	447,864	2,450,610	38,028,860	16,656,736	28,986,515	131,449,233	45,643,250	179,990,957
2019	Average fuel consumption per vehicle (gallons)	481	52	2,463	640	1,639	9,909	518	3,488	651
2019	Average miles traveled per gallon of fuel consumed	24.1	44.0	7.3	17.6	7.5	6.0	<b>22.2</b>	<b>6.6</b>	18.1

(1) The FHWA estimates national trends by using State reported Highway Performance and Monitoring System (HPMS) data, fuel consumption data (MF-21 and MF-27), vehicle registration data (MV-1, MV-9, and MV-10), other data such as the R.L. Polk vehicle data, and a host of modeling techniques.

(2) Light Duty Vehicles Short WB - passenger cars, light trucks, vans and sport utility vehicles with a wheelbase (WB) equal to or less than 121 inches. Light Duty Vehicles Long WB - large passenger cars, vans, pickup trucks, and sport/utility vehicles with wheelbases (WB) larger than 121 inches. All Light Duty Vehicles - passenger cars, light trucks, vans and sport utility vehicles regardless of wheelbase.

(3) Single-Unit - single frame trucks that have 2-Axles and at least 6 tires or a gross vehicle weight rating exceeding 10,000 lbs.

(4) For 2018 and 2019, the vehicle occupancy is estimated by the FHWA from the 2017 National Household Travel Survey (NHTS) and the annual R.L. Polk Vehicle registration data; For single unit truck and heavy trucks, 1 motor vehicle mile traveled = 1 person-mile traveled.

(5) VMT data are based on the latest HPMS data available; it may not match previous published results.

**Appendix H**  
**Transportation Impact Fee:**  
**Calculated Impact Fee Schedules**

## **Appendix H: Transportation - Calculated Impact Fee Schedules**

This Appendix presents the detailed rate calculations for each land use in the Palm Beach County transportation impact fee schedule.

**Table H-1  
Calculated Transportation Impact Fee Schedule**

		Equivalent Gasoline Tax \$\$ per gallon to capital: Facility life (years): Interest rate:	\$0.080 25 2.40%	County Revenues: \$0.003 State Revenues: \$0.077		Unit Cost per Lane Mile: \$5,559,000 Average VMC per Lane Mile: 14,000 Fuel Efficiency: 18.97 mpg Effectivedays per year: 365		Interstate/Toll Facility Adjustment Factor: 34.8% Cost per VMC: \$397.07								
ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	Percent New Trips	% New Trips Source	Net VMT <sup>(1)</sup>	Total Impact Cost	Annual Capital Impr. Tax	Capital Improvement Credit	Net Road Impact Fee	Current Impact Fee <sup>(2)</sup>	% Change
<b>RESIDENTIAL:</b>																
210	Single Family (Detached)	du	7.81	FL Studies	6.62	7.12	FL Studies	100%	n/a	16.85	\$6,693	\$43	\$801	\$5,892	\$4,717	25%
220	Multi-Family (Low-Rise); 1-3 levels	du	6.74	ITE 11th Edition	5.21	5.71	FL Studies (LUC 220/221/222)	100%	n/a	11.45	\$4,546	\$30	\$559	\$3,987	\$2,929	36%
221/ 222	Multi-Family (Mid/High-Rise); 4+ levels	du	4.54	ITE 11th Edition	5.21	5.71	FL Studies (LUC 220/221/222)	100%	n/a	7.71	\$3,062	\$20	\$373	\$2,689	\$2,929	-8%
240	Mobile Home Park	du	4.17	FL Studies	4.60	5.10	FL Studies	100%	n/a	6.25	\$2,483	\$16	\$298	\$2,185	\$1,741	26%
251	Senior Adult Housing (Detached)	du	3.54	Blend ITE 11th & FL Studies	5.42	5.92	FL Studies	100%	n/a	6.25	\$2,484	\$16	\$298	\$2,186	n/a	n/a
252	Senior Adult Housing (Attached)	du	2.99	Blend ITE 11th & FL Studies	4.34	4.84	Based on LUC 251 (adjusted) <sup>(3)</sup>	100%	n/a	4.23	\$1,680	\$11	\$205	\$1,475	n/a	n/a
254	Assisted Living Facility	bed	2.60	ITE 11th Edition	3.08	3.58	FL Studies (LUC 253)	72%	FL Studies (LUC 253)	1.88	\$746	\$5	\$93	\$653	\$528	24%
n/a	Accessory Apartment (Mother-in-Law/Grooms Quarters)	du	3.48	FL Studies Blend (LUC 251/252/253)	5.21	5.71	Same as LUC 220	100%	n/a	5.91	\$2,347	\$15	\$280	\$2,067	\$1,427	45%
<b>LODGING:</b>																
310	Hotel	room	5.56	Blend ITE 11th & FL Studies	6.26	6.76	FL Studies	66%	FL Studies	7.49	\$2,974	\$19	\$354	\$2,620	\$1,948	34%
320	Motel	room	3.35	ITE 11th Edition	4.34	4.84	FL Studies	77%	FL Studies	3.65	\$1,449	\$10	\$186	\$1,263	\$1,702	-26%
<b>RECREATION:</b>																
411	Public Park	acre	0.78	ITE 11th Edition	5.15	5.65	Same as LUC 710	90%	Based on LUC 710	1.18	\$468	\$3	\$56	\$412	n/a	n/a
430	Golf Course	hole	30.38	ITE 11th Edition	6.62	7.12	Same as LUC 210	90%	Based on LUC 710	59.01	\$23,430	\$150	\$2,796	\$20,634	\$8,674	138%
445	Movie Theater	screen	114.83	Blend ITE 11th & FL Studies	2.22	2.72	FL Studies	88%	FL Studies	73.13	\$29,039	\$212	\$3,951	\$25,088	\$18,551	35%
491	Racquet/Tennis Club	court	27.71	ITE 11th Edition	5.15	5.65	Same as LUC 710	94%	FL Studies (LUC 492)	43.73	\$17,364	\$113	\$2,106	\$15,258	\$9,337	63%
<b>INSTITUTIONS:</b>																
520	Elementary School (Private)	student	2.27	ITE 11th Edition	3.31	3.81	50% of LUC 210: Tavel Demand Model	80%	Based on LUC 710 (adjusted) <sup>(4)</sup>	1.96	\$778	\$5	\$93	\$685	\$405	69%
522	Middle/Junior High School (Private)	student	2.10	ITE 11th Edition	3.31	3.81	50% of LUC 210: Tavel Demand Model	80%	Based on LUC 710 (adjusted) <sup>(4)</sup>	1.81	\$720	\$5	\$93	\$627	\$567	11%
525	High School (Private)	student	1.94	ITE 11th Edition	3.31	3.81	50% of LUC 210: Tavel Demand Model	90%	Based on LUC 710	1.88	\$748	\$5	\$93	\$655	\$602	9%
560	Church/Synagogue	1,000 sf	7.60	ITE 11th Edition	3.93	4.43	Midpoint of LUC 710 & LUC 820 (App. E)	90%	Based on LUC 710	8.76	\$3,480	\$23	\$429	\$3,051	\$2,100	45%
565	Day Care Center	1,000 sf	49.63	Blend ITE 11th & FL Studies	2.03	2.53	FL Studies	73%	FL Studies	23.98	\$9,520	\$71	\$1,323	\$8,197	\$9,461	-13%

**Table H-1 (continued)**  
**Calculated Transportation Impact Fee Schedule**

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	Percent New Trips	% New Trips Source	Net VMT <sup>(1)</sup>	Total Impact Cost	Annual Capital Impr. Tax	Capital Improvement Credit	Net Road Impact Fee	Current Impact Fee <sup>(2)</sup>	% Change
<b>INSTITUTIONS:</b>																
566	Cemetery	acre	6.02	ITE 11th Edition	6.62	7.12	Same as LUC 210	90%	Based on LUC 710	11.69	\$4,643	\$30	\$559	\$4,084	\$575	610%
<b>MEDICAL:</b>																
610	Hospital	1,000 sf	10.77	ITE 11th Edition	6.62	7.12	Same as LUC 210	78%	Midpoint of LUC 310 & LUC 720	18.13	\$7,199	\$46	\$857	\$6,342	\$3,604	76%
620	Nursing Home	bed	3.02	Blend ITE 11th & FL Studies	2.59	3.09	FL Studies	89%	FL Studies	2.27	\$901	\$6	\$112	\$789	\$518	52%
640	Animal Hospital/Veterinary Clinic	1,000 sf	24.20	Blend ITE 11th & FL Studies	1.90	2.40	FL Studies	70%	FL Studies	10.49	\$4,166	\$31	\$578	\$3,588	\$3,864	-7%
<b>OFFICE:</b>																
710	General Office	1,000 sf	10.84	ITE 11th Edition	5.15	5.65	FL Studies	92%	FL Studies	16.74	\$6,648	\$43	\$801	\$5,847	\$3,418	71%
720	Medical Office 10,000 sq ft or less	1,000 sf	23.83	FL Studies	5.55	6.05	FL Studies	89%	FL Studies	38.37	\$15,237	\$99	\$1,845	\$13,392	\$7,891	70%
720	Medical Office greater than 10,000 sq ft	1,000 sf	34.21	Blend ITE 11th & FL Studies	5.55	6.05	FL Studies	89%	FL Studies	55.09	\$21,874	\$142	\$2,646	\$19,228	\$7,891	144%
<b>RETAIL:</b>																
817	Nursery (Garden Center)	acre	108.10	ITE 11th Edition	1.07	1.57	Appendix E: Fig. E-1 (5,000 sf)	37%	Appendix E: Fig. E-2 (5,000 sf)	13.95	\$5,540	\$48	\$895	\$4,645	\$1,699	173%
822	Retail/Shopping Center less than 40,000 sfgla	1,000 sfgla	54.45	ITE 11th Edition	1.48	1.98	Appendix E: Fig. E-1 (19k sfgla)	48%	Appendix E: Fig. E-2 (19k sfgla)	12.61	\$5,007	\$40	\$745	\$4,262	\$7,656	-44%
821	Retail/Shopping Center 40,000 to 150,000 sfgla	1,000 sfgla	67.52	ITE 11th Edition	1.94	2.44	Appendix E: Fig. E-1 (59k sfgla)	57%	Appendix E: Fig. E-2 (59k sfgla)	24.34	\$9,665	\$72	\$1,342	\$8,323	\$7,211	15%
820	Retail/Shopping Center greater than 150,000 sfgla	1,000 sfgla	37.01	ITE 11th Edition	2.80	3.30	Appendix E: Fig. E-1 (538k sfgla)	75%	Appendix E: Fig. E-2 (538k sfgla)	25.34	\$10,061	\$70	\$1,305	\$8,756	\$6,718	30%
840/ 841	New/Used Auto Sales	1,000 sf	24.58	Blend ITE 11th & FL Studies	4.60	5.10	FL Studies	79%	FL Studies	29.12	\$11,563	\$76	\$1,416	\$10,147	\$6,877	48%
848	Tire Store	1,000 sf	27.69	ITE 11th Edition	3.62	4.12	FL Studies (LUC 942)	72%	FL Studies (LUC 942)	23.53	\$9,342	\$63	\$1,174	\$8,168	\$5,849	40%
851	Convenience Market	1,000 sf	739.50	Blend ITE 11th & FL Studies	1.52	2.02	FL Studies	41%	FL Studies	150.24	\$59,656	\$471	\$8,778	\$50,878	n/a	n/a
880/ 881	Pharmacy/Drug Store with & without Drive-Thru	1,000 sf	103.86	Blend ITE 11th & FL Studies	2.08	2.58	FL Studies	32%	FL Studies	22.54	\$8,948	\$66	\$1,230	\$7,718	\$5,349	44%
882	Marijuana Dispensary	1,000 sf	211.12	ITE 11th Edition	2.08	2.58	Same as LUC 880/881	32%	Same as LUC 880/881	45.81	\$18,190	\$134	\$2,497	\$15,693	n/a	n/a
890	Furniture Store	1,000 sf	6.30	ITE 11th Edition	6.09	6.59	FL Studies	54%	FL Studies	6.75	\$2,682	\$17	\$317	\$2,365	\$963	145%
<b>SERVICES:</b>																
912	Bank/Savings Drive-In	1,000 sf	103.73	Blend ITE 11th & FL Studies	2.46	2.96	FL Studies	46%	FL Studies	38.27	\$15,194	\$109	\$2,031	\$13,163	\$16,116	-18%
931	Fine-Dining/Quality Restaurant	1,000 sf	86.03	Blend ITE 11th & FL Studies	3.14	3.64	FL Studies	77%	FL Studies	67.81	\$26,925	\$186	\$3,466	\$23,459	\$12,225	92%
932	High-Turn Over Restaurant	1,000 sf	103.46	Blend ITE 11th & FL Studies	3.17	3.67	FL Studies	71%	FL Studies	75.91	\$30,142	\$207	\$3,858	\$26,284	\$17,589	49%

**Table H-1 (continued)**  
**Calculated Transportation Impact Fee Schedule**

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	Percent New Trips	% New Trips Source	Net VMT <sup>(1)</sup>	Total Impact Cost	Annual Capital Impr. Tax	Capital Improvement Credit	Net Road Impact Fee	Current Impact Fee <sup>(2)</sup>	% Change
<b>SERVICES:</b>																
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	479.17	Blend ITE 11th & FL Studies	2.05	2.55	FL Studies	58%	FL Studies	185.73	\$73,749	\$545	\$10,157	\$63,592	\$30,702	107%
941	Quick Lubrication Vehicle Shop	bay	40.00	ITE 11th Edition	3.62	4.12	FL Studies (LUC 942)	72%	FL Studies (LUC 942)	33.99	\$13,495	\$91	\$1,696	\$11,799	\$4,854	143%
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	172.01	ITE 11th Edition	1.90	2.40	FL Studies (LUC 944/945)	23%	FL Studies (LUC 944/945)	24.50	\$9,730	\$73	\$1,360	\$8,370	\$6,090	37%
945	Gas Station w/Convenience Store 2,000 to 5,499 sq ft	fuel pos.	264.38	ITE 11th Edition (Adjusted) <sup>(5)</sup>	1.90	2.40	FL Studies (LUC 944/945)	23%	FL Studies (LUC 944/945)	37.66	\$14,955	\$112	\$2,087	\$12,868	\$6,090	111%
	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	345.75	ITE 11th Edition	1.90	2.40	FL Studies (LUC 944/945)	23%	FL Studies (LUC 944/945)	49.26	\$19,558	\$147	\$2,740	\$16,818	\$6,090	176%
947	Self-Service Car Wash	bay	43.94	Blend ITE 11th & FL Studies	2.18	2.68	FL Studies	68%	FL Studies	21.23	\$8,432	\$62	\$1,155	\$7,277	\$6,109	19%
<b>INDUSTRIAL:</b>																
110	General Light Industrial	1,000 sf	4.87	ITE 11th Edition	5.15	5.65	Same as LUC 710	92%	Same as LUC 710	7.52	\$2,987	\$19	\$354	\$2,633	\$1,522	73%
150	Warehousing	1,000 sf	1.71	ITE 11th Edition	5.15	5.65	Same as LUC 710	92%	Same as LUC 710	2.64	\$1,049	\$7	\$130	\$919	\$778	18%
151	Mini-Warehouse	1,000 sf	1.46	Blend ITE 11th & FL Studies	3.51	4.01	Average of LUC 710 & LUC 820 (50k sq ft)	92%	Same as LUC 710	1.54	\$610	\$4	\$75	\$535	\$546	-2%

- 1) Net VMT calculated as ((Trip Generation Rate\* Trip Length\* % New Trips)\*(1-Interstate/Toll Facility Adjustment Factor)/2). This reflects the unit of vehicle miles of capacity consumed per unit of development and is multiplied by the cost per vehicle
- 2) Source: Palm Beach County Administration Division
  - For Office, the <50,000 sf rate is shown
  - For Retail, the 50,000 to 200,000 sf rate is shown
- 3) The trip length uses LUC 251 adjusted based on the ratio LUC 210 to LUC 220 trip lengths
- 4) The percent new trips for schools estimated at 90% based on LUC 710, adjusted to reflect the nature of elementary and middle schools where attendees are unable to drive and are typically dropped off by parents, at times on their way to another destination