ORDINANCE NO. 955

AN ORDINANCE OF THE CITY OF BROOKSVILLE, FLORIDA, ESTABLISHING FIRE AND RESCUE IMPACT FEES, PUBLIC BUILDINGS IMPACT FEES, PARKS AND RECREATION IMPACT FEES AND MULTIMODAL IMPACT FEES; ADOPTING AN IMPACT FEE STUDY DATED SEPTEMBER 23, 2022; CREATING CHAPTER 50, "IMPACT FEES," OF THE CODE OF ORDINANCES; PROVIDING REGULATIONS PERTAINING TO FIRE AND RESCUE IMPACT FEES, PUBLIC BUILDINGS IMPACT FEES, PARKS AND RECREATION IMPACT FEES AND ROADS AND MULTIMODAL IMPACT FEES; PROVIDING FOR CODIFICATION; PROVIDING FOR SEVERABILITY AND CONFLICTS, AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, under its home rule powers and pursuant to §163.31801, Florida Statutes and judicially created law, the City of Brooksville may impose impact fees to ensure that new development pays for its proportional share of capital facilities required by such new development; and

WHEREAS, the City Council of the City of Brooksville has studied the necessity for and implications of the adoption of an ordinance creating impact fees and has retained a professional consulting firm to prepare a study relating to fire rescue, public buildings, parks and recreation, and multimodal impact fees (the "Study") to determine the proportionate demand that new development generates for additional fire rescue, public buildings, parks and recreation, and multimodal improvements and facilities; and

WHEREAS, the Study has been presented to, and reviewed by, the City Council of the City of Brooksville, and it has been determined (1) that fire rescue, public buildings, parks and recreation, and multimodal impact fees are necessary to offset the costs associated with meeting future demands for the City's fire rescue, public buildings, parks and recreation, and multimodal facilities pursuant to the projections set forth in the Study; (2) that the fire rescue, public buildings, parks and recreation, and multimodal impact fees bear a reasonable relationship to the burden imposed upon the City to provide fire rescue, public buildings, parks and recreation, and multimodal facilities to new City residents; (3) that fire rescue, public buildings, parks and recreation, and multimodal impact fee revenues will provide a direct benefit to such new City residents reasonably related to the fees assessed; (4) that an essential nexus exists between projected new development and the need for additional fire rescue, public buildings, parks and recreation, and multimodal facilities to be funded with fire rescue, public buildings, parks and recreation, and multimodal impact fees and the benefits that accrue to new development paying the fees; and (5) that the amount of the fire rescue, public buildings, parks and recreation, and multimodal impact fees are reasonably proportional to the *pro rata* share of the additional fire rescue, public buildings, parks and recreation, and multimodal facilities needed to serve new development; and

WHEREAS, the costs of real property for use for fire rescue, public buildings, parks and recreation, and multimodal facilities development and the costs of various facilities and equipment

1/11/23 pc: David Hainley
Ron Snowberger
Bevin Vose

have been used by the City's consultant in developing a development impact cost per building square feet and land use type as set forth in the Study; and

WHEREAS, the decisions of the City Council as set forth herein are reasonable and prudent steps pertaining to sound growth management which have been taken for the benefit of the citizens of the City, both present and future; and

WHEREAS, the City is projected to continue to grow in population and further economically develop in the future; and

WHEREAS, this Ordinance contains an administrative framework to ensure that the benefit of fire rescue, public buildings, parks and recreation, and multimodal facilities funded with fire rescue, public buildings, parks and recreation, and multimodal impact fees will accrue proportionately to new development paying the fees; and

WHEREAS, Section 163.3202(3), *Florida Statutes*, encourages the use of innovative land use regulations and impact fees by local governments to manage growth and to provide the necessary public facilities and for the imposition by local governments of impact fees on development to fund the capital cost of facilities necessitated by such development; and

WHEREAS, requiring future growth to contribute its fair share of the costs necessary to fund required capital improvements and additions is an integral and vital part of the regulatory plan of growth management in the City and is a practice consistent with sound and generally accepted growth management, fiscal and public administration practices and principles.

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Brooksville, Florida, as follows:

SECTION 1. The above recitals, or "Whereas" clauses, are hereby adopted as the City Council's legislative findings and are incorporated herein by reference.

SECTION 2. Chapter 50 of the Brooksville Code of Ordinances, to be entitled "Impact Fees," is hereby created as follows:

CHAPTER 50 – IMPACT FEES

ARTICLE I. IN GENERAL

Sec. 50-1. Short title and authority.

(a) This chapter shall be known and may be cited as "Brooksville Impact Fees."

(b) The City Council has the authority to adopt this chapter pursuant to Article VII of the Constitution of the State of Florida, F.S. Ch. 166, and §163.31801, F.S.

Sec. 50-2. Intent and purpose.

(a) The purpose of this chapter is to ensure that new development pays its proportionate share of the anticipated costs of public facilities necessary to provide fire rescue, public buildings, parks and recreation, and multimodal facilities for the new development.

(b) The intent of the City Council is to ensure that its impact fee schedules reflect the most recent and localized data pertaining to growth patterns in the City and the cost of public facilities necessary to provide fire rescue, public buildings, parks and recreation, and multimodal facilities for new development.

Sec. 50-3. Administrative charges.

If established, administrative charges shall be collected from each applicant and shall be distributed as appropriate for impact fee administration, for financial administration, and for costs related to the establishment, amendment and annual review/update of the impact fee ordinance and methodology. Administrative charges, if adopted, shall be set by resolution and shall be based upon incurred and anticipated costs to create, administer, update and manage the impact fee system and shall not exceed actual costs of the City. Administrative charges, if collected, shall not be deposited in any impact fee capital fund accounts.

Sec. 50-4. Impact fee capital fund accounts and use of capital fund account monies.

(a) There shall be established separate capital fund accounts for fire rescue, public buildings, parks and recreation, and multimodal impact fees, to be designated separately as the "fire rescue impact fee account", public buildings impact fee", "parks and recreation impact fee account", and the "multimodal impact fee account." The capital fund accounts for impact fees shall continue to be maintained separate and apart from each other and separate and apart from all other accounts of the City. The monies deposited into each of the impact fee capital fund accounts shall be used solely for the purposes as set forth in this chapter and shall be accounted for accordingly.

(b) Funds on deposit in impact fee accounts established within this article shall not be used for any expenditure that would be classified as an operational expense, a maintenance expense, or a repair or replacement expense; provided, however, if there is an expansion component of capital facility capacities, then impact fees can be used to fund the share of improvements proportional to growth.

(c) Any funds on deposit in the impact fee funds not immediately necessary for expenditure shall be invested in interest-bearing accounts. Applicants shall not receive a credit for or be entitled to interest from the investment of such funds, except as otherwise required in this chapter.

Sec. 50-5. Impact fees are transferable.

Impact fee credits are assignable and transferable at any time after establishment from one development or parcel to any other that is within the same impact fee zone or impact fee district or that is within an adjoining impact fee zone or impact fee district within the same local government jurisdiction, and which receives benefits from the improvement or contribution that generated the credits.

Sec. 50-6. Non-binding impact fee estimate.

An applicant may request an estimate of impact fees which may be imposed by filing a written request to the City. Any estimate which the City provides is non-binding and may be subject to change when the impact fees become due and payable pursuant to this chapter. Non-binding estimates are for the sole benefit of the prospective applicant and neither bind the City nor preclude it from making amendments or revisions to any provisions of this chapter. No vested rights, legal entitlements, or equitable estoppel accrue by reason of a non-binding estimate. A non-binding fee estimate does not constitute a final decision and may not be appealed pursuant to this chapter.

Sec. 50-7. Definitions.

The following words, terms and phrases, when used in this chapter, shall have the meaning ascribed to them in this section, except where the context clearly indicates a different meaning, or except as otherwise provided. For words, terms and phrases not listed in this section, definitions in the City of Brooksville City Code may apply.

Applicant means any person, developer, builder or entity which requires public services as a result of development for the benefit of itself or a prospective future occupant.

Building is any structure, either temporary or permanent, designed or built for the support, enclosure shelter or protection of persons, chattels or property of any kind. This term shall include trailers, mobile homes or any other vehicles serving in any way the function of a building. This term shall not include temporary construction sheds or trailers erected to assist in construction and maintained during the time of a construction.

Owner means the most recent owner of a parcel of property appearing in the Official Records of Hernando County, Florida.

Sec. 50-8. Administrative rules and policies.

The City Manager or designee is hereby authorized to adopt administrative rules and policies to implement the provisions of this chapter as the City Manager deems necessary and appropriate.

Sec. 50-9. Alternative Fee; Calculation.

(A) If an applicant believes that the impact to the fire-rescue facilities, public buildings, parks and recreation facilities, or multimodal transportation facilities caused by the applicant's proposed Development is less than the fees established by the City, the applicant may, at his or her own expense, prior to the issuance of a building permit for such Development, submit a calculation of an alternative impact fee to the City Manager pursuant to the provisions of this section. The City Manager shall make a determination within 10 business days after submittal, or as otherwise required by law, as to whether that calculation complies with the requirements of this section and if the City will accept the alternative calculations and the fees determined through such calculations.

(B) For purposes of any alternative impact fee calculation, the Development shall be presumed to have the maximum impact on the Capital Improvement System for the land use category contemplated under the Impact Fee Rate.

(C) If an applicant decides to perform an alternative Impact Fee Study, the methodology for such study shall be approved by the City Manager, based on the methodology adopted by the City Council in the Impact Fee Study that is attached to this ordinance, before the applicant begins the study. Through an alternative Impact Fee Study, an applicant may calculate the demand component for a proposed development that is different than that described in the Impact Fee Study. However, the cost and credit components for the alternative impact fee shall be those included in the Impact Fee Study.

Sec. 50-10. Appeals.

(a) Any person who disagrees with a decision or interpretation of this chapter may appeal to the City Manager or designee by filing a written notice of appeal within ten (10) days after the date of the action or decision complained of. The written notice of appeal shall set forth concisely the action or decision appealed as well as the grounds upon which the appeal is based. The City Manager or designee shall consider all facts material to the appeal and render a written decision within thirty (30) days of receiving the appeal. Any person who disagrees with the decision of the City Manager or designee may appeal to the City Council by filing a written notice of appeal with the City Manager's office setting forth concisely the decision appealed within ten (10) days after the date of the City Manager's decision. The appeal shall be set for the next available City Council meeting for consideration. The City Council's written decision and shall constitute final administrative review.

(b) Appeal fees commensurate with costs incurred by the City, as set by resolution, shall be paid by the applicant prior to a decision being rendered.

Sec. 50-11. Penalties and liens against property.

Violations of this Chapter shall be prosecuted as provided by City Code or by an injunction or other legal or equitable relief in the circuit court against any person violating this Chapter. Failure to pay an impact fee when determined by the city that an obligation is required to satisfy the impact of development may result in the amount due becoming a lien against the property. The City shall provide a written notice of the impact fee due by personal service, certified, return receipt requested United States mail or Federal Express or other equivalent overnight letter delivery company.

Sec. 50-12. Adoption of impact fee study.

(a) The City Council hereby adopts by reference the study entitled "City of Brooksville 2022 Municipal Impact Fee Study," dated September 23, 2022, as prepared by Benesch. The study sets forth the computation and allocation of the capital costs of the City of Brooksville to provide fire rescue, public buildings, parks and recreation, and multimodal facilities. A copy of such study is

attached hereto as Exhibit "A", but is not codified with this ordinance, and instead is available for review on the City's website, as well as in the Office of the City Clerk during normal work hours.

(b) The City Council finds there is a reasonable connection, or rational nexus, between the need for fire rescue, public buildings, parks and recreation, and multimodal facilities in the City and the growth in population anticipated within the city. In addition, the City Council finds there is a reasonable connection, or rational nexus, between the anticipated expenditures of the fire rescue, public buildings, parks and recreation, and multimodal impact fees collected and the benefits accruing to anticipated new development.

Sec. 50-13. Imposition of parks and recreation, and roads and mobility impact fees.

(a) Any applicant who seeks to develop land or make improvements to real property shall pay the following fire rescue, public buildings, parks and recreation, and multimodal impact fees in the manner and amount established as follows:

Land Use	Unit	Fire Rescue	Public Buildings	Parks & Recreation	Multi-Modal	Total Calculated City Fees
Single family (2k sf)	du	$245	$467	$676	$1,014	**$2,402**
Current		$215	$466	$411	$1,269	
Light Industrial	1000 sf	$80	$154	---	$447	**$681**
Office (50k sq ft)	1000 sf	$164	$314	---	$998	**$1,476**
Retail (125 sq ft)	1000 sf	$433	$826	---	$1,351	**$2,610**

Sec. 50-14. Time of payment of fire rescue, public buildings, parks and recreation, and multimodal impact fees.

The fire rescue, public buildings, parks and recreation, and multimodal impact fees shall be paid at the time of issuance of a building permit for a structure or structures, or such other time as may be specifically provided by a developer's agreement.

Sec. 50-15. Disposition of revenues imposed by fire rescue, public buildings, parks and recreation, and multimodal impact fees.

The funds collected by reason of establishment of the fire rescue, public buildings, parks and recreation, and multimodal impact fees in accordance with this Article shall be used solely for the purpose of acquisition and/or construction of land, facilities and equipment determined to be

needed to provide fire rescue, public buildings, parks and recreation, and multimodal transportation respectively for new development within the City. Said funds shall not be used to maintain or repair existing fire rescue, public buildings, parks and recreation, and multimodal facilities or equipment. The City shall spend funds on a first in, first out basis.

Sec. 50-16. Disposition of funds not expended.

(a) If the City of Brooksville fire rescue, public buildings, parks and recreation, and multimodal impact fees, or any of them, have not been expended or encumbered by the end of the calendar quarter immediately following ten (10) years after the date the fees were paid, upon application of the fee payer of proof of payment, or proof of the date the development permit was approved by the City and that development was never begun, the fees shall be returned with interest at the rate determined by the City based upon the average interest earning rate incurred by the City in accordance with the following procedure:

(1) The present owner must petition the City Council for the refund within one year following the end of the calendar quarter immediately following ten (10) years after the date on which the fee was received.

(2) The petition must be submitted to the City Clerk and must contain:

(i) A notarized sworn statement that the petitioner is the current owner of the property;

(ii) A copy of the dated receipt issued for payment of the fee or other document evidencing the date the development was approved by the City, which development was never begun;

(iii) A certified copy of the latest recorded deed; and

(iv) A copy of the most recent ad valorem tax bill.

(3) If reimbursement is approved, the City shall remit to the petitioner within 60 days of approval.

(b) In determining whether a petitioner is entitled to a refund, it shall be assumed that impact fees are expended or encumbered in the same order in which they were received (that is, "first in, first out").

(c) No refund shall be made of any administrative fee authorized and collected pursuant to this chapter.

Sec. 50-17. Charge when use of property changed.

Any change in the use of property shall require payment of a fire rescue, public buildings, parks and recreation, and multimodal impact fee in an amount equal to the increased calculation, if any.

SECTION 3. Codification. It is the intent of the City Council of the City of Brooksville that the provisions of Section 2 of this Ordinance shall be codified except for Exhibit "A". The codifier is granted broad and liberal authority in renumbering and codifying the provisions of this Ordinance; article and section numbers assigned throughout are suggested by the City.

SECTION 4. Severability. If any section, sentence, phrase, word or portion of this Ordinance is determined to be invalid, unlawful or unconstitutional, said determination shall not be held to invalidate or impair the validity, force or effect of any other section, sentence, phrase, word or portion of this Ordinance not otherwise determined to be invalid, unlawful or unconstitutional.

SECTION 5. Conflicts. In any case where a provision of this Ordinance is found to be in conflict with a provision of any other ordinance of this City, the provision which establishes the higher standards for the promotion and protection of the health and safety of the people shall prevail.

SECTION 6. Effective Date. This Ordinance shall become effective ninety (90) days after the date of adoption of this Ordinance pursuant to §163.31801, Florida Statutes.

PASSED AND ADOPTED, by the City Council of the City of Brooksville, Florida, in regular session assembled, this 9th day of January, 2023.

CITY OF BROOKSVILLE
Ordinance No. 955

CITY OF BROOKSVILLE

By: _____
Blake Bell, Mayor

ATTEST: _____
Jennifer Batista, City Clerk

Approved on First Reading: December 19, 2022
Notice published: December 30, 2022
Approved on Second and Final Reading: January 9, 2023

APPROVED AS TO FORM AND CONTENT FOR THE RELIANCE OF THE CITY OF BROOKSVILLE ONLY:

_____
Vose Law Firm, City Attorney

VOTE OF CITY COUNCIL
Bell Aye
Bailey Aye
Bronson Absent
Tanner Aye
Thieryung Aye

Hernando Sun
Your Weekly Local Newspaper.

THE HERNANDO SUN; Published Weekly

Brooksville Hernando County FLORIDA

PUBLISHER'S AFFIDAVIT OF PUBLICATION
STATE OF FLORIDA
COUNTY OF HERNANDO :
Before the undersigned authority personally appeared Julie B. Maglio, who on oath says that she is Editor of the Hernando Sun, a weekly newspaper published at Brooksville in Hernando County, Florida; that the attached copy of the advertisement, being a
Notice of Public Hearing

in the matter of
Ordinance No. 955

was published in said newspaper by print in the issue(s) of:
December 30, 2022

and/or by publication on the newspaper's website, if authorized, on December 30, 2022

Affiant further says that the newspaper complies with all legal requirements for publication in chapter 50, Florida Statutes.

(Signature of Affiant)

Sworn to and subscribed before me
this 2nd day of January, 2023.

(Signature of Notary Public)

LISA M. MACNEIL
Commission # HH 254975
Expires April 19, 2026

(Print, Type, or Stamp Commissioned Name of Notary Public)

Personally known ✓ or

produced identification_____

Type of identification produced_____

The City Council of the City of Brooksville will hold a Public Hearing in the Joseph E. Johnston, III, City Hall Council Chambers, 201 Howell Avenue, Brooksville, Florida Second and Final Reading of Ordinance No. 955 will be held at 7:00 p.m., January 9, 2023. The Ordinance may be obtained in the City Clerk's office at City Hall, 201 Howell Avenue, Brooksville, FL 34601, or by calling the City Clerk at 352-540-3816.

Ordinance No. 955:

AN ORDINANCE OF THE CITY OF BROOKSVILLE, FLORIDA, ESTABLISHING FIRE AND RESCUE IMPACT FEES, PUBLIC BUILDINGS IMPACT FEES, PARKS AND RECREATION IMPACT FEES AND MULTIMODAL IMPACT FEES; ADOPTING AN IMPACT FEE STUDY DATED SEPTEMBER 23, 2022; CREATING CHAPTER 50, "IMPACT FEES," OF THE CODE OF ORDINANCES; PROVIDING REGULATIONS PERTAINING TO FIRE AND RESCUE IMPACT FEES, PUBLIC BUILDINGS IMPACT FEES, PARKS AND RECREATION IMPACT FEES AND ROADS AND MULTIMODAL IMPACT FEES; PROVIDING FOR CODIFICATION; PROVIDING FOR SEVERABILITY AND CONFLICTS, AND PROVIDING AN EFFECTIVE DATE.
In accordance with the Americans with Disabilities Act, persons with disabilities needing a special accommodation to participate in this proceeding should contact the ADA Coordinator no later than 48 hours in advance of the meeting at (352)540-3810. Meeting agendas and supporting documentation are available from the City Clerk's office and online at www.cityofbrooksville.us.

Interested parties may appear at the meeting and be heard with respect to the proposed ordinance. Any person desiring to appeal any decision with respect to any matter considered at this meeting may need a record of the proceedings including the testimony and evidence upon which the appeal is to be based, and, therefore, must make arrangements for a court reporter to ensure that a verbatim record of the proceeding is made.

s/ Jennifer J. Batista, CMC

Published: December 30, 2022

Tindale Oliver

is now

benesch

City of Brooksville

Impact Fee Study

Final Report
September 23, 2022

Prepared for:

City of Brooksville
201 Howell Avenue
Brooksville, FL 34601
ph (352) 540-3810

Prepared by:

Benesch
1000 N. Ashley Dr., Suite 400
Tampa, Florida 33602
ph (813) 224-8862
fax (813) 226-2106
E-mail: nkamp@benesch.com
1032001-00.20

City of Brooksville
Impact Fee Study

Table of Contents

Appendices:

I. Introduction

The City of Brooksville collects Hernando County impact fees in the city, but does not have any city impact fees. At this time, the City is interested in implementing impact fees for the following service areas:

- Fire Rescue
- Public Buildings
- Parks & Recreation
- Multi-Modal Transportation

The City of Brooksville has retained Benesch (formerly Tindale Oliver) to prepare a technical study to develop impact fee calculations for these service areas. This report serves as the technical study to support the calculation of impact fees. Data and information included in this report are collected primarily in 2021.

Methodology

In developing the City'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 of development by land use in the case of all impact fee program areas in this study with the exception of transportation. In the case of multimodal transportation, person-miles of travel is used.

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. As such, the City 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. In other words, case law requires that the new development should not be 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 City'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 served as the basis 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:** Required 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 applicable here.

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 an evaluation of the inventory, service area, level of service (LOS), cost, credit, and demand components. Information supporting this analysis was obtained from the City and other sources, as indicated.

II. Fire Rescue Facilities

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

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

Facility Inventory

Table II-1 presents the buildings and land inventory associated with the fire rescue services in the City of Brooksville, which includes approximately 12,000 square feet of building space and 0.63 acres of land.

Cost estimates for buildings are based on insurance values, cost estimates available from the City, and cost information obtained from Hernando County and other Florida jurisdictions. Land values are based on a review of the current value of land where the existing fire station is located as well as vacant land sales and values of similarly sized and located parcels based on information obtained from the Hernando County Property Appraiser database.

Based on this review and analysis, the building value is estimated at $300 per square foot for the fire station, $90 per square foot for the vehicle storage building and the land value is estimated at $80,000 per acre. Using these cost estimates results in a total building and land value of approximately $2.6 million for fire rescue services. A more detailed explanation of building and land value estimates is included in Appendix B.

Table II-1

Fire Rescue Buildings and Land Inventory

Description	Address	Number of Bays[1]	Year Built[2]	Square Footage[3]	Acres[4]	Building Value[5]	Land Value[6]	Building & Land Value[7]
Fire Station 61	85 Veterans Ave, Brooksville, FL 34601	8	1981	7,158	0.63	$2,147,400	$50,400	$2,647,800
Vehicle Storage Building		N/A	1998	5,000		$450,000		
Total				12,158	0.63	$2,597,400	$50,400	$2,647,800
Weighted Average Building Value per Square Foot[8]						$214		
Land Value per Acre[9]							$80,000	

1) Source: City of Brooksville
2) Source: City of Brooksville
3) Source: City of Brooksville
4) Source: Hernando County Property Appraiser
5) Square footage (item 3) multiplied by the estimated building value per square foot of $300 for the fire station and $90 for the vehicle storage building. Appendix B provides further detail.
6) Acreage (item 4) multiplied by the estimated land value per acre (item 9). Appendix B provides further detail.
7) Sum of building and land values (items 5 and 6)
8) Total building value (item 5) divided by total square footage (item 3)
9) Source: Appendix B

In addition to land and buildings, the City of Brooksville fire rescue impact fee inventory includes the necessary vehicles and equipment required to perform its services. As presented in Table II-2, the total vehicle and equipment value is approximately $1.7 million for fire rescue services.

Table II-2

Fire Rescue Vehicle and Equipment Inventory

Description	Value per Unit[1]	Unit Count[1]	Total Value[1]
Vehicles			
Fire Truck Freightliner American LaFrance E61 A	$253,400	1	$253,400
Fire Truck Ford Rescue Old Brush 61	$70,100	1	$70,100
Fire Truck Sutphen Fire Ladder Truck	$695,000	1	$695,000
Heavy Weight Ford Expedition 4x4	$30,566	1	$30,566
Medium Weight Ford F250 Response Vehicle DC60	$49,725	1	$49,725
Fire Truck Sutphen Pumper Truck E61	$515,600	1	$515,600
Non Emergency Chevrolet Traverse Chief 60	$35,020	1	$35,020
Subtotal - Equipment Value		**7**	**$1,649,411**
Equipment			
Camera	$13,948	1	$13,948
Patches/Pumper Robot	$9,432	1	$9,432
Subtotal - Equipment Value	-	**2**	**$23,380**
Total Vehicle & Equipment Value[3]	-	-	**$1,672,791**

1) Source: City of Brooksville Finance Department

Service Area and Demand Component

The City of Brooksville provides fire rescue services throughout the city. As such, the proper benefit district is the entire city. In this technical study, the 2021 weighted and functional population estimates are used to measure level of service and the demand component. Because simply using weighted (permanent, plus weighted seasonal) population estimates does not fully address daily workers and visitors who also benefit from fire rescue 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 service area 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

The City of Brooksville is served by one fire rescue station. Based on associated service area population, the resulting current achieved level of service (LOS) is one station per 9,200 weighted seasonal residents for fire rescue services.

In terms of functional residents, the City's achieved LOS is approximately 13,600 functional residents per fire rescue station or 0.074 stations per 1,000 functional residents. The use of current LOS in the impact fee calculations implies that the City intends to continue to provide this level of infrastructure.

Table II-3

Current Level of Service (2021)

Variable	Year 2021	
	Weighted	Functional
Population[1]	9,246	13,552
Number of Stations[2]	1	1
Achieved LOS (Stations per 1,000 population)[3]	0.108	0.074

1) Source: Appendix A, Table A-1 and Table A-7
2) Source: Table II-1
3) Population (Item 1) divided by the number of stations (Item 2)

Table II-4 compares the level of service for other select Florida cities to the level of service of City of Brooksville. The LOS is displayed in terms of permanent population for 2020 for the service area of all entities.

Table II-4

Level of Service Comparison (2020)

Community	2020 Service Area Population[1]	Number of Stations[2]	Residents per Station[3]	LOS (Stations per 1,000 Residents)[4]
Minneola	13,843	1	13,843	0.072
Plant City	39,764	3	13,255	0.075
Maitland	19,543	2	9,772	0.102
Tavares	19,003	2	9,502	0.105
Brooksville	8,890	1	8,890	0.112
New Port Richey	16,728	2	8,364	0.120
Mount Dora	16,341	2	8,171	0.122
Inverness	7,543	1	7,543	0.133
Leesburg	27,000	4	6,750	0.148
Lake Alfred	6,374	1	6,374	0.157
Groveland	18,505	3	6,168	0.162

1) Source: 2020 U.S. Census Bureau Population Estimates
2) Source: City websites and the US Fire Administration; National Fire Department Census
3) Service area population (Item 1) divided by the number of station (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 II-5 provides a summary of all capital costs, amounting to approximately $4.3 million for fire rescue services.

In addition, Table II-5 also provides the impact cost per functional resident, which is calculated by multiplying the net asset value per station by the current LOS (stations per 1,000 functional residents) and dividing by 1,000. As shown, this calculation results in $320 per functional resident for fire rescue services.

Table II-5

Total Impact Cost per Functional Resident

Variable	Figure	Percent of Total[9]
Building Value[1]	$2,597,400	60.1%
Land Value[2]	$50,400	1.2%
Vehicle and Equipment Value[3]	$1,672,791	38.7%
Total Asset Value[4]	**$4,320,591**	**100.0%**
Number of Stations[5]	1	
Cost per Station[6]	$4,320,591	
Achieved LOS (Stations per 1,000 population)[7]	0.074	
Total Impact Cost per Functional Resident[8]	**$319.72**	

1) Source: Table II-1
2) Source: Table II-1
3) Source: Table II-2
4) Sum of building value (Item 1), land value (Item 2), and vehicle/equipment value (Item 3)
5) Source: Table II-1
6) Net asset value (Item 4) divided by the number of stations (Item 5)
7) Source: Table II-3
8) Cost per station (Item 6) multiplied by the achieved LOS (Item 7) divided by 1,000
9) Distribution of total asset value

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 operational 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 from 2020 to 2025 were reviewed. During this six-year period, an average annual non-impact fee funding of $29,000 is allocated toward fire rescue services capital facilities utilizing revenues primarily from the fire assessment program 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-6, the result is approximately $2.09 per functional resident.

Table II-6

Capital Expansion Credit

Description[1]	Funding Source	2020	2021	2022	2023	2024	2025	Total 2020-2025
Equipment	Fire Assesment	$38,800	$58,000	$0	$0	$13,000	$0	$109,800
Facility Upgrade	State Grant	$63,150	$0	$0	$0	$0	$0	$63,150
Total Capital Expenditures		**$101,950**	**$58,000**	$0	$0	**$13,000**	**$0**	**$172,950**
Average Annual Capital Expansion Expenditures[2]								**$28,825**
Average Annual Functional Population[3]								**13,800**
Capital Expansion Credit per Functional Resident[4]								**$2.09**

1) Source: City of Brooksville
2) Source: Average annual capital expansion expenditures over the 6-year period
3) Source: Appendix A, Table A-7
4) Average annual capital expansion expenditures (Item 2) divided by average annual functional population (Item 3)

Net Fire Rescue Impact Cost

Table II-7 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 $280 per functional resident.

Table II-7

Net Impact Cost per Resident

Variable	Impact Cost	Revenue Credits
Impact Cost		
Total Impact Cost per Functional Resident[1]	**$319.72**	
Impact Credit		
Capital Expansion Credit per Functional Resident[2]		$2.09
Capitalization Rate		2.15%
Capitalization Period (in years)		25
Present Value of Capital Expansion Credit per Functional Resident[3]		**$40.09**
Net Impact Cost		
Net Impact Cost per Functional Resident[4]	**$279.63**	

1) Source: Table II-5
2) Source: Table II-6
3) Present value of the capital expansion credit per functional resident over a 25-year period at a capitalization rate of 2.15% as provided by the City of Brooksville.
4) Total impact cost per functional resident (Item 1) less the present value of capital expansion credit per functional resident (Item 3)

Calculated Fire Rescue Impact Fee Schedule

Table II-8 presents the calculated fire rescue impact fee schedule for the City of Brooksville, based on the net impact cost per functional resident previously presented in Table II-7.

Table II-8
Calculated Fire Rescue Impact Fee Schedule

ITE LUC	Land Use	Impact Unit	Functional Resident Coefficient[1]	Calculated Impact Fee[2]
Residential:				
210	Single Family (detached)	du	1.46	**$408**
220/221/222	Multi-Family (Apartment/Condominium/Townhouse)	du	1.18	**$330**
240	Mobile Home	du	1.03	**$288**
251	Senior Housing (Detached)	du	1.12	**$313**
252	Senior Housing (Attached)	du	0.91	**$254**
Transient, Assisted, Group:				
253/255	Congregate Care Facility/Continuing Care Retirement Center	du	1.06	**$296**
254	Assisted Living	bed	0.97	**$271**
310	Hotel	room	1.16	**$324**
320	Motel	room	0.99	**$277**
620	Nursing Home	bed	1.09	**$305**
Recreational:				
416	RV Park	occupied site	0.47	**$131**
420	Marina	boat berth	0.13	**$36**
430	Golf Course	acre	0.10	**$28**
444	Movie Theater	screen	5.19	**$1,451**
492	Health/Fitness Club	1,000 sf	2.41	**$674**
Institutional:				
520	Elementary School (Private)	student	0.10	**$28**
522	Middle School (Private)	student	0.09	**$25**
525	High School (Private)	student	0.08	**$22**
540	University 7,500 or fewer students (Private)	student	0.10	**$28**
550	University greater than 7,500 students (Private)	student	0.08	**$22**
560	Public Assembly	1,000 sf	0.41	**$115**
565	Day Care Center	1,000 sf	0.81	**$227**
Medical:				
610	Hospital	1,000 sf	1.30	**$364**
630	Clinic	1,000 sf	1.50	**$419**
Office:				
710	Office	1,000 sf	0.98	**$274**
720	Medical Office 10,000 sq ft or less	1,000 sf	1.20	**$336**
720	Medical Office greater than 10,000 sq ft	1,000 sf	1.72	**$481**
Retail:				
812	Building Materials/Lumber Store	1,000 sf	0.54	**$151**

Table II-8 (Continued)

Calculated Fire Rescue Impact Fee Schedule

ITE LUC	Land Use	Impact Unit	Functional Resident Coefficient[1]	Calculated Impact Fee[2]
Retail:				
813	Discount Superstore, Free-Standing	1,000 sf	1.72	$481
816	Hardware/Paint Store	1,000 sf	0.25	$70
822	Retail/Shopping Center (less than 40,000 sfgla)	1,000 sfgla	2.08	$582
821	Retail/Shopping Center (40,000 sfgla to 150,000 sfgla)	1,000 sfgla	2.58	$721
820	Retail/Shopping Center (greater than 150,000 sfgla)	1,000 sfgla	1.41	$394
840/841	New/Used Auto Sales	1,000 sf	1.57	$439
850	Supermarket	1,000 sf	2.45	$685
862	Home Improvement Superstore	1,000 sf	1.94	$542
880/881	Pharmacy/Drug Store with & without Drive-Thru	1,000 sf	1.84	$515
890	Furniture Store	1,000 sf	0.32	$89
Services:				
912	Bank/Savings Drive-In	1,000 sf	1.48	**$414**
931	Fine Dining/Quality Restaurant	1,000 sf	5.76	**$1,611**
932	High-Turnover (Sit-Down) Restaurant	1,000 sf	5.42	**$1,516**
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	9.77	**$2,732**
942	Automobile Care Center	1,000 sf	1.67	**$467**
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	1.46	$408
945	Gas Station w/Convenience Store 2,000-5,499 sq ft	fuel pos.	2.30	**$643**
945	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	3.00	**$839**
947	Self-Service Car Wash	service bay	0.96	**$268**
n/a	Convenience/Gasoline/Fast Food Restaurant	1,000 sf	7.97	**$2,229**
Industrial:				
110	General Light Industrial	1,000 sf	0.48	$134
130	Industrial Park	1,000 sf	0.35	$98
140	Manufacturing	1,000 sf	0.55	$154
150	Warehouse	1,000 sf	0.11	$31
151	Mini-Warehouse	1,000 sf	0.04	$11

1) Source: Appendix A, Table A-8 for residential and transient, assisted, group land uses and Table A-9 for non-residential land uses
2) Net impact cost per functional resident from Table II-7 multiplied by the functional resident coefficient (item 1) for each land use

Fire Rescue Impact Fee Schedule Comparison

As part of the work effort in developing the City of Brooksville fire rescue impact fee schedule, the City's calculated impact fee schedule was compared to the adopted fee schedules of other select Florida cities. Tables II-9 and presents this comparison.

Table II-9

Fire Rescue Impact Fee Schedule Comparison

Land Use	Unit[2]	City of Brooksville Calculated[3]	Hernando County Calculated[4]	Hernando County Existing[5]	Fruitland Park[6]	Groveland [7]	Inverness [8]	Lakeland[9]	Maitland [10]	Minneola [11]	Mount Dora[12]	Tavares[13]	Plant City [14]
Date of Last Update		2021	2021	2013	2006	2017	N/A	2019	2016	N/A	N/A	2006	2006
Adoption percentage[1]		N/A	N/A	100%	100%	100%	N/A	100%	100%	N/A	N/A	100%	100%
Residential:													
Single Family (2,000 sf)	du	$403	$316	$235	$669	$484	$394	$398	$390	$539	$444	$403	$363
Multi-family (1,300 sf)	du	$339	$231	$177	$368	$484	$278	$281	$498	$405	$229	$306	$308
Non-Residential:													
Light Industrial	1,000 sf	$134	$98	$86	$267	$270	$84	$87	$0	$179	$81	$151	$139
Office (50,000 sf)	1,000 sf	$274	$174	$171	$646	$630	$224	$253	$210	$301	$350	$311	$262
Retail (125,000 sf)	1,000 sf	$721	$296	$334	$905	$630	$475	$430	$670	$741	$377	$464	$343
Bank w/Drive-Thru	1,000 sf	$414	$292	$328	$669	$630	$475	$430	$670	$741	$377	$455	$464
Fast Food w/Drive-Thru	1,000 sf	$2,732	$1,910	$510	$3,386	$630	$475	$430	$2,430	$741	$377	$1,915	$1,765

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-8
4) Source: Tindale Oliver Hernando County Impact Fee Update Study 2021. Calculated fees represent results of the on-going study and are not yet adopted.
5) Source: Hernando County Planning & Development Department. Fee shown represents the sum of fire and EMS impact fees.
6) Source: City of Fruitland Park Community Development, Ordinance 2006-004
7) Source: City of Groveland Ordinance 2019-5
8) Source: City of Inverness Code of Ordinances, Florida, Chapter 11.5-Impact fees
9) Source: City of Lakeland Community and Economic Development
10) Source: City of Maitland Code of Ordinances, Chapter 6 - Fire Protection, Article IV - Fire Protection Facilities and Services Impact Fee
11) Source: City of Minneola Code of Ordinances, Florida, Subpart A-General Ordinances, Chapter 42 Impact Fees, Article IV-Fire Protection
12) Source: City of Mount Dora Fee Schedule for Building and Planning
13) Source: City of Tavares Document Center, Permitting & Impact Fees
14) Source: Plant City Code of Ordinances, Chapter 86-Impact Fees, Article II.-Fire Protection

III. Public Buildings

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

- Facility Inventory
- Service Area and Population
- Level of Service
- Cost Component
- Net Public Buildings Impact Cost
- Calculated Impact Fee Schedule
- Impact Fee Schedule Comparison

These elements are summarized throughout this section.

Facility Inventory

The City of Brooksville owns and operates approximately 51,000 square feet of public facilities on 6 acres throughout the city.

As shown in Table III-1, the total value of the public buildings is estimated at $12 million, of which $11.7 million is associated with buildings and the remaining $327,000 with land. The building value is estimated at $230 per square foot. These unit figures are based on insurance values of existing buildings, cost information received from Hernando County and other Florida jurisdictions and discussions with City representatives. Land values are based on a review of land value of existing buildings, vacant land sales and values of similar size properties in the city and is estimated at $55,000 per acre. Appendix B provides additional information.

Table III-1

Public Facilities Building and Land Inventory

Building Name	Address	Building Type	Year Acquired/ Built[1]	Number of Acres[2]	Square Feet[3]	Building Value[4]	Land Value[5]	Total Building and Land Value[6]
City Hall	201 Howell Avenue	Primary	1975	2.74	26,650	$6,129,500	$150,700	$6,280,200
Frank Emerson DPW	600 South Brooksville Ave	Primary	1950	3.21	17,141	$3,942,430	$176,550	$4,118,980
Police Station[7]	87 Veterans Avenue	Primary	1990	N/A	7,120	$1,637,600	N/A	$1,637,600
Total				5.95	50,911	$11,709,530	$327,250	$12,036,780
Building Value per Square Foot[8]						$230		
Land Value per Acre[9]							$55,000	

1) Source: City of Brooksville
2) Source: Hernando County Property Appraiser
3) Source: City of Brooksville
4) Estimated building value per square foot ($230) multiplied by building square feet (Item 3)
5) Number of acres (Item 2) multiplied by the estimated land value per acre (Item 9)
6) Sum of building and land value (Items 4 and 5)
7) Acreage is excluded since the station is located on the same parcel as the golf course
8) Total building value (Item 4) divided by total square feet (Item 3)
9) Source: Appendix B

Service Area and Demand Component

The service area for public buildings is citywide, which also represents the appropriate benefit district. 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 daily workers and visitors who also benefit from general government 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 service area 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 III-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. Impact fee calculations assume that the City will continue to provide this level of service in the future.

Table III-2

Current Level of Service (2021)

Variable	2021	
	Weighted Population	Functional Population
Population[1]	9,246	13,552
Public Buildings Square Footage[2]	50,911	50,911
Current LOS (Square Feet per Resident)[3]	**5.51**	**3.76**

1) Source: Appendix A, Tables A-1 and A-7
2) Source: Table III-1
3) Total square footage (Item 2) divided by population (Item 1)

Cost Component

The cost component of the study evaluates the cost of capital items, including buildings and land. Table III-3 provides a summary of all capital costs, which amounts to approximately $12 million. Table III-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 LOS of 3.76 square

feet per resident. As shown, these calculations result in $889 per resident for public buildings capital assets.

Table III-3

Total Impact Cost per Resident

Variable	Figure	Percent of Total[8]
Total Building Value[1]	$11,709,530	97%
Total Land Value[2]	$327,250	3%
Total Asset Value[3]	**$12,036,780**	100%
Total Building Square Footage[4]	50,911	
Total Asset Value per Square Foot[5]	$236.43	
Current LOS (Total Square Feet per Functional Resident)[6]	3.76	
Total Impact Cost per Functional Resident[7]	$888.98	

1) Source: Table III-1
2) Source: Table III-1
3) Sum of building value (Item 1) and land value (Item 2)
4) Source: Table III-1
5) Total asset value (Item 3) divided by building square footage (Item 4)
6) Source: Table III-2
7) Total cost per square foot (Item 5) multiplied by the achieved LOS (Item 6)
8) Distribution of total asset value (Item 3)

Credit Component

To avoid overcharging new development, a review of the capital funding allocation for public buildings is completed. The purpose of this review is to determine any potential revenues generated by future development that is likely to be used for additional land and building expansion projects. 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 public buildings. This review indicated that the City does not have any funding identified for public buildings capacity projects and will rely primarily on impact fee revenues for these improvements. However, a 10-percent credit is included in the calculations to provide the City with the flexibility to use some level of alternative funding if needed. The resulting credit is $89 per functional resident. If, in the future, the City starts allocating a larger amount of non-impact fee funding toward these facilities, the credit calculations should be revised.

Net Public Buildings Impact Cost

The net public buildings impact cost per resident is the difference between the cost component and the credit component. Table III-4 summarizes the calculation of the net public buildings impact cost per resident. As presented, the net impact cost per resident amounts to approximately $800.

Table III-4

Net Impact Cost per Resident

Variable	Impact Cost	Revenue Credits
Impact Cost		
Total Impact Cost per Functional Resident[1]	$888.98	-
Revenue Credit		
Credit Percentage[2]	-	10%
Credit Amount[3]	-	$88.90
Net Impact Cost		
Net Impact Cost per Functional Resident[4]	$800.08	-

1) Source: Table III-3
2) An estimated 10% credit is provided to give the City the flexibility to use other revenue sources.
3) Revenue credit percentage (item 2) multiplied by total impact cost per functional resident (item 1)
4) Total impact cost per functional resident (item 1) less total revenue credit per functional resident (item 3)

Calculated Public Buildings Impact Fee Schedule

Table III-5 presents the calculated public buildings impact fee schedule for the City of Brooksville based on the net impact cost per resident previously presented in Table III-4.

Table III-5
Calculated Public Buildings Impact Fee Schedule

ITE LUC	Land Use	Impact Unit	Functional Resident Coefficient[1]	Total Impact Fee[2]
Residential:				
210	Single Family (detached)	du	1.46	**$1,168**
220/221/222	Multi-Family (Apartment/Condominium/Townhouse)	du	1.18	**$944**
240	Mobile Home	du	1.03	$824
251	Senior Housing (Detached)	du	1.12	**$896**
252	Senior Housing (Attached)	du	0.91	**$728**
Transient, Assisted, Group:				
253/255	Congregate Care Facility/Continuing Care Retirement Center	du	1.06	**$848**
254	Assisted Living	bed	0.97	**$776**
310	Hotel	room	1.16	$928
320	Motel	room	0.99	**$792**
620	Nursing Home	bed	1.09	**$872**
Recreational:				
416	RV Park	occupied site	0.47	**$376**
420	Marina	boat berth	0.13	**$104**
430	Golf Course	acre	0.10	**$80**
444	Movie Theater	screen	5.19	**$4,152**
492	Health/Fitness Club	1,000 sf	2.41	**$1,928**
Institutional:				
520	Elementary School (Private)	student	0.10	$80
522	Middle School (Private)	student	0.09	$72
530	High School (Private)	student	0.08	**$64**
540	University/Junior College (7,500 or fewer students) (Private)	student	0.10	**$80**
550	University/Junior College (more than 7,500 students) (Private)	student	0.08	**$64**
560	Public Assembly	1,000 sf	0.41	**$328**
565	Day Care Center	1,000 sf	0.81	**$648**
Medical:				
610	Hospital	1,000 sf	1.30	**$1,040**
630	Clinic	1,000 sf	1.50	**$1,200**
Office:				
710	General Office	1,000 sf	0.98	**$784**
720	Medical Office 10,000 sq ft or less	1,000 sf	1.20	**$960**
	Medical Office greater than 10,000 sq ft	1,000 sf	1.72	**$1,376**
Retail:				
812	Buildings Materials/Lumber Store	1,000 sf	0.54	$432

Table III-5 (Continued)

Calculated Public Buildings Impact Fee Schedule

ITE LUC	Land Use	Impact Unit	Functional Resident Coefficient[1]	Total Impact Fee[2]
Retail:				
813	Discount Superstore, Free-Standing	1,000 sf	1.72	$1,376
816	Hardware/Paint Store	1,000 sf	0.25	$200
822	Retail/Shopping Center (less than 40,000 sfgla)	1,000 sfgla	2.08	$1,664
821	Retail/Shopping Center (40,000 sfgla to 150,000 sfgla)	1,000 sfgla	2.58	$2,064
820	Retail/Shopping Center (greater than 150,000 sfgla)	1,000 sfgla	1.41	$1,128
840/841	New/Used Auto Sales	1,000 sf	1.57	$1,256
850	Supermarket	1,000 sf	2.45	$1,960
862	Home Improvement Superstore	1,000 sf	1.94	$1,552
880/881	Pharmacy/Drug Store with & without Drive-Thru	1,000 sf	1.84	$1,472
890	Furniture Store	1,000 sf	0.32	$256
Services:				
912	Bank/Savings Drive-In	1,000 sf	1.48	$1,184
931	Fine Dining/Quality Restaurant	1,000 sf	5.76	$4,608
932	High-Turn Over (Sit-Down) Restaurant	1,000 sf	5.42	$4,336
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	9.77	$7,817
942	Automobile Care Center	1,000 sf	1.67	$1,336
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	1.46	$1,168
945	Gas Station w/Convenience Store 2,000-5,499 sq ft	fuel pos.	2.30	$1,840
945	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	3.00	$2,400
947	Self-Service Car Wash	service bay	0.96	$768
n/a	Convenience/Gasoline/Fast Food Restaurant	1,000 sf	7.97	$6,377
Industrial				
110	General Light Industrial	1,000 sf	0.48	$384
130	Industrial Park	1,000 sf	0.35	$280
140	Manufacturing	1,000 sf	0.55	$440
150	Warehousing	1,000 sf	0.11	$88
151	Mini-Warehouse	1,000 sf	0.04	$32

1) Source: Appendix A, Table A-8 for residential and transient, assisted, group land uses and Table A-9 for non-residential land uses

2) Net impact cost per functional resident from Table III-4 multiplied by the functional resident coefficient (Item 1) for each land use

Public Buildings Impact Fee Schedule Comparison

As part of the work effort in developing the City of Brooksville's public buildings impact fee program, a comparison of the City's calculated public buildings impact fee schedule to fees adopted by other select Florida municipalities was completed. Table III-6 presents this comparison.

Table III-6

Public Buildings Impact Fee Comparison

Land Use	Unit[2]	Brooksville Calculated[3]	Hernando County Calculated[4]	Hernando County Existing[5]	Cape Canaveral[6]	Cooper City[7]	Dania Beach[8]	Davie[9]	Melbourne[10]	Port St. Lucie[11]
Date of Last Update		2021	2021	2012	N/A	1990	2005	2009	N/A	2013
Assessed Portion of Calculated[1]		N/A	N/A	100%	N/A	100%	100%	100%	N/A	100%
Residential:										
Single Family (2,000 sq ft)	du	$1,168	$1,200	$466	$106	$846	$120	$204	$250	$406
Multi-Family (1,300 sq ft)	du	$944	$878	$352	$106	$846	$108	$76	$223	$330
Non-Residential										
Light Industrial	1,000 sf	$384	$366	$168	$148	$678	$160	$120	$76	$134
Office (50,000 sq ft)	1,000 sf	$784	$651	$335	$148	$678	$160	$150	$187	$192
Retail (125,000 sq ft)	1,000 sf gla	$2,084	$1,105	$651	$148	$678	$160	$150	$668	$116
Bank w/Drive-Thru	1,000 sf	$1,184	$1,091	$651	$148	$678	$160	$150	$668	$116
Fast Food w/Drive-Thru	1,000 sf	$7,817	$7,137	$1,012	$148	$678	$160	$150	$1,593	$116

1) Represents that portion of the maximum calculated fee for each respective municipality that is actually charged. Fees may have been lowered through indexing or policy discounts. Does not account for moratoriums/suspension.
2) Du = dwelling unit
3) Source: Table III-5
4) Source: Tindale Oliver Hernando County Impact Fee Update Study 2021. Calculated fees represent results of the on-going study and are not yet adopted.
5) Source: Hernando County Planning & Development Department
6) Source: Cape Canaveral Code of Ordinances, Appendix B-Schedule of Fees
7) Source: Cooper City Code of Ordinances, Chapter 22 Planning and Public Facilities, Article IV. Impact Fees, Sec. 22-65.
8) Source: City of Dania Beach Document Center. Fee shown is "administrative" impact fee.
9) Source: Town of Davie Planning and Zoning Department. Listed as "General Government" impact fee. Less than 10 units per parcel fee shown as a proxy for multi-family.
10) Source: City of Melbourne Code of Ordinances, Part III - Land Development Regulations, Chapter 10-Impact Fees, Article III-Public Facilities
11) Source: City of Port St. Lucie Building Department. Fee for Residential has a Economic Development without pre-payment component ($1,821) and a public building component. Only the Public Buildings Component is shown

IV. Parks & Recreation Facilities

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

- Land and Recreation Facilities Inventory
- Service Area and Population
- Level of Service
- Cost Component
- Net Parks and Recreation Facilities Impact Cost
- Calculated Impact Fee Schedule
- Impact Fee Schedule Comparison

These elements are summarized throughout this section.

Land and Recreation Facilities Inventory

According to information provided by the City of Brooksville, the City's land and recreation facilities inventory utilized for impact fee purposes includes 4 parks totaling nearly 174 acres. The inventory excludes park land that is not owned by the City and parks that are operated by another entity and generate revenue. Table IV-1 presents a summary of the inventory included in the parks and recreation facilities impact fee.

Table IV-1
Park Land and Recreation Facility Inventory

Description	Classification	Acreage	Concession Stand (sq. ft.)	Courts: Basketball (Lighted)	Courts: Racquetball (Lighted)	Courts: Racquetball (Not Lighted)	Courts: Tennis (Lighted)	Courts: Volleyball (Sand)	Fields: Adult Softball (Lighted)	Fields: Youth Softball (Lighted)	Gymnasium (sq. ft.)	Pavilions	Playground (units)	Public Meeting Rooms	Restroom	Trail (Paved)
Tom Varn Park	Regional	[illegible]	512	2	2	2		1	2	3	6,600	2	1	[illegible]	1	1.50
Russell Street Park	Neighborhood	12.5										1			1	0.50
Bud McKethan Park	Neighborhood	4.5					3					1	1		1	0.25
[illegible] **Association Enrichment Center**/[illegible]	**Regional**	74.6												1,790	1	4.35
Neighborhood		17.00	0	0	0	0	3	[illegible]	0	0	0	2	1	0	2	0.75
Regional		156.60	512	2	2	2	0	1	[illegible]	3	[illegible]	[illegible]	1	2,590	2	[illegible]
Total		173.60	512	2	[illegible]	[illegible]	3	1	[illegible]	3	[illegible]	4	2	[illegible]	4	[illegible]

Source: City of Brooksville

Service Area and Demand Component

The City-owned parks are utilized citywide, and therefore, the citywide service area and population are used in the calculation of parks and recreational facilities impact fee. Appendix A, Table A-1, provides the estimated population for 2021 and the projected population through 2045. Parks and recreation 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 presented in Appendix A.

Level of Service

The current LOS for all City-owned and maintained parks is presented in Table IV-2. To determine the current LOS, the total acreage of each park type is divided by the service area population for 2021 and multiplied by 1,000. As shown, the total LOS of 174 acres per 1,000 weighted seasonal residents is utilized in the calculation of the parks and recreation facilities impact fee with the assumption that the City will continue to provide this level of service in the future.

Table IV-2

Current Level of Service (2020)

Park Classification/Variable	2021 Weighted Population[1]	Park Acreage[2]	Achieved LOS[3]
City of Brooksville	9,246		
Level of Service (Acres per 1,000 Residents)			
Neighborhood		17.00	1.84
Regional		156.60	16.94
Total Park Acreage/LOS - All Parks		**173.60**	**18.78**

1) Source: Appendix A, Table A-1
2) Source: Table IV-1
3) Park acreage (Item 2) divided by population (Item 1), multiplied by 1,000

Cost Component

The capital cost associated with parks and recreation facilities consists of two components: the cost of recreational facilities located at each park and the cost of purchasing and developing land for each park. The following paragraphs address recreation facility and park land value estimates.

Recreational Facility Value

To estimate current recreational facility value, multiple sources were reviewed to determine the unit cost of each recreational facility type, including insured values of the facilities, recent cost information obtained for similar facilities from other jurisdictions and input from the City of Brooksville representatives.

As shown in Table IV-3, the total recreational facility value for all parks is $8.7 million, which equates to an average of $939 per resident.

Table IV-3

Recreational Facility Cost Per Resident

Variable	Cost
Recreational Facility Cost per Acre[1]	$50,000
Total Acres[2]	173.60
Total Recreational Facility Value[3]	**$8,680,000**
Achieved LOS (Acres per 1,000 Residents)[4]	18.78
Total Recreational Facility Cost per Resident[5]	**$939.00**

1) Source: Appendix B
2) Source: Table IV-1
3) Recreational facility cost per acre (Item 1) multiplied by total acres (Item 2)
4) Source: Table IV-2
5) Recreational facility value per acre (Item 1) multiplied by the achieved LOS (Item 4), divided by 1,000

Land Cost

The land value per acre for the City's park inventory is calculated based on the value of current park land, vacant land sales of similar size parcels over the past four years, value of similar size vacant parcels based on information obtained from the Hernando County Property Appraiser's database, and discussions with the City of Brooksville representatives. This analysis resulted in an estimated average land value of $10,000 per acre and is presented in Table IV-4. Appendix B provides further detail regarding land value estimates.

The cost of land for parks and recreation facilities includes more than just the purchase cost of the land. Landscaping, site improvement, and irrigation are also considered. These costs can vary greatly, depending on the type of park. The estimated cost for landscaping, site preparation, and irrigation is estimated at $5,000 per acre.

These land costs are converted to land value per resident using the LOS calculated previously and result in average land value of $282 per resident.

Table IV-4
Land Cost per Resident

Variable	Cost
Land Purchase Cost per Acre[1]	$10,000
Landscaping, Site Prep., and Irrigation Cost per Acre[2]	$5,000
Total Land Cost per Acre[3]	**$15,000**
Total Acres[4]	173.60
Total Land Value[5]	**$2,604,000**
Achieved LOS (Acres per 1,000 Residents)[6]	18.78
Total Land Cost per Resident[7]	**$281.70**

1) Source: City of Brooksville
2) Based on estimates provided by other Florida jurisdictions
3) Sum of land purchase cost per acre and landscaping, site prep., and irrigation cost per acre (items 1 and 2)
4) Source: Table IV-1
5) Total land cost per acre (item 3) multiplied by total acres (item 4)
6) Source: Table IV-2
7) Total land value per acre (item 3) multiplied by the achieved LOS (item 6), divided by 1,000

Total Impact Cost per Resident

Table IV-5 presents total parks and recreation facility value per resident. As presented, the total park land and recreation facilities value is estimated at $1,221 per resident, of which $282 is for land and $939 is for recreational facilities.

Table IV-5
Total Impact Cost per Resident

Variable	Per Resident	% of Total[4]
Per Resident		
Total Land Cost[1]	$281.70	23%
Recreational Facility Cost[2]	$939.00	77%
Total Impact Cost[3]	**$1,220.70**	**100%**

1) Source: Table IV-4
2) Source: Table IV-3
3) Sum of land cost and recreational facility cost per resident (items 1 and 2)
4) Distribution of total impact cost

Credit Component

To avoid overcharging new development, a review of the capital funding allocation for park land and recreational facilities is completed. The purpose of this review is to determine any potential revenues generated by future development that is likely to be used for additional land and recreational facility expansion projects. Revenue credits are then applied against the total impact cost per resident so that new development is not charged twice for capital revenue contributions used to expand parks and recreational facilities. This review indicated that the City does not have any alternative funding sources identified for parks and recreational facility capacity projects and will rely primarily on impact fee revenues for these improvements. However, a 10-percent credit is included in the calculations to provide the City with the flexibility to use some level of alternative funding if needed. The resulting credit is $122 per resident. If, in the future, the City starts allocating a larger amount of non-impact fee funding toward these facilities, the credit calculations should be revised.

Net Parks & Recreation Facilities Impact Cost

The net impact cost per resident is the difference between the cost and credit components. Table IV-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 $1,099 per resident.

Table IV-6

Total Impact Cost per Resident

Variable	Impact Cost	Revenue Credits
Impact Cost		
Total Impact Cost per Resident[1]	$1,220.70	-
Revenue Credit		
Credit Percentage[2]	-	10%
Credit Amount[3]	-	$122.07
Net Impact Cost		
Net Impact Cost per Functional Resident[4]	$1,098.63	-

1) Source: Table IV-5
2) An estimated 10% credit is provided to give the City the flexibility to use other revenue sources.
3) Revenue credit percentage (Item 2) multiplied by total impact cost per functional resident (Item 1)
4) Total impact cost per functional resident (Item 1) less total revenue credit per functional resident (Item 3)

Calculated Parks & Recreation Facilities Impact Fee Schedule

Table IV-7 presents the calculated parks and recreation facilities impact fee schedule for the City of Brooksville for residential land uses, based on the net impact cost per resident previously presented in Table IV-6.

Table IV-7

Calculated Parks and Recreation Facilities Impact Fee Schedule

ITE LUC	Residential Land Use	Impact Unit	Residents per Unit[1]	Calculated Impact Fee[2]
Residential:				
210	Single Family (detached)	du	2.05	**$2,252**
220/221/222	Multi-Family	du	1.66	**$1,824**
240	Mobile Home	du	1.44	**$1,582**
251	Senior Housing (Detached)	du	1.57	**$1,725**
252	Senior Housing (Attached)	du	1.27	**$1,395**

1) Source: Appendix A, Table A-2
2) Residential per unit (Item 1) multiplied by the net impact cost per resident from Table IV-6

Parks & Recreation Facilities Impact Fee Schedule Comparison

As part of the work effort in updating the City of Brooksville's parks and recreation impact fee schedule, the City's calculated impact fee schedule was compared to the adopted fee schedules of select Florida municipalities. Table IV-8 presents this comparison

Table IV-8

Impact Fee Schedule Comparison

Land Use	Unit[1]	Brooksville	Hernando County		Groveland[6]	Inverness[7]	Lake Alfred[8]	Lakeland[9]	Leesburg[10]	Maitland[11]	Mascotte[12]	Minneola[13]	Mount Dora[14]	Plant City[15]	Tavares[16]
		Calculated[4]	Calculated[4]	Existing[5]											
Date of Last Update		2021	2021	2012	2017	N/A	2018	2015	2004	2008	2017	N/A	N/A	2003	2005
Assessed Portion of Calculated[2]		N/A	N/A	100%	100%	N/A	100%	100%	100%	65%	100%	N/A	N/A	100%	100%
Residential															
Single Family (2,600 sf)	du	$2,252	$491	$411	$1,476	$380	$1,510	$1,333	$410	$1,151	$571	$410	$1,815	$582	$440
Multi-Family (1,300 sf)	du	$1,831	$358	$311	$1,476	$270	$1,130	$2,491	$410	$1,151	$571	$307	$1,412	$582	$336
Mobile Home (1,300 sf)	du	$1,382	$375	$411	$1,476	$380	$1,336	$1,473	$310	$1,151	$571	$410	$2,815	$469	$222

1) Represents the portion of the maximum calculated fee for each respective municipality 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-7
4) Source: Tindale Oliver Hernando County Impact Fee Update Study 2021. Fees represent the results of the on-going study and are not yet adopted.
5) Source: Hernando County Planning & Development Department
6) Source: City of Groveland Ordinance 2019-50
7) Source: City of Inverness Code of Ordinances, Florida, Chapter 11.5-Impact fees
8) Source: City of Lake Alfred, Florida Notice of Increase of Police, Fire, Parks and Recreation, and Public Facilities
9) Source: City of Lakeland Community and Economic Development
10) Source: City of Leesburg Code of Ordinances, Part 2 Code of Ordinances, Chapter 7-Building and Building Regulations, Article XII. Municipal Services Impact Fees, Sec. 7-253.- Schedule of impact fees
11) Source: City of Maitland Code of Ordinances, Chapter 11-Parks, Recreation, and Boating, Article III-Parks and Recreation Impact Fee
12) Source: City of Mascotte Service Fees
13) Source: City of Minneola Code of Ordinances, Florida, Subpart A-General Ordinances, Chapter 42 Impact Fees, Article VI-Parks and Recreation Impact Fees
14) Source: City of Mount Dora Fee Schedule for Building and Planning
15) Source: Plant City Code of Ordinances, Chapter 86-Impact Fees, Article V.-Parks and Recreation
16) Source: City of Tavares Document Center, Permitting & Impact Fees

V. Multi-Modal Transportation

This section summarizes the analysis used to update the City of Brookville's multi-modal transportation impact fee schedule and includes the following subsections:

- Demand Component
- Cost Component
- Credit Component
- Calculated Multi-Modal Transportation Impact Fee
- Multi-Modal Transportation Impact Fee Comparison

The transportation impact fee calculations are based primarily on the Hernando County Road Impact Fee Update Study prepared in 2020; however, the roadway-based fee was converted to a multi-modal fee to provide the City with the flexibility to use revenues on stand-alone sidewalks, bicycle lanes and transit amenities. The travel handled by the City's classified roadway network was calculated to determine the portion of the fees the City can retain. It is recommended that the City discusses the study results with the County to ensure that City/County combined fee does not exceed the maximum transportation impact fee and new growth is not overcharged.

As in the case of the other impact fee program areas, the methodology used for the multi-modal study follows a consumption-based approach in which new development is charged based upon the proportion of person-miles of travel (PMT) that each unit of new development is expected to consume of the transportation network.

Included in this section is the necessary support material used in the calculation of the multi-modal fee. The general equation used to compute the multi-modal fee for a given land use is:

[Demand x Cost] – Credit = Fee

The "demand" for travel placed on a transportation system is expressed in units of Person-Miles of Travel (PMT) (daily vehicle-trip generation rate x the trip length (in miles) x the percent new trips [of total trips] x person-trip factor) 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 person-mile of transportation capacity and is based on recent transportation costs for city, county and state facilities.

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 Component

Travel Demand

Travel demand is the amount of a 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)
- Interstate/toll facility adjustment factor
- Vehicle-trip to person-trip factor

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* (11th edition). The Florida Studies Database (included in Appendix C) 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 excluded from the total travel for each use.

To calculate the interstate and toll (I/T) facility adjustment factor, the loaded highway network file was generated using the Tampa Bay Regional Planning Model (TBRPM v8.2a). A select zone analysis was run for all traffic analysis zones located within Hernando County in order to differentiate trips with an origin and/or destination within the county versus trips that simply passed through the county.

The analysis reviewed trips on all interstate and toll facilities within Hernando County, including, Interstate 75 and the Suncoast Parkway. The limited access vehicle-miles of travel (Limited Access VMT) for county-generated trips with an origin and/or destination within county was calculated for the identified limited access facilities. Next, the total VMT was calculated for all county-generated trips with an origin and/or destination within Hernando County for all roads, including limited access facilities.

The I/T adjustment factor of 8.1 percent was determined by dividing the total limited access VMT by the total countywide VMT. Total county VMT reduced by this factor is representative of only the roadways that are eligible to be funded with roads impact fee revenues. Appendix C, Table C-1 provides further detail on this calculation.

Conversion of Vehicle-Trips to Person-Trips

In the case of the multi-modal fee, it is necessary to estimate travel in units of person-miles. Vehicle-trips were converted to person-trips by applying a vehicle-trip to person-trip conversion factor of 1.40. This value was derived from a review of the TBRPM v8.2. Given that a large portion of travel occurs via automobile, this approach is found to be reasonable.

City Portion Adjustment Factor

As previously mentioned, the impact fee calculations reflect the costs associated with all roads (city, county, state) within the city. Using the TPRPM model data, a city adjustment factor was developed to identify the percentage of travel that occurs on the city's classified roads. The city portion adjustment factor of 17 percent was determined by dividing the VMT on city roads by the total city VMT. This figure is applied to the calculated multi-modal transportation impact fee

to determine the city's portion of the total fee. Additional information is included in Appendix C, Table C-2.

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 roadway capacity expansion improvements in Hernando County. In addition to local data, bid data for recently completed/ongoing 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 **11 percent** of construction phase costs based on a review of recent roads/transportation impact fee studies throughout Florida. Additional detail is provided in Appendix D, Table D-2.

CEI costs for county roads were estimated at **nine (9) percent** of construction phase costs based on a review of recent roads/transportation impact fee studies throughout Florida. Additional detail is provided in Appendix D, Table D-8.

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. Due to limited recent local acquisition data, this factor was determined through a review of the ROW-to-construction cost ratios for county road unit costs in previously completed impact fee studies throughout Florida. For county roadways, the ROW factors ranged from 32 percent to 60 percent with an average of 42 percent. For purposes of this update study and based on discussions with County representatives, the ROW cost for county roads is estimated at **40 percent** of the construction cost per lane mile. Additional detail is provided in Appendix D, Table D-3.

Construction

The construction cost for county roads was based on recently bid projects and future estimates in Hernando County and in other communities in Florida. A review of construction cost of improvements in Hernando County since 2013 identified two capacity expansion projects:

- Cortez Blvd Frontage Rd @ I-75
- Barclay Avenue from San Antonio Road to Powell Rd/Elgin Blvd

The Cortez Blvd improvement features a curb & gutter design with a construction cost of $1.67 million per lane mile, which is reflective of lower costs associated with frontage roads. The Barclay Avenue project features an open drainage design with a construction cost estimate of $2.73 million per lane mile.

Curb & Gutter Design

In addition to the Cortez Blvd project in Hernando County, recent improvements from other suburban/rural counties throughout Florida were reviewed to increase the sample size. This review included over 98 lane miles of lane addition and new road construction improvements with a weighted average cost of approximately $2.80 million per lane mile. Additional data is provided in Appendix D, Table D-4.

Based on a review of these data sets and discussions with County representatives, construction cost is estimated at **$2.80 million** per lane mile for curb & gutter county road improvements.

Open Drainage Design

Due to the small sample of open drainage capacity projects, the cost per lane mile for county roads with open drainage-design characteristics was calculated based on the relationship between curb & gutter and open drainage roadway costs from the FDOT District 7 Long Range Estimates (LRE). Based on these cost estimates, 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. Additional detail is provided in Appendix D, Tables D-1 and D-5.

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 Hernando County roadways included in the Hernando-Citrus MPO's 2045 Long Range Transportation Plan's (LRTP) Cost Feasible Plan. As shown in Table V-1, the weighted average county roadway construction cost was calculated at approximately $2.16 million per lane mile, with a total weighted average cost of $3.46 million per lane mile for county roadways.

Table V-1

Estimated Total Cost per Lane Mile for County Roads

Cost Phase	Cost per Lane Mile		
	Curb & Gutter	Open Drainage[5]	Weighted Average[6]
Design[1]	$308,000	$234,000	$238,000
Right-of-Way[2]	$1,120,000	$851,000	$864,000
Construction[3]	$2,800,000	$2,128,000	$2,162,000
CEI[4]	$252,000	$192,000	$195,000
Total Cost	**$4,480,000**	**$3,405,000**	**$3,459,000**
Lane Mile Distribution[7]	5%	95%	100%

1) Design is estimated at 11% of construction costs
2) Right-of-Way is estimated at 40% of construction costs
3) Source: Appendix D, Table D-4
4) CEI 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 jurisdiction to develop a weighted average cost per lane mile
7) Source: Appendix D, Table D-9; Items (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 state roads and other roadways built by FDOT with respect to roadway capacity expansion improvements in Hernando County. In addition to local data, bid data for recently completed/ongoing roadway projects and recent roadway construction bid data throughout Florida were used to supplement the cost data for state 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 roads/transportation impact fee studies throughout Florida. Additional detail is provided in Appendix D, Table D-2.

CEI costs for state roads were estimated at **11 percent** of construction phase costs based on a review of recent roads/transportation impact fee studies throughout Florida. Additional detail is provided in Appendix D, Table D-8.

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 recent local acquisition data, this factor was determined through a review of the ROW-to-construction cost ratios for state road unit costs in previously completed impact fee studies throughout Florida. For state roadways, the ROW factors ranged from 32 percent to 60 percent with an average of 43 percent. For purposes of this update study, the ROW cost for state roads was estimated at **40 percent** of the construction cost per lane mile. Additional detail is provided in Appendix D, Table D-3.

Construction

The construction cost for state roads (and other roadways built by FDOT) was based on recently bid projects in Hernando County and in other communities in Florida. A review of construction cost data for improvements in Hernando County since 2013 identified three capacity expansion projects:

- SR 50 from Windmere Road to E. of US 301 (curb & gutter/open drainage)
- CR 578 (County Line Road) from Suncoast Pkwy to US 41 @ Ayers Road (curb & gutter)
- CR 578 (County Line Road) from Springtime St to E. of Mariner Blvd (open drainage)

The SR 50 improvement includes a mix of curb & gutter/open drainage design with a construction cost of $4.71 million per lane mile, while the CR 578 project (Suncoast to Ayers) features a curb & gutter design with a construction cost of $3.38 million per lane mile. Combined, the curb & gutter improvements result in a weighted average construction cost of $4.25 million per lane mile. The CR 578 project (Springtime to Mariner) has an open drainage design on a very short roadway segment, resulting in a construction cost of $6.28 million per lane mile.

Curb & Gutter Design

In addition to the local projects, recent improvements from other suburban/rural counties throughout Florida were reviewed to increase the sample size. This review included approximately 247 lane miles of lane addition and new road construction improvements with a weighted average cost of approximately $3.97 million per lane mile. Additional data is provided in Appendix D, Table D-6.

Based on a review of these data sets and discussions with County representatives, a construction cost of **$4.20 million** per lane mile was used in the impact fee calculation for curb & gutter state road improvements. This estimate reflects local costs in Hernando County along with inclusion of certain amenities, such as shared-use paths, etc.

Open Drainage Design

Due to the small sample of open drainage improvements, the cost per lane mile for state roads with rural-design characteristics (open drainage) was calculated based on the relationship between urban and rural roadway costs from the FDOT District 7 Long Range Estimates (LRE). Based on these cost estimates, the costs for roadways with rural-design characteristics were estimated at approximately 76 percent of the costs for roadways with urban-design characteristics. Additional detail is provided in Appendix D, Tables D-1 and D-7.

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 Hernando County roadways included in the Hernando-Citrus MPO's 2045 LRTP's Cost Feasible Plan. As shown in Table V-2, the weighted average state roadway construction cost was calculated at approximately $3.24 million per lane mile, with a total weighted average cost of $5.25 million per lane mile for state roadways.

Table V-2

Estimated Total Cost per Lane Mile for State Roads

Cost Phase	Cost per Lane Mile		
	Curb & Gutter	Open Drainage[5]	Weighted Average[6]
Design[1]	$462,000	$351,000	$357,000
Right-of-Way[2]	$1,680,000	$1,277,000	$1,297,000
Construction[3]	$4,200,000	$3,192,000	$3,242,000
CEI[4]	$462,000	$351,000	$357,000
Total Cost	**$6,804,000**	**$5,171,000**	$5,253,000
Lane Mile Distribution[7]	5%	95%	100%

1) Design is estimated at 11% of construction costs
2) Right-of-Way is estimated at 40% of construction costs
3) Source: Appendix D, Table D-6
4) CEI is estimated at 11% of construction costs
5) Open drainage costs are estimated at 74% 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 D, Table D-9; Items (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 3. The resulting weighted average cost of approximately $4.05 million per lane mile was utilized as the roadway cost input in the calculation of the roads impact fee rates. The weighted average cost

per lane-mile includes county and state roads and is based on the lane miles distribution of the LRTP's Cost Feasible Plan (Appendix D, Table D-9).

It should be noted that the cost estimates developed for this impact fee study reflect a large sample size from several communities over the past seven years. When compared to the smaller sample of improvements observed over the last two to three years, the data and estimates used in this study represent a conservative approach. Additionally, these estimates account for Hernando County's suburban/rural nature, which tends to moderate roadway costs compared to some of the larger, more urbanized counties that are experiencing higher construction and land acquisition costs.

Table V-3

Estimated Cost per Lane Mile for County and State Roadway Projects

Cost Phase	County Roads[1]	State Roads[2]	County and State Roads[3]
Design	$238,000	$357,000	**$277,000**
Right-of-Way	$864,000	$1,297,000	**$1,007,000**
Construction	$2,162,000	$3,242,000	**$2,518,000**
CEI	$195,000	$357,000	**$248,000**
Total Cost	**$3,459,000**	**$5,253,000**	$4,050,000
Lane Mile Distribution[4]	67%	33%	100%

1) Source: Table V-1
2) Source: Table V-2
3) Lane mile distribution (item 4) multiplied by the individual component costs for county and state roads and then added together to develop a weighted average cost per lane-mile
4) Source: Appendix D, Table D-9

Person-Miles of Capacity Added per Lane Mile

An additional component of the roads impact fee equation is the capacity added per lane-mile of roadway constructed. The VMC is an estimate of capacity added per lane mile, for county, developer, and state roadway improvements in the Hernando-Citrus MPO's 2045 LRTP (projects in Hernando only). As shown in Table V-4, the VMC was then converted to person-miles of capacity (PMC) using the person-trip factor (1.40 persons per vehicle) previously discussed. Additional detail is provided in Appendix D, Table D-9.

Table V-4

Weighted Average Person-Miles of Capacity per Lane Mile

Road Type	Lane Miles Added[1]	Vehicle-Miles of Capacity Added[2]	VMC Added per Lane Mile[3]	Vehicle-Trip to Person-Trip Factor[4]	PMC Added per Lane Mile[5]
County/Dev. Roads	64.80	729,444	11,257	1.40	**15,760**
State Roads	31.22	346,721	11,106	1.40	**15,548**
Total	**96.02**	**1,076,165**			
Weighted Average VMC/PMC Added per Lane Mile[6]			**11,200**	1.40	**15,680**

1) Source: Appendix D, Table D-9
2) Source: Appendix D, Table D-9
3) Vehicle-miles of capacity added (Item 2) divided by lane miles added (Item 1)
4) Source: Based on the Tampa Bay Regional Planning Model
5) VMC added per lane mile (Item 3) multiplied by the vehicle-trip to person-trip factor (Item 5)
6) Total VMC added (Item 2) divided by total lane miles added (Item 1)

Cost per Person-Mile of Capacity

The transportation cost per unit of development is assessed based on the cost per person-mile of capacity. As shown in Tables V-3 and V-4, the cost and capacity for roadways in Hernando County have been calculated based on recent local and statewide improvements.

The cost per PMC figure is used in the multi-modal impact fee calculation to determine the total cost per unit of development based on person-miles of travel consumed. As shown in Table V-5, for each person-mile of travel that is added to the transportation system, approximately **$258** of capacity is consumed.

Table V-5

Weighted Average Cost per Vehicle-Mile of Capacity Added

Road Type	Cost per Lane Mile[1]	Average PMC Added per Lane Mile[2]	Cost per PMC[3]
County Roads	$3,459,000	15,760	$219.48
State Roads	$5,253,000	15,548	$337.86
Total	**$4,050,000**	**15,680**	
Weighted Average PMC Added per Lane Mile[4]			**$258.29**

1) Source: Table V-3
2) Source: Table V-4
3) Average PMC added per lane mile (Item 2) divided by cost per lane mile (Item 1)
4) Total person-miles of capacity added for county and state roads (Item 2) divided by the total lanes miles added (Item 1)

Credit Component

Capital Improvement Credit

The credit component of the impact fee accounts for the existing County and State funding sources that are being expended on transportation capacity expansion (excluding impact fee funds). This section summarizes the calculations utilized to develop the credit component to account for non-impact fee revenue contributions. Additional details are provided in Appendix E.

The present value of the average annual non-impact fee funding generated by new development over a 25-year period that is expected to fund capacity expansion projects was credited against the cost of 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

A review of the County's recent historical expenditures and the FY 2020-2024 Capital Improvement Plan indicates that the majority of capacity expansion improvements are being funded through local option fuel tax and roads impact fees. As shown in Table V-6, a total gas tax equivalent revenue credit of 0.2 pennies was calculated for the average annual non-impact fee funding of capacity expansion projects.

State Credit

As shown in Table V-6, State expenditures in Hernando 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 ten years of historical expenditures, as well as five years of planned expenditures, indicated that FDOT's roadway spending generates a credit of 28.1 pennies of equivalent gas tax revenue, annually. Additional detail is provided in Appendix E, Table E-3.

In summary, Hernando County contributes 0.2 pennies while the State spends an average of 28.1 pennies, annually, for roadway capacity projects in the County. A total credit of 28.3 pennies is expected to be generated by new development from all non-impact fee revenues. These credit figures reflect the most recent available data for roadway expenditures from County and State sources.

Table V-6

Equivalent Pennies of Gas Tax Revenue

Credit	Average Annual Expenditures	Value per Penny[3]	Average Annual Equivalent Pennies per Gallon[4]
County Revenue[1]	$150,196	$740,488	$0.002
State Revenue[2]	$20,810,666	$740,488	$0.281
Total	**$20,960,862**		$0.283

1) Source: Appendix E, Table E-2
2) Source: Appendix E, Table E-3
3) Source: Appendix E, Table E-1
4) Avg annual expenditures divided by the value per penny (Item 3) 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 3.0 percent was used in the impact fee calculation based on estimates provided by Hernando 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 annually (over 25 years) by travel associated with a particular land use.

Appendix E, Table E-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.

$$Fuel\ Efficiency = \sum VMT_{Roadway\ Type} \div \sum \left(\frac{VMT_{Vehicle\ Type}}{MPG_{Vehicle\ Type}} \right)_{Roadway\ Type}$$

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 E, Table E-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 Multi-Modal Transportation Impact Fee

Detailed impact fee calculations for each land use are included in Appendix F, 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 F illustrates the following:

- Demand component variables (trip rate, trip length, and percent new trips)
- Total multi-modal impact fee cost
- Annual capital improvement credit
- Present value of the capital improvements credit
- Net multi-modal transportation impact fee rates

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 Single Family (detached) land use category using information from the impact fee schedules included in Appendix F. For each land use category, the following equations are utilized to calculate the net impact fee:

Net Impact Fee = Total Impact Cost – Capital Improvement Credit

Where:

Total Impact Cost = ([Trip Rate × Assessable Trip Length × % New Trips] /2) × (1 – Interstate/Toll Facility Adjustment Factor) × (Person-Trip Factor) × (Cost per Person-Mile of Capacity)

Capital Improvement Credit = Present Value (Annual Capital Improvement Credit), given 3.00% interest rate & a 25-year facility life

Annual Capital Improvement Credit = ([Trip Rate × Total Trip Length × % New Trips] / 2) × (Effective Days per Year × $/Gallon to Capital) / 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 (detached) 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 (8.1%)
- *Person-Trip Factor* = Converts vehicle-miles of travel to person-miles of travel (1.40)
- *Cost per Lane Mile* = unit cost to construct one lane mile of roadway, in $/lane-mile ($4,050,000)
- *Average Capacity Added per Lane Mile* = represents the average number of persons on one travel lane at capacity for one lane mile of roadway, in vehicles/lane-mile/day (15,680)
- *Cost per Person-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 3.00% interest and a 25-year facility life, the uniform series present worth factor is 17.4131
- *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 ($0.283)
- *Fuel Efficiency* = average fuel efficiency of vehicles, in vehicle-miles/gallon (18.97)
- *Percent Travel on City's Classified Roads = 17%*

Multi-Modal Transportation Impact Fee Calculation

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

Single Family (detached) Multi-Modal Transportation Impact Fee Rate (Table F-1):

Total Impact Cost = ([7.81 * 6.62 * 1.0] /2) * (1 - 0.081) * (1.40) * ($4,050,000 /15,680) = **$8,591**
Annual Cap. Improv. Credit = ([7.81 * 7.12 * 1.0] /2) * 365 * ($0.283 /18.97) = $151
Capital Improvement Credit = $151 * 17.4131 = $2,629
Net Multi-Modal Transportation Impact Fee = $8,591 – $2,629 = $5,962
City of Brooksville Portion = $5,962 * 17% = **$1,014**

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

Transportation Impact Fee Schedule Comparison

As part of the work effort in developing Brooksville's MMTIF, a comparison of calculated fees to roads/transportation impact fee schedules adopted in other jurisdictions was completed, as shown in Table V-7.

Note that differences in fee levels for a given land use can be caused by several factors, including the year of the technical study, adoption percentage, study methodology including variation in costs, credits, and travel demand, land use categories included in the fee schedule, etc.

Table V-7

Transportation Impact Fee Comparison

Land Use	Unit[2]	City of Brooksville (Calculated)[3]	City of Inverness[4]	City of Maitland[5] CRA	City of Maitland[5] Tiers 1&2	City of Maitland[5] Tier 3	City of Melbourne[6]	City of Plant City[7] Zone 1	City of Plant City[7] Zone 2	City of Plant City[7] Zone 3	City of Plant City[7] Zone 4	City of Plant City[7] Zone 5	City of Port St. Lucie[8]	City of Lakeland[9]
Date of Last Update		2021	[illegible]	[illegible]	2016	[illegible]	n/a	2010	2010	2010	2010	[illegible]	[illegible]	[illegible]
Assessed Portion of Calculated[1]		100%	90%	n/a	n/a	n/a	n/a	[illegible]	100%	[illegible]	[illegible]	100%	[illegible]	30-75%
Residential:														
Single Family Detached ([illegible] sq ft)	du	[illegible]	[illegible]	$1,574	[illegible]	$2,000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Non-Residential:														
Light Industrial	1,000 sf	[illegible]	$651	$702	$795	$935	[illegible]	$289	$327	[illegible]	$280	$120	[illegible]	$604
Office ([illegible]00 sq ft)	1,000 sf	[illegible]	[illegible]	$1,798	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$1,721	[illegible]	[illegible]	[illegible]	[illegible]
Retail (125,000 sq ft)	1,000 sf	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	$3,689	[illegible]	[illegible]	[illegible]	[illegible]	$673	[illegible]	[illegible]
Bank w/Drive-In	1,000 sf	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Fast Food w/Drive-Thru	1,000 sf	[illegible]	[illegible]	[illegible]	$16,849	[illegible]	$25,034	[illegible]	[illegible]	$4,397	[illegible]	[illegible]	[illegible]	$46,934

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 F, Table F-1
4) Source: Inverness, FL Code of Ordinances, Chapter 11.5 (Municode)
5) Source: City of Maitland Community Development Department
6) Source: City of Melbourne, FL Code of Ordinances, Chapter 10 (Municode)
7) Source: Plant City, FL Code of Ordinances, Sec. 86-113 (Municode)
8) Source: City of Port St. Lucie Planning & Zoning Department
9) Source: City of Lakeland Community & Economic Development Department

Table V-7 (continued)
Transportation Impact Fee Comparison

Land Use	Unit[2]	City of Brooksville (Calculated)[3]	Hernando County		Citrus County[6]	Pasco County[7]			Polk County[8]	Sumter County[9]	Lake County[10]	
			Existing[4]	Calculated[5]		Urban	Suburban	Rural			Central	South
Date of Last Update		2021	2018	2020	2021	2018	2018	2018	2019	2019	2019	2019
Adopted Portion of Calculated[1]		100%	22%	100%	47%	n/a	n/a	n/a	100%	40%	26%	70%
Residential:												
Single Family Detached (2,000 sq ft)	du	$1,014	$1,709	$4,720	$1,815	$5,895	$4,170	[illegible]	[illegible]	[illegible]	$1,008	$2,706
Non-Residential:												
Light Industrial	1,000 sf	$447	$806	$2,798	$506	$0	$0	$0	$835	$1,304	$433	$1,728
Office (50,000 sq ft)	1,000 sf	$998	$1,112	$5,511	$1,435	$0	$0	$0	$2,256	$1,367	$935	$2,531
Retail (125,000 sq ft)	1,000 sf	$1,261	$1,917	$8,713	$1,204	$5,841	$7,051	$8,812	$3,536	$1,774	$1,091	$2,964
Bank w/Drive-In	1,000 sf	$2,176	$4,297	$11,476	$1,204	$11,730	$14,884	[illegible]	$3,536	$5,806	$7,589	$20,537
Fast Food w/Drive Thru	1,000 sf	$12,791	$17,397	$90,061	$1,204	$40,980	$46,712	[illegible]	$3,536	$28,394	$7,589	$20,537

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 F, Table F-1
4) Source: Hernando County Zoning Department
5) Source: *Hernando County Roads Impact Fee Update Study, June 2020*
6) Source: Citrus County Department of Growth Management, Land Development Division. Retail/Commercial rate is applied to bank and fast food restaurant.
7) Source: Pasco County Planning and Development Department. Pasco County rates reflect local buy-down policy used to reduce fee rates for certain types of development.
8) Source: Polk County Planning and Development. Retail/Commercial rate is applied to bank and fast food restaurant. The Polk County impact fee only assesses the portion of travel occurring on the county road system.
9) Source: Sumter County Impact Fee Division
10) Source: Lake County Office of Planning and Zoning. Rates for "Central Benefit District" are shown. Per the 2019 transportation impact fee study, the "convenience retail" rate is shown for bank w/drive thru and fast food w/drive-thru. CENTRAL rates also apply to the NORTH CENTRAL district and SOUTH rates also apply to the NORTHEAST/WEKIVA district.

Appendix A
Demand Component -- Population:
Supplemental Information

Appendix A: Population

Except for the transportation 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, not only the residents, or permanent population of the City, but also the seasonal residents and visitors were considered. Seasonal residents include visitors and part-time residents, which are defined as living in the City of Brooksville 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 will be used in all population estimates and projections. References to population contained in this report pertain to the weighted seasonal population, unless otherwise noted.

Table A-1 presents the weighed seasonal population trends. The projections indicate that the current weighted seasonal population of the City is approximately 9,200 and is estimated to increase to 11,300 (increase of 2,100) by 2045.

Table A-1
Weighted Seasonal Population Trends and Projections

Year	City of Brooksville[1]
2000	7,512
2001	7,523
2002	7,564
2003	7,631
2004	7,676
2005	7,733
2006	7,814
2007	7,837
2008	8,208
2009	8,221
2010	7,934
2011	7,926
2012	7,916
2013	7,856
2014	7,901
2015	7,997
2016	8,228
2017	8,299
2018	8,644
2019	8,902
2020	9,137
2021	9,246
2022	9,355
2023	9,466
2024	9,579
2025	9,694
2026	9,801
2027	9,912
2028	10,023
2029	10,136
2030	10,251
2031	10,336
2032	10,422
2033	10,509
2034	10,596
2035	10,687
2036	10,756
2037	10,825
2038	10,897
2039	10,968
2040	11,039
2041	11,100
2042	11,160
2043	11,222
2044	11,284
2045	11,346

Source: Appendix A, Table A-10

Apportionment of Demand by Residential Unit Type and Size

Table A-2 presents the population per housing unit (PPH) for the residential categories. This analysis includes all housing units, both occupied and vacant.

Table A-2

Population per Housing Unit by Housing Type (2019)

Housing Type	Population[1]	Housing Units[2]	Population / Housing Units[3]
Single Family (detached)	3,683	1,795	2.05
Multi-Family	2,396	1,446	1.66
Mobile Home	1,952	1,355	1.44
Total/Weighted Average	**8,031**	**4,596**	**1.75**
Senior Housing (Detached)[4]	2,816	1,795	1.57
Senior Housing (Attached)[5]	1,832	1,446	1.27
Congregate Care Facility/Continuing Care Retirement Center[6]	4,648	3,241	1.43

1) Source: 2019 American Community Survey (ACS); 5-Yr. Estimates, Table B25033, adjusted for seasonal population
2) Source: 2019 American Community Survey (ACS); 5-Yr. Estimates, 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.
6) Estimate for congregate care facility is based on people per household figures for single and 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
Note: Excludes boats, RVs, vans, etc.

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 city 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)[1]. 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 the City of Brooksville's functional population, an

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

analysis of the City's population and employment characteristics was conducted. Tables A-3 and A-4 present this analysis for the City. Based on this analysis, the City of Brooksville's residents, on average, spend 17.1 hours each day at their place of residence. This corresponds to approximately 71 percent of each 24-hour day at their place of residence and the other 29 percent away from home.

Table A-3

Population & Employment Characteristics

Calculation Step	Figure
Total workers living in Brooksville[1]	2,525
Total Population (2016)[2]	8,006
Total workers as a percent of population[3]	31.5%
School age population (5-17 years) (2016)[4]	1,083
School age population as a percent of population[5]	13.5%
Population net of workers and school age population[6]	4,398
Other population as a percent of total population[7]	55.0%

1) Source: Census Transportation Planning Package (CTPP), 2016
2) Source: 2016 American Community Survey (ACS); 5-Yr. Estimates, Table B01001
3) Total workers (Item 1) divided by population (Item 2)
4) Source: 2016 American Community Survey (ACS); 5-Yr. Estimates, Table B01001
5) Total school age population (Item 4) divided by 2016 population (Item 2)
6) Total 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 population (Item 2)

Table A-4

Residential Coefficient for 24-Hour Functional Population

Population Group	Hours at Residence[1]	Percent of Population[2]	Effective Hours[3]
Workers	13	31.5%	4.1
Students	15	13.5%	2.0
Other	20	55.0%	11.0
Total Hours at Residence[4]			17.1
Residential Functional Population Coefficient[5]			71.3%

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

The resulting percentage from Table A-4 is used in the calculation of the residential coefficient for the 24-hour functional population. These actual calculations are presented in Table A-5.

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-5 shows the functional population coefficients for residential and non-residential uses in the City of Brooksville, which are used to estimate the 2021 functional population in Tables A-6.

Table A-5

General Functional Population Coefficients

Functional Population Employment Category	ITE LUC	Employee Hours per Employee[1]	Trips per Employee[2]	One-Way Trips per Employee[3]	Journey-to-Work Occupancy per Trip[4]	Daily Occupancy per Trip[5]	Visitors per Employee	Visitor Hours per Trip	Days per Week[6]	Functional Residents per Unit[7]
Population									7.00	0.713
Natural Resources	N/A	9.00	3.10	1.55	1.32	1.88	0.00	1.00	**7.00**	0.379
Construction	110	9.00	3.10	1.55	1.32	1.88	0.00	1.00	**5.00**	0.271
Manufacturing	140	9.00	2.51	1.26	1.32	1.88	**0.08**	1.00	5.00	0.270
Transportation, Communication, Utilities	110	9.00	3.10	1.55	1.32	1.88	0.00	1.00	5.00	0.271
Wholesale Trade	150	9.00	5.05	2.53	1.32	1.88	**0.15**	1.00	5.00	0.272
Retail Trade	820	9.00	30.50	25.25	1.24	1.73	11.37	1.50	7.00	1.168
Finance, Insurance, Real Estate	710	9.00	3.33	1.67	1.24	1.73	0.82	1.00	5.00	0.297
Services[8]	N/A	9.00	20.97	10.16	1.24	1.73	4.98	1.00	6.00	0.499
Government[9]	730	9.00	7.45	3.73	1.24	1.73	1.83	1.00	7.00	0.451

(1) Estimated

(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 715

ITE Code 730 at 7.45 weekday trips per employee, Volume 2 Office Land Uses, page 789

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[11]	Trips per Employee	Share	Weighted Trips
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:

1.88 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-7 for residential and the equation below to determine the Functional Population Coefficient per Employee for all land-use categories except residential includes the following:

[(Days per Week x Employee Hours in Place) + (Visitors per Employee x Visitor Hours per Trip x Days per Week)]

(24 Hours per Day x 7 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: fine dining, 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-6

City of Brooksville Functional Population (2021)

Population Category	City of Brooksville Baseline Data[1]	Functional Resident Coefficient[2]	Functional Population[3]
2021 Weighted Population	9,246	0.713	6,592
Employment Category			
Natural Resources	242	0.379	92
Construction	822	0.271	223
Manufacturing	407	0.270	110
Transportation, Communication, and Utilities	748	0.271	203
Wholesale Trade	100	0.272	27
Retail Trade	1,599	1.148	1,836
Finance, Insurance, and Real Estate	837	0.292	244
Services	5,634	0.499	2,811
Government Services	3,135	0.451	1,414
Total Employment by Category Population[4]			6,960
2021 Total Functional Population[5]			13,552

1) Source: Table A-1 for population and 2021 Woods & Poole for employment data
2) Source: Table A-5
3) Functional population is calculated by multiplying the 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-7

Functional Population (2000 - 2045)

Year	City of Brooksville [1]
2000	11,021
2001	11,032
2002	11,087
2003	11,187
2004	11,254
2005	11,333
2006	11,446
2007	11,480
2008	12,020
2009	12,044
2010	11,622
2011	11,610
2012	11,598
2013	11,505
2014	11,574
2015	11,713
2016	12,053
2017	12,161
2018	12,672
2019	13,052
2020	13,391
2021	13,552
2022	13,715
2023	13,880
2024	14,047
2025	14,216
2026	14,372
2027	14,530
2028	14,690
2029	14,852
2030	15,015
2031	15,135
2032	15,256
2033	15,378
2034	15,501
2035	15,641
2036	15,735
2037	15,829
2038	15,940
2039	16,052
2040	16,148
2041	16,245
2042	16,326
2043	16,424
2044	16,523
2045	16,606

Source: Table A-6 for 2021. Other years are based on growth rates of the 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 Table A-8. Besides the residential land uses, Table A-8 includes transient land uses, such as hotels, motels, congregate care facilities (CCF), and nursing homes. Secondary sources, such as Florida's Adventure Coast, Brooksville-Weeki Wachee and the Florida Department of Elderly Affairs, are used to determine the occupancy rate for hotels, motels, CCF, and nursing homes.

Non-Residential Land Uses

A similar approach is used to estimate functional residents for non-residential land uses. Table A-9 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-8

Functional Residents for Residential and Transient Land Uses

Residential Land Use	Impact Unit	ITE LUC[1]	Residents/ Visitors Per Unit[2]	Occupancy Rate[3]	Adjusted Residents Per Unit[4]	Visitor Hours at Place[5]	Workers Per Unit[6]	Work Day Hours[7]	Days Per Week[8]	Functional Residents Per Unit[9]
Residential:										
Single Family (detached)	du	210	2.05	-	-	-	-	-		1.46
Multi Family (Apartment/Condominium/Townhouse)	du	220/221/222	1.66	-	-	-	-	-		1.18
Mobile Home	du	240	1.44	-	-	-	-	-		1.03
Senior Housing (Detached)	du	251	1.57	-	-	-	-	-		1.12
Senior Housing (Attached)	du	252	1.27	-	-	-	-	-		0.91
Transient, Assisted, Group:										
Congregate Care Facility/Continuing Care Retirement Center	du	253/255	1.43	89%	1.27	16	0.56	9	7	1.06
Assisted Living	bed	254	1.00	89%	0.89	20	0.61	9	7	0.97
Hotel	room	310	3.00	63%	1.89	12	0.56	9	7	1.16
Motel	room	320	3.00	63%	1.89	12	0.13	9	7	0.99
Nursing Home	bed	620	1.00	89%	0.89	20	0.92	9	7	1.09

(1) Land use code from the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 11th Edition

(2) Estimates for the residential land uses and congregate care facility/continuing care retirement center from Table A-2; estimates for the hotel/motel land use is based on data obtained from Florida's Adventure Coast, Brooksville-Weeki Wachee; and the estimate used for assisted living facility/nursing home is based on 1 person per bed.

(3) Source for hotel/motel occupancy: Florida's Adventure Coast, Brooksville-Weeki Wachee. Source for assisted living facility/nursing home occupancy rate is the Florida Department of Elder Affairs, Hernando County Profile.

(4) Residents per unit times occupancy rate (Item 3)

(5), (7), (8) Estimated

(6) Adapted from ITE Trip Generation Handbook, 11th Edition

(9) For residential this is Residents Per Unit times 0.713. For Transient, Assisted, and Group it is:

$$\frac{\text{[Adjusted Residents per Unit X Hours at Place X Days per Week] + [Workers Per Unit x Work Hours Per Day X Days per Week]}}{\text{(24 Hours per Day X 7 Days per Week)}}$$

Table A-9

Functional Resident Coefficients for Non-Residential Land Uses

ITE Use[1]	Land Use	Impact Unit	Trips Per Unit[1]	Trips Per Employee[1]	Employees Per Unit[1]	One-Way Factor of Trips	Worker Factor[1]	Occupants Per Trip[1]	Visitors[1]	Visitor Hours Per Trip[1]	Days Per Week[1]	Functional Residents per Unit[2]
	RECREATIONAL:											
416	RV Park	occupied site	1.63	n/a	1.20	0.81	9	1.87	0.31	1.50	7	0.47
420	Marina	boat berth	2.41	20.52	0.12	1.21	9	1.87	2.54	1.00	7	0.11
430	Golf Course	acre	3.74	20.52	0.18	1.87	9	1.87	3.52	0.25	7	0.10
444	Movie Theater	screen	114.83	53.13	2.16	57.42	9	1.87	105.22	1.00	7	5.19
492	Health/Fitness Club	1,000 sf	34.50	27.25	1.27	17.25	9	1.87	30.99	1.50	7	2.41
	INSTITUTIONAL:											
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 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
540	University 7,500 or fewer students (Private)	student	2.00	11.75	0.17	1.00	9	1.11	0.94	2.00	5	0.10
550	University greater than 7,500 students (Private)	student	1.50	11.75	0.13	0.75	9	1.11	0.70	2.00	5	0.08
560	Public Assembly	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	49.83	21.38	2.32	24.92	9	1.79	42.11	0.15	5	0.81
	MEDICAL:											
610	Hospital	1,000 sf	10.77	3.77	2.86	5.39	9	1.54	5.44	1.00	7	1.30
630	Clinic	1,000 sf	37.39	13.90	2.69	18.70	9	1.54	26.11	1.00	5	1.50
	OFFICE:											
710	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 10,000 sq ft or less	1,000 sf	23.83	8.71	2.74	11.92	9	1.54	15.62	1.00	5	1.20
	Medical Office greater than 10,000 sq ft	1,000 sf	34.21	8.71	3.93	17.11	9	1.54	22.42	1.00	5	1.72
	RETAIL:											
812	Building Materials/Lumber Store	1,000 sf	17.08	25.77	0.66	8.53	9	1.72	14.01	0.50	7	0.54
813	Discount Superstore, Free-Standing	1,000 sf	50.58	21.90	2.31	25.29	9	1.72	41.19	0.50	7	1.72
816	Hardware/Paint Store	1,000 sf	8.07	27.69	0.29	4.04	9	1.72	6.66	0.50	7	0.25
822	Retail/Shopping Center less than 40,000 sf/ga	1,000 sf/ga	54.45	17.42	3.13	27.23	9	1.72	43.71	0.50	7	2.08
821	Retail/Shopping Center 40,000 sf/ga to 150,000 sf/ga	1,000 sf/ga	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/ga	1,000 sf/ga	37.01	17.42	2.12	18.51	9	1.72	29.72	0.50	7	1.41
840/841	New/Used Auto Sales	1,000 sf	24.58	11.84	2.08	12.29	9	1.72	19.06	1.00	7	1.57
850	Supermarket	1,000 sf	94.48	43.86	2.15	47.24	9	1.72	79.10	0.50	7	2.45
862	Home Improvement Superstore	1,000 sf	30.74	n/a	2.50	15.37	9	1.72	23.94	1.00	7	1.94
880/881	Pharmacy/Drug Store with & without Drive-Thru	1,000 sf	103.86	69.17	1.50	51.93	9	1.72	87.82	0.35	7	1.84
890	Furniture Store	1,000 sf	6.10	10.93	0.58	3.15	9	1.72	4.84	0.50	7	0.32
	SERVICE:											
912	Bank/Savings 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 Sit-Down 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	481.99	44.52	10.83	241.00	9	2.32	548.29	0.25	7	9.77
942	Automobile Care Center	1,000 sf	28.19	14.30	1.97	14.10	9	1.72	22.28	1.00	7	1.67
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	172.01	275.78	0.62	86.01	8	1.72	147.32	0.20	7	1.46

Table A-9 (Continued)

Functional Resident Coefficients for Non-Residential Land Uses

ITE Use[1]	Land Use	Unit/Unit	Trips Per Unit[2]	Trips Per Employee[3]	Employees Per Unit[4]	One-Way Factor of Trips[5]	Worker Hours[6]	Occupants Per Trip[7]	Workers[8]	Worker Hours Per Trip[9]	Days Per Week[10]	Functional Resident Coefficient per Unit[11]
	SERVICES											
945	Gas Station w/Convenience Store 2,000-2,999 sq ft	fuel pos.	264.38	241.21	1.10	132.19	9	1.72	226.27	0.85	7	3.80
945	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	348.75	241.21	1.43	172.88	9	1.72	295.82	1.10	7	5.03
947	Self-Service Car Wash	service bay	63.94	n/a	0.54	31.97	9	1.72	37.29	0.50	7	0.94
n/a	Convenience/Gasoline/Fast Food Restaurant	1,000 sf	984.59	n/a	7.56	492.30	9	1.72	844.26	0.20	7	7.57
	INDUSTRIAL											
110	General Light Industrial	1,000 sf	4.87	3.10	1.57	2.44	9	1.44	1.99	1.00	5	0.48
130	Industrial Park	1,000 sf	3.37	2.91	1.16	1.69	9	1.46	1.31	1.00	5	0.35
140	Manufacturing	1,000 sf	4.75	2.51	1.89	2.38	9	1.46	1.58	1.00	5	0.55
150	Warehouse	1,000 sf	1.71	5.03	0.34	0.86	9	1.46	0.82	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

Sources:
(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 calculation.
(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) ÷ (Workers X Hours/Week X Days/Week)/(24 Hours ÷ 7 Days)]

Table A-10

Weighted Seasonal Population Projections

Year	Permanent Population[1]	Seasonal Population[2]	Total Weighted Season Population[3]
2000	7,264	248	7,512
2001	7,275	248	7,523
2002	7,314	250	7,564
2003	7,379	252	7,631
2004	7,422	254	7,676
2005	7,478	255	7,733
2006	7,556	258	7,814
2007	7,578	259	7,837
2008	7,937	271	8,208
2009	7,949	272	8,221
2010	7,719	215	7,934
2011	7,711	215	7,926
2012	7,702	214	7,916
2013	7,643	213	7,856
2014	7,687	214	7,901
2015	7,780	217	7,997
2016	8,006	222	8,228
2017	8,074	225	8,299
2018	8,410	234	8,644
2019	8,661	241	8,902
2020	8,890	247	9,137
2021	8,995	251	9,246
2022	9,102	253	9,355
2023	9,210	256	9,466
2024	9,320	259	9,579
2025	9,431	263	9,694
2026	9,536	265	9,801
2027	9,643	269	9,912
2028	9,751	272	10,023
2029	9,861	275	10,136
2030	9,973	278	10,251
2031	10,056	280	10,336
2032	10,140	282	10,422
2033	10,224	285	10,509
2034	10,309	287	10,596
2035	10,397	290	10,687
2036	10,464	292	10,756
2037	10,532	293	10,825
2038	10,601	296	10,897
2039	10,670	298	10,968
2040	10,740	299	11,039
2041	10,799	301	11,100
2042	10,858	302	11,160
2043	10,918	304	11,222
2044	10,978	306	11,284
2045	11,038	308	11,346

1) Source: 2000 through 2019 is the U.S. Census and the Bureau of Economic and Business Research (BEBR). 2020 is the 2020 U.S. Census Bureau estimate.
2) Source: Seasonal 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 the 2010 U.S. Census for years 2011-2045. The figures are weighed by 0.42 to account for seasonal residents only residing in the City 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)

Appendix B
Cost Component -- Building and Land Values
Supplemental Information

Appendix B: Building and Land Values

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

Building Values

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

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

The following paragraphs provide a summary for each service area.

Fire Rescue Facilities

Fire rescue facilities include the fire station and support buildings, such as the vehicle storage building. Each type of building has varying costs depending on the design and amenities. As part of the cost estimates the following was considered:

- The City has not built any new fire stations or other related buildings over the past five years. There are plans to expand the administrative facilities of the current fire station at an estimated cost of $280 per square foot.
- The insured value of the Fire Station 1 is $233 per square foot while the vehicle storage building is insured for $71 per square foot. Insurance values are considered to be conservative estimates since insurance companies do not need to insure certain parts of the building, such as the foundation, etc.
- Station cost data from other jurisdictions ranged from $250 per square foot to $465 per square foot.

Based on this information and discussions with the City representatives, an average value of $300 per square foot is used for stations and $90 per square foot for the vehicle storage building.

Public Buildings

For public buildings cost estimates, the following analysis was completed:

- Within the past five years, the City of Brooksville did not build any new government buildings and there are no plans to build a new facility over the next five years.
- The insurance values of primary buildings averaged $187 per square foot and support facilities $68 per square foot. As mentioned previously, insurance values are considered to be a conservative estimate since insurance companies do not need to insure certain parts of the building, such as the foundation, etc.
- Benesch supplemented the local data with cost estimates utilized in recently completed public buildings impact fee studies. This analysis reviewed data from studies conducted between 2015 and 2020, which ranged from $155 per square foot to $300 per square foot for building cost only.

Given this information, building cost is estimated at $230 per square foot for primary buildings and $80 per square foot for support buildings.

Parks and Recreational Facilities

Similar to other facilities, recreational facility values are based on the following:

- Construction cost of recently built facilities;
- Insurance values of existing facilities;
- Facility values obtained from other jurisdictions; and
- Discussions with the City representatives.

This analysis resulted in an estimate of $50,000 per acre for recreational facilities.

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/estimates for future purchases for the related infrastructure (if any);
- Land value of current inventory as reported by the Hernando County Property Appraiser (HCPA);
- Value of vacant land by size and by land use;
- Vacant land sales between 2017 and 2020 by size and by land use; and
- Discussions with the City representatives.

Fire Rescue

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

- The City did not purchase any land recently and there are no upcoming purchases at this time.
- The value of parcel where Fire Station 1 located is estimated at $144,000 per acre by HCPA.
- Vacant land sales of similarly sized parcels (1 acre to 5 acres) between 2017 and 2020 averaged $80,000 per acre with a median value of $98,000 per acre for all vacant land use types. These prices were higher for commercial properties, with an average of $93,000 per acre and a median value of $119,000 per acre.
- Similarly, the value of vacant land reported by the Property Appraiser averaged $57,000 per acre with a median value of $57,000 per acre as well for all vacant properties. For commercial properties, the average value is estimated at $97,000 per acre with a median value of $105,000 per acre.

Given this information, an average land value of **$80,000 per acre** is determined to be a reasonable estimate for fire rescue impact fee calculation purposes.

Public Buildings

The land value estimate for public buildings is based on the following:

- There were no recent purchases or estimates for upcoming purchases.
- The value of parcels where current public buildings are located averages $81,000 per acre, with a range of $24,000 per acre to $144,000 per acre.
- Vacant land sales of similarly sized parcels countywide between 2017 and 2020 averaged $80,000 per acre with a median value of $98,000 per acre for all vacant land use types.
- Similarly, the value of vacant land reported by the Property Appraiser averaged $57,000 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 the City, an average land value of **$55,000 per acre** is determined to be a reasonable, if not conservative, estimate for general government buildings impact fee calculation purposes.

Parks and Recreational Facilities

The park land value estimate is based on the following:

- There were no recent land purchases and there are no estimates for upcoming purchases.

- The value of parcels where current parks are located averaged $14,000 per acre with a median value of $35,000 per acre. Land value of Quarry is $3,200 per acre. When the value of larger parks (Tom Varn and Quarry) are excluded, the average land value of remaining two parks is $43,000 per acre with a median value of $44,000 per acre.
- Vacant land sales from 2017 to 2020 for parcels between 1 acre and 80 acres averaged $77,000 per acre with a median value of $20,000 per acre for all vacant land use types. In the case of residential properties, the average value was $57,000 per acre for the same size parcels with a median value of $11,000 per acre.
- Similarly, the value of vacant land reported by the Property Appraiser for parcels with 1 acre to 80 acres of land averaged $48,000 per acre with a median value of $29,000 per acre. When only residential parcels are considered, the average value was $23,000 per acre and the median value was $20,000 per acre.

Given this information, an average land value of **$10,000 per acre** is determined to be a reasonable estimate for park land in Brooksville for impact fee calculation purposes. This estimates reflects the dominance of parks with larger acreage, which are valued lower than others.

Appendix C
Multi-Modal Transportation Impact Fee:
Demand Component

Appendix C: MMTIF - Demand Component

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

Interstate & Toll Facility Adjustment Factor

Table C-1 presents the interstate and toll facility adjustment factor used in the calculation of the impact fee. This variable is based on data from the Tampa Bay Regional Planning Model v8.2, specifically the 2040 projected vehicle-miles of travel of all county-generated trips on all in-county roadways. It should be noted that the adjustment factor excludes all external-to-external trips, which represent traffic that goes through Hernando County, but does not necessarily stop in the county. 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 impact fee charges for each land use.

Table C-1

Interstate/Toll Facility Adjustment Factor

Roadway	VMT (2040)	% VMT
Interstate/Toll Facilities	393,377	8.1%
Other Roads	4,447,122	91.9%
Total (All Roads)	**4,840,499**	**100.0%**

Source: TBRPM v8.2, 2040

City Portion Adjustment Factor

Using the TPRPM model data, a city adjustment factor was developed to identify the percentage of travel that occurs on the city's classified roads. Map C-1 illustrates the roadways considered for this review. While not all of the "City" roads are currently classified, it is recommended that the City of Brooksville update their Comprehensive Plan to reflect these new classifications. The city portion adjustment factor of 17 percent was determined by dividing the VMT on city roads by the total city VMT, as shown in Table C-2.

Table C-2

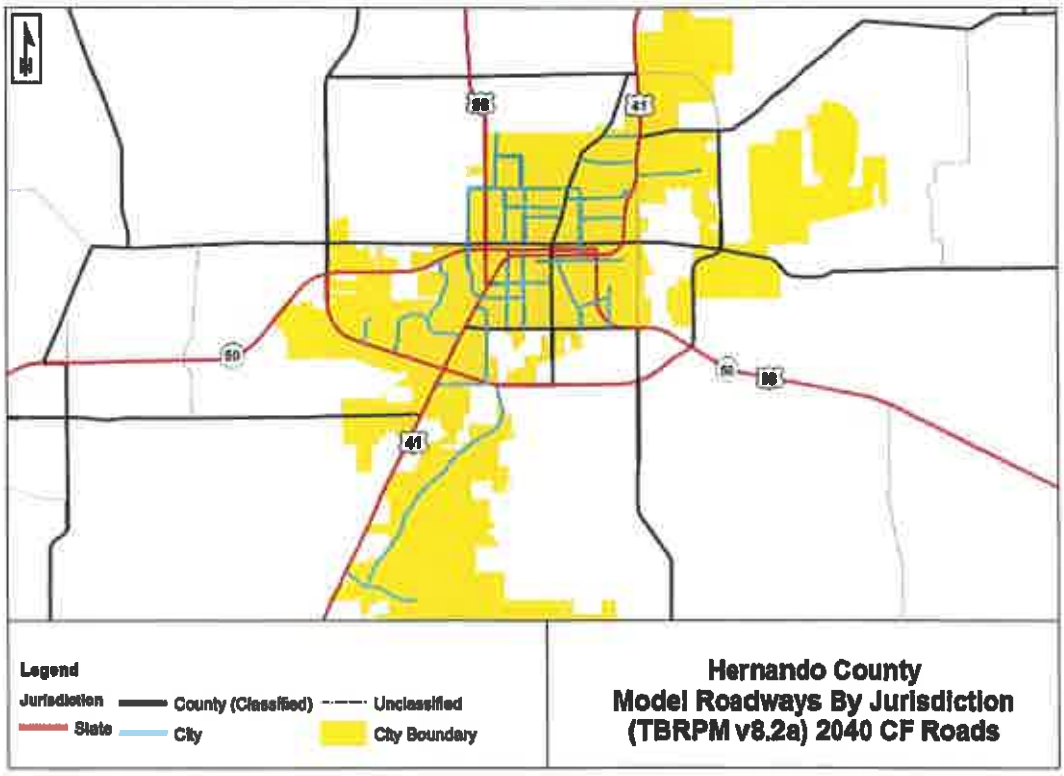
City Portion Adjustment Factor

Jurisdiction	VMT (2040)	% VMT
State	285,139	65.0%
County	78,894	18.0%
Local (Classified)	74,344	17.0%
Total (All Roads)	**438,377**	**100.0%**

Source: TBRPM v8.2, 2040. Interstate/Toll Facilities are excluded

Map C-1

City of Brooksville Roadway Classifications



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 (11th edition). In instances, when both ITE *Trip Generation* reference report 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. Tindale Oliver (now Benesch) 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 C-3

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	[illegible]	2006	-	-	[illegible]	-	-	-	-	Orange County
Orange Co, FL	84.7	2006	-	-	[illegible]	-	-	-	-	Orange County
Orange Co, FL	93.0	2006	-	-	1.5	-	-	-	-	Orange County
Orange Co, FL	107.0	2007	-	-	1.45	-	-	-	-	Orange County
Orange Co, FL	77.0	2008	-	-	[illegible]	-	-	-	-	Tindale Oliver
Orange Co, FL	[illegible]	2011	-	-	1.15	-	-	-	-	Tindale Oliver
Total Size	545.0	6		Average Trip Length:			n/a			
ITE	880.0	15		Weighted Average Trip Length:			n/a			
Blended total	1,425.0				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 C-4

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	[illegible]	-	[illegible]	-	[illegible]	Sarasota County
Sarasota Co, FL	79	Jun-93	86	86	9.77	-	4.40	-	[illegible]	Sarasota County
Sarasota Co, FL	135	Jun-93	[illegible]	75	[illegible]	-	[illegible]	-	[illegible]	Sarasota County
Sarasota Co, FL	152	Jun-93	63	63	[illegible]	-	7.30	-	[illegible]	Sarasota County
Sarasota Co, FL	193	Jun-93	123	[illegible]	6.65	-	4.60	-	31.51	Sarasota County
Sarasota Co, FL	97	Jun-93	33	[illegible]	[illegible]	-	[illegible]	-	[illegible]	Sarasota County
Sarasota Co, FL	[illegible]	Jun-93	[illegible]	[illegible]	[illegible]	-	8.40	-	[illegible]	Sarasota County
Sarasota Co, FL	[illegible]	Jun-93	207	207	7.76	-	[illegible]	-	[illegible]	Sarasota County
Hernando Co, FL	76	May-96	149	[illegible]	[illegible]	[illegible]	4.85	-	43.55	Tindale Oliver
Hernando Co, FL	[illegible]	May-96	[illegible]	205	8.27	[illegible]	6.05	-	49.27	Tindale Oliver
Hernando Co, FL	232	May-96	142	182	[illegible]	[illegible]	[illegible]	-	[illegible]	Tindale Oliver
Hernando Co, FL	[illegible]	May-96	[illegible]	[illegible]	[illegible]	[illegible]	3.28	-	[illegible]	Tindale Oliver
Charlotte Co, FL	135	Oct-97	230	-	5.30	[illegible]	[illegible]	-	43.87	Tindale Oliver
Charlotte Co, FL	142	Oct-97	245	-	5.20	[illegible]	4.10	-	[illegible]	Tindale Oliver
Charlotte Co, FL	[illegible]	Oct-97	[illegible]	-	[illegible]	[illegible]	10.80	-	[illegible]	Tindale Oliver
Charlotte Co, FL	[illegible]	Oct-97	[illegible]	-	7.60	[illegible]	[illegible]	-	[illegible]	Tindale Oliver
Charlotte Co, FL	257	Oct-97	225	-	[illegible]	[illegible]	7.40	-	[illegible]	Tindale Oliver
Charlotte Co, FL	[illegible]	Oct-97	[illegible]	-	7.00	9a-5p	6.80	-	46.20	Tindale Oliver
Charlotte Co, FL	[illegible]	Oct-97	152	-	6.80	9a-5p	[illegible]	-	37.62	Tindale Oliver
Charlotte Co, FL	[illegible]	Oct-97	518	-	[illegible]	[illegible]	5.00	-	[illegible]	Tindale Oliver
Charlotte Co, FL	441	Oct-97	[illegible]	-	[illegible]	9a-5p	[illegible]	-	[illegible]	Tindale Oliver
Charlotte Co, FL	[illegible]	Oct-97	348	-	6.10	9a-5p	8.00	-	48.80	Tindale Oliver
Collier Co, FL	90	Dec-99	91	-	[illegible]	8a-6p	11.40	-	[illegible]	Tindale Oliver
Collier Co, FL	[illegible]	Dec-99	[illegible]	-	[illegible]	8a-6p	6.40	-	[illegible]	Tindale Oliver
Lake Co, FL	49	Apr-02	[illegible]	-	6.70	7a-6p	[illegible]	-	[illegible]	Tindale Oliver
Lake Co, FL	52	Apr-02	[illegible]	-	10.00	7a-6p	[illegible]	-	76.00	Tindale Oliver
Lake Co, FL	126	Apr-02	217	-	[illegible]	7a-6p	8.30	-	[illegible]	Tindale Oliver
Pasco Co, FL	55	Apr-02	[illegible]	-	[illegible]	[illegible]	8.12	-	[illegible]	Tindale Oliver
Pasco Co, FL	60	Apr-02	[illegible]	-	7.73	[illegible]	[illegible]	-	67.64	Tindale Oliver
Pasco Co, FL	70	Apr-02	[illegible]	-	7.80	[illegible]	[illegible]	-	[illegible]	Tindale Oliver
Pasco Co, FL	74	Apr-02	[illegible]	-	[illegible]	[illegible]	5.85	-	[illegible]	Tindale Oliver
Pasco Co, FL	[illegible]	Apr-02	[illegible]	-	7.46	[illegible]	[illegible]	-	67.07	Tindale Oliver
Marion Co, FL	[illegible]	Apr-02	167	-	8.02	7a-6p	5.10	-	[illegible]	Kimley-Horn & Associates
Marion Co, FL	105	Apr-02	[illegible]	-	[illegible]	7a-6p	7.72	-	[illegible]	Kimley-Horn & Associates
Marion Co, FL	124	Apr-02	[illegible]	-	8.04	7a-6p	[illegible]	-	[illegible]	Kimley-Horn & Associates
Marion Co, FL	[illegible]	Apr-02	171	-	7.87	7a-6p	7.00	-	[illegible]	Kimley-Horn & Associates
Marion Co, FL	[illegible]	Apr-02	[illegible]	-	[illegible]	7a-6p	[illegible]	-	[illegible]	Kimley-Horn & Associates
Citrus Co, FL	111	Oct-03	[illegible]	-	[illegible]	7a-6p	[illegible]	-	[illegible]	Tindale Oliver
Citrus Co, FL	[illegible]	Oct-03	[illegible]	-	[illegible]	7a-6p	[illegible]	-	27.52	Tindale Oliver
Citrus Co, FL	[illegible]	Oct-03	[illegible]	-	[illegible]	7a-6p	[illegible]	-	[illegible]	Tindale Oliver
Citrus Co, FL	[illegible]	Oct-03	[illegible]	-	7.20	7a-6p	[illegible]	-	65.81	Tindale Oliver
Citrus Co, FL	[illegible]	Oct-03	248	-	[illegible]	7a-6p	[illegible]	-	[illegible]	Tindale Oliver
Lake Co, FL	42	Dec-06	122	-	[illegible]	-	[illegible]	-	[illegible]	Tindale Oliver
Lake Co, FL	[illegible]	Dec-06	[illegible]	-	[illegible]	-	[illegible]	-	[illegible]	Tindale Oliver
Lake Co, FL	[illegible]	Dec-06	144	-	[illegible]	-	10.79	-	[illegible]	Tindale Oliver
Lake Co, FL	90	Dec-06	[illegible]	-	9.12	-	[illegible]	-	[illegible]	Tindale Oliver
Lake Co, FL	[illegible]	Dec-06	[illegible]	-	[illegible]	-	[illegible]	-	[illegible]	Tindale Oliver
Hernando Co, FL	[illegible]	Apr-07	516	-	[illegible]	7a-6p	[illegible]	-	[illegible]	Tindale Oliver
Hernando Co, FL	[illegible]	Apr-07	[illegible]	-	[illegible]	7a-6p	[illegible]	-	[illegible]	Tindale Oliver
Hernando Co, FL	[illegible]	Apr-07	[illegible]	-	[illegible]	7a-6p	[illegible]	-	[illegible]	Tindale Oliver
Hernando Co, FL	58	Apr-07	[illegible]	-	[illegible]	7a-6p	[illegible]	-	[illegible]	Tindale Oliver
Collier Co, FL	74	Mar-08	[illegible]	-	[illegible]	7a-6p	[illegible]	-	[illegible]	Tindale Oliver
Collier Co, FL	[illegible]	Mar-08	512	-	[illegible]	7a-6p	[illegible]	-	[illegible]	Tindale Oliver
Collier Co, FL	[illegible]	Mar-08	[illegible]	-	[illegible]	7a-6p	[illegible]	-	[illegible]	Tindale Oliver
Collier Co, FL	42	Mar-08	[illegible]	-	[illegible]	7a-6p	[illegible]	-	[illegible]	Tindale Oliver
Total Size	[illegible]	55	[illegible]	Average Trip Length:			[illegible]			
				Weighted Average Trip Length:			[illegible]			

Weighted Average Trip Generation Rate: 7.81

Table C-5

LUC 215: Single Family Attached Housing

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Hernando Co. FL	31	[illegible]	31	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]
Hernando Co. FL	128	[illegible]	198	[illegible]	[illegible]	[illegible]	5.18	-	[illegible]	[illegible]
Pasco Co. FL	229	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]
Pasco Co. FL	248	[illegible]	353	[illegible]	[illegible]	[illegible]	3.53	-	[illegible]	[illegible]
Total Size	636	4	780	Average Trip Length:			6.95			
ITE	2,640	22		Weighted Average Trip Length:			7.01			
Blended total	3,276									

Weighted Average Trip Generation Rate: 4.97
ITE Average Trip Generation Rate: 7.20
Blend of FL Studies and ITE Average Trip Generation Rate: 6.77

Table C-6

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	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	-	[illegible]	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	-	[illegible]	Tindale Oliver
Lake Co. FL	169	Dec-06	[illegible]	-	8.09	-	6.00	-	48.54	Tindale Oliver
Lake Co. FL	226	Dec-06	301	-	[illegible]	-	2.17	-	[illegible]	Tindale Oliver
Hernando Co. FL	[illegible]	Apr-07	[illegible]	-	[illegible]	-	5.95	-	24.34	Tindale Oliver
Hernando Co. FL	176	Apr-07	332	-	5.38	-	5.24	-	[illegible]	Tindale Oliver
Total Size	3,467	13	2,640	Average Trip Length:			[illegible]			
				Weighted Average Trip Length:			5.21			

Table C-7

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	[illegible]	22	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]
Marion Co. FL	82	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]
Marion Co. FL	137	Jul-91	22	22	3.10	[illegible]	4.88	-	15.13	[illegible]
Sarasota Co. FL	996	Jun-93	181	181	4.19	-	4.40	-	18.44	[illegible]
Sarasota Co. FL	235	Jun-93	100	100	3.51	-	5.10	-	17.90	[illegible]
Marion Co. FL	188	Apr-02	147		3.51	24hr.	5.48	-	19.23	[illegible]
Marion Co. FL	227	[illegible]	173	-	2.76	24hr.	8.80	-	24.29	[illegible]
Marion Co. FL	297	[illegible]	175	-	4.78	24hr.	4.76	-	22.75	[illegible]
Hernando Co. FL	1,892	[illegible]	425	425	4.13	9a-6p	4.13	-	17.06	[illegible]
Total Size	4,121	9	1,303	Average Trip Length:			[illegible]			
				Weighted Average Trip Length:			[illegible]			

Weighted Average Trip Generation Rate: 4.17

Table C-8

Land Use 251: Senior Adult Housing - Detached

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Lakeland, FL	67	[illegible]	28	24	3.50	9am-4pm	2.44	-	8.54	[illegible]
Marion Co. FL	778	Apr-02	[illegible]	-	2.96	24hr.	3.49	-	10.33	Kimley Horn & Associates
Marion Co. FL	877	Apr-02	209	-	2.81	24hr.	5.80	-	17.17	Kimley Horn & Associates
Marion Co. FL	[illegible]	[illegible]	[illegible]	-	3.65	24hr.	6.00	-	21.90	Kimley Horn & Associates
Marion Co. FL	[illegible]	Apr-02	198	-	[illegible]	[illegible]	[illegible]	-	[illegible]	Kimley Horn & Associates
Marion Co. FL	[illegible]	[illegible]	[illegible]	-	2.50	24hr.	[illegible]	-	[illegible]	[illegible]
Total Size	9,477	6	945	Average Trip Length:			[illegible]			
ITE	9,690	15		Weighted Average Trip Length:			[illegible]			
Blended total	19,167									

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 C-9

Land Use 252: Senior Adult Housing - Attached

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	[illegible]	Oct-91	726	726	2.46	24hr.	-	-	-	Tindale Oliver
Total Size	208	1		Average Trip Length:			n/a			
ITE	432	6		Weighted Average Trip Length:			n/a			
Blended total	640									

Weighted Average Trip Generation Rate: 2.46
ITE Average Trip Generation Rate: 3.24
Blend of FL Studies and ITE Average Trip Generation Rate: 2.89

Table C-10

Land Use 253: Congregate Care 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	2.30	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			Average Trip Length:	2.85			
ITE	720	4				Weighted Average Trip Length:	3.09			
Blended total	992					Weighted Percent New Trip Average:		71.6		
	792									

Weighted Average Trip Generation Rate: 3.50
ITE Average Trip Generation Rate: 2.21
Blend of FL Studies and ITE Average Trip Generation Rate: 2.33

Table C-11

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	17.80	7-11a/1-7p	8.30	79.0	82.21	Tindale Oliver
Pinellas Co, FL	114	Oct-89	50	14	7.90	11-7p	8.20	47.0	21.17	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	-	-	5.97	-	-	-	-	Orange County
Orange Co, FL	172	1997	-	-	6.36	-	-	-	-	Orange County
Orange Co, FL	170	1997	-	-	6.06	-	-	-	-	Orange County
Orange Co, FL	178	1997	-	-	6.10	-	-	-	-	Orange County
Orange Co, FL	200	1997	-	-	4.53	-	-	-	-	Orange County
Orange Co, FL	112	1998	-	-	3.73	-	-	-	-	Orange County
Orange Co, FL	150	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	170	1999	-	-	5.57	-	-	-	-	Orange County
Orange Co, FL	70	1999	-	-	1.83	-	-	-	-	Orange County
Orange Co, FL	121	1999	-	-	4.61	-	-	-	-	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	-	-	3.25	-	-	-	-	Orange County
Orange Co, FL	891	2005	-	-	4.69	-	-	-	-	Orange County
Orange Co, FL	1,584	2005	-	-	5.89	-	-	-	-	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	-	-	-	7.41	-	-	-	-	Orange County
Orange Co, FL	160	-	-	-	6.19	-	-	-	-	Orange County
Orange Co, FL	130	-	-	-	4.23	-	-	-	-	Orange County
Orange Co, FL	130	-	-	-	3.40	-	-	-	-	Orange County
Orange Co, FL	144	-	-	-	7.84	-	-	-	-	Orange County
Orange Co, FL	100	-	-	-	7.37	-	-	-	-	Orange County
Orange Co, FL	100	-	-	-	4.71	-	-	-	-	Orange County
Orange Co, FL	1,501	2012	-	-	3.50	-	-	-	-	Tindale Oliver
Orange Co, FL	174	2011	-	-	7.83	-	-	-	-	Tindale Oliver
Orange Co, FL	238	2014	-	-	4.05	-	-	-	-	Tindale Oliver
Total Size	10,184	36	164			Average Trip Length:	6.71			
ITE	1,036	7				Weighted Average Trip Length:	6.28			
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
Blend of FL Studies and ITE Average Trip Generation Rate: 5.56

Table C-12

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	45	21	-	10a-2p	2.80	65.0	-	Tindale Oliver
Pinellas Co, FL	54	Oct-89	32	22	-	12p-7p	3.60	69.0	-	Tindale Oliver
Pinellas Co, FL	120	Oct-89	26	22	-	2p-7p	5.20	84.5	-	Tindale Oliver
Total Size	222	3	104			Average Trip Length:	3.88			
ITE	654	8				Weighted Average Trip Length:	4.34			
						Weighted Percent New Trip Average:		76.6		

Table C-13

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	Dec-89	153	116	113.30	2p-9p	2.70	77.0	175.17	Tindale Oliver
Pinellas Co, FL	12	Nov-89	122	112	43.00	2p-9p	1.90	95.2	[illegible]	Tindale Oliver
Total Size	20	2	275			Average Trip Length:	3.30			
ITE	6	1				Weighted Average Trip Length:	2.21			
Blended total	26					Weighted Percent New Trip Average:		87.8		

Weighted Average Trip Generation Rate: 89.25
ITE Average Trip Generation Rate: 220.00
Blend of FL Studies and ITE Average Trip Generation Rate: 114.83

Table C-14

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			Average Trip Length:	n/a			
ITE	37	8				Percent New Trip Average:		94.0		

Table C-15

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	3.6	Aug-89	94	66	66.99	7a-6p	1.80	70.0	89.28	Tindale Oliver
Pinellas Co, FL	10.0	Sep-89	179	134	66.99	7a-6p	2.10	75.0	328.52	Tindale Oliver
Tampa, FL	-	Mar-86	28	25	-	-	2.60	89.0	-	Kimley-Horn & Associates
Total Size	13.6	3	301			Average Trip Length:	2.20			
ITE	135.0	27				Weighted Average Trip Length:	2.03			
Blended total	130.6					Weighted Percent New Trip Average:		73.2		
								Weighted Average Trip Generation Rate:		66.99
								ITE Average Trip Generation Rate:		47.62
								Blend of FL Studies and ITE Average Trip Generation Rate:		48.63

Table C-16

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
Lewisville, FL	120	Mar-89	74	66	2.86	11a-4p	2.30	89.0	6.58	Tindale Oliver
Total Size	120	1	74			Average Trip Length:	2.30			
ITE	480	3				Weighted Average Trip Length:	2.30			
Blended total	600					Weighted Percent New Trip Average:		89.0		
								Weighted Average Trip Generation Rate:		2.86
								ITE Average Trip Generation Rate:		1.06
								Blend of FL Studies and ITE Average Trip Generation Rate:		3.02

Table C-17

Land Use 630: Clinic

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	103.9	Aug-89	614	572	37.03	7a-4p	5.10	93.0	175.59	Tindale Oliver
St. Petersburg, FL	-	Oct-89	280	252	-	9a-5p	4.10	90.0	-	Tindale Oliver
Total Size	103.9	2	894			Average Trip Length:	4.60			
ITE	180.0	9				Weighted Average Trip Length:	5.00			
	283.9					Weighted Percent New Trip Average:		93.0		
								Weighted Average Trip Generation Rate:		37.03
								ITE Average Trip Generation Rate:		37.80
								Blend of FL Studies and ITE Average Trip Generation Rate:		37.80

Table C-18

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	7a-6p	11.30	-	529.41	Sarasota County
Gwinnett Co, GA	98.0	Dec-92	-	-	4.30	-	3.90	-	-	Street Smarts
Gwinnett Co, GA	140.0	Dec-92	-	-	3.80	-	3.80	-	-	Street Smarts
Pinellas Co, FL	187.0	Oct-89	431	388	18.49	7a-6p	6.80	91.0	116.84	Tindale Oliver
St. Petersburg, FL	262.8	Sep-89	291	274	-	7a-6p	3.40	84.0	-	Tindale Oliver
Total Size	742.1	5	736			Average Trip Length:	6.86			
ITE	9,617.0	59				Weighted Average Trip Length:	5.14			
						Weighted Percent New Trip Average:		92.3		

Table C-19

Site	Size (1,000 sf)	Tues., Jan 11		Wedn., Jan 12		Thurs., 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
Average												17.59	17.71	35.30
Average excluding Site 4												11.84	11.99	23.83

Table C-20

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	[illegible]	-	-	4.0[illegible]	79.0	-	Kimley-Horn & Associates
Palm Harbor, FL	14.6	Oct-89	104	78	[illegible]	9a-5p	6.30	73.0	156.27	Tindale Oliver
St. Petersburg, FL	-	Nov-89	34	[illegible]	57.[illegible]	9a-4p	1.20	88.0	-	Tindale Oliver
Hernando Co, FL	58.4	May-96	290	349	28.52	9a-4p	6.47	84.5	[illegible]	Tindale Oliver
Hernando Co, FL	29.9	May-96	202	[illegible]	[illegible]	9a-4p	6.06	95.8	[illegible]	Tindale Oliver
Charlotte Co, FL	11.0	Oct-97	-	[illegible]	49.50	9a-5p	4.60	92.1	[illegible]	Tindale Oliver
Charlotte Co, FL	28.8	Oct-97	-	168	31.00	9a-5p	3.60	[illegible]	91.04	Tindale Oliver
Charlotte Co, FL	30.4	Oct-97	-	[illegible]	39.60	9a-5p	[illegible]	83.5	[illegible]	Tindale Oliver
Citrus Co, FL	38.3	Oct-03	-	168	32.26	9-4p	6.80	97.1	213.03	Tindale Oliver
Citrus Co, FL	10.[illegible]	Nov-03	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Tindale Oliver
Citrus Co, FL	5.3	Dec-03	-	30	[illegible]	8-5p	5.25	[illegible]	[illegible]	Tindale Oliver
Orange Co, FL	[illegible]	2009	-	-	[illegible]	-	-	-	-	Orange County
Orange Co, FL	23.5	2010	-	-	16.58	-	-	-	-	Tindale Oliver
Total Size	298.6	13	763			Average Trip Length:	[illegible]			
ITE	270.0	16				Weighted Average Trip Length:	[illegible]			
Blended total	568.6					Weighted Percent New Trip Average:		88.4		

Average Trip Generation Rate: 32.59
ITE Average Trip Generation Rate: 36.00
Blend of FL Studies and ITE Average Trip Generation Rate: 34.21

Table C-21

Land Use 812: Building Materials and Lumber Store

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	86.9	Jun-91	[illegible]	-	-	[illegible]	[illegible]	73.0	-	Tindale Oliver
Tampa, FL	[illegible]	Jun-91	40	-	-	[illegible]	6.00	-	-	Tindale Oliver
Tampa, FL	-	Jun-91	[illegible]	-	-	[illegible]	[illegible]	75.7	-	Tindale Oliver
Total Size	183.4	3	170			Average Trip Length:	[illegible]			
ITE	234.0	15				Weighted Average Trip Length:	[illegible]			
						Weighted Percent New Trip Average:		74.4		

Table C-22

Land Use 813: Free-Standing Discount Superstore

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Citrus Co, FL	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Tindale Oliver
Total Size	703.6	1				Average Trip Length:	[illegible]			
ITE	13,[illegible]	72				Weighted Average Trip Length:	[illegible]			
Blended total	14,[illegible]					Weighted Percent New Trip Average:		91.8		

Average Trip Generation Rate: 55.01
ITE Average Trip Generation Rate: 50.52
Blend of FL Studies and ITE Average Trip Generation Rate: [illegible]

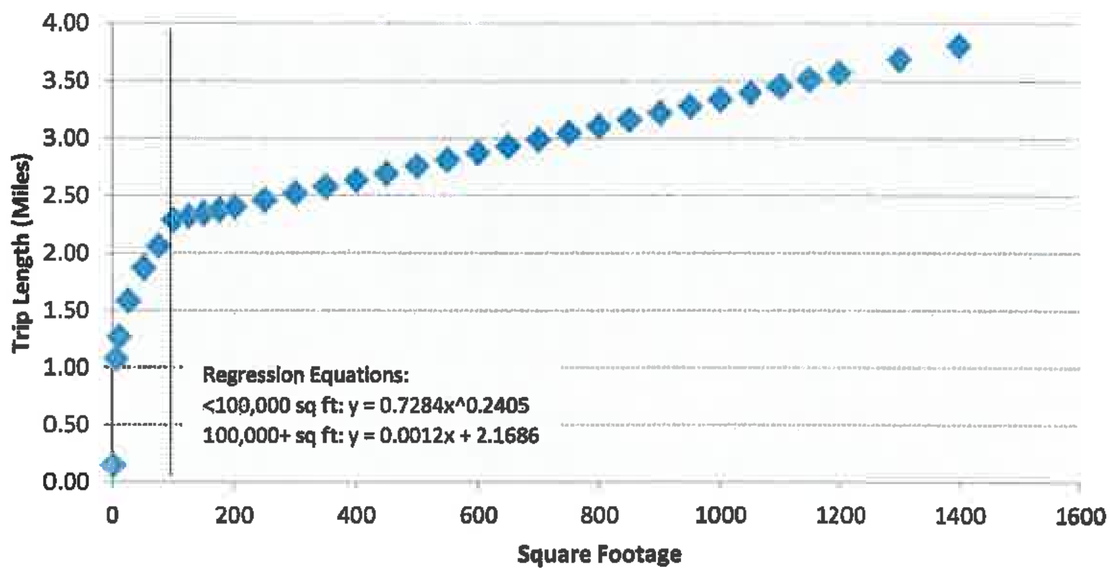
Table C-23

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	[illegible]	[illegible]			–	[illegible]		Kimley-Horn & Associates
Tampa, FL	–	Mar-86	170	-	–	-	[illegible]	-		Kimley-Horn & Associates
Tampa, FL	–	Mar-86	[illegible]	269	–	-	-	76.[illegible]	–	Kimley-Horn & Associates
Tampa, FL	[illegible]	Mar-86	144	-	–	-	2.50	-		Kimley-Horn & Associates
St. Petersburg, FL	[illegible]	[illegible]	[illegible]	288	–	11a-7p	[illegible]	78.0	[illegible]	Tindale Oliver
St. Petersburg, FL	132.3	[illegible]	400	[illegible]	[illegible]	10a-7p	1.80	[illegible]	[illegible]	Tindale Oliver
Largo, FL	[illegible]	[illegible]	160	120	26.73	10a-[illegible]	[illegible]	75.0	46.11	Tindale Oliver
Dunedin, FL	80.5	[illegible]	276	210	81.48	9a-5p	1.40	76.0	86.69	Tindale Oliver
Pinellas Park, FL	696.0	Sep-[illegible]	485	388	–	9a-6p	3.20	80.0		Tindale Oliver
Seminole, FL	425.0	Oct-[illegible]	674	586	–	-	-	[illegible]		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.[illegible]		Tindale Oliver
Sarasota/Bradenton, FL	109.0	[illegible]-92	300	185	–	11a-6p		61.6		King Engineering Associates, Inc.
Ocala, FL	[illegible]	[illegible]	300	[illegible]	-	12a-6p	-	[illegible]		King Engineering Associates, Inc.
Gwinnett Co, GA	99.1	[illegible]	-	-	46.00	-	[illegible]	70.0	[illegible]	Street Smarts
Gwinnett Co, GA	[illegible]	[illegible]	-	-	27.00	-	-	[illegible]	–	Street Smarts
Sarasota Co, FL	110.0	Jun-[illegible]	58	58	122.14	-	[illegible]	–		Sarasota County
Sarasota Co, FL	146.1	Jun-93	65	65	51.53		2.80	–		Sarasota County
Sarasota Co, FL	157.3	Jun-93	57	57	79.79	-	1.40	-	–	Sarasota County
Sarasota Co, FL	[illegible]	Jun-93	61	62	66.79	-	5.90	-	–	Sarasota County
Hernando Co, FL	107.8	May-96	808	331	77.60	9a-[illegible]	4.68	54.5	197.65	Tindale Oliver
Charlotte Co, FL	88.0	Oct-97	–	-	73.50	9a-[illegible]	1.80	57.1	75.56	Tindale Oliver
Charlotte Co, FL	191.9	Oct-97	-	-	[illegible]	9a-[illegible]	2.40	50.9	87.97	Tindale Oliver
Charlotte Co, FL	51.3	Oct-97	-	-	43.00	9a-[illegible]	2.70	51.8	60.08	Tindale Oliver
Lake Co, FL	67.8	Apr-[illegible]	246	177	102.60	-	3.40	71.2	248.37	Tindale Oliver
Lake Co, FL	72.3	Apr-[illegible]	444	376	65.30	-	4.50	59.0	173.37	Tindale Oliver
Pasco Co, FL	[illegible]	Apr-[illegible]	222	-	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Tindale Oliver
Pasco Co, FL	75.6	Apr-[illegible]	[illegible]	-	38.[illegible]	[illegible]	[illegible]	58.2	[illegible]	Tindale Oliver
Citrus Co, FL	[illegible]	Oct-[illegible]	-	784	55.84	8a-[illegible]	2.40	88.[illegible]	118.05	Tindale Oliver
Citrus Co, FL	91.3	Nov-03	-	390	54.30	8a-[illegible]	1.60	88.0	76.77	Tindale Oliver
Bozeman, MT	104.3	Dec-06	359	359	46.98	-	3.35	49.0	77.08	Tindale Oliver
Bozeman, MT	159.9	Dec-06	502	501	56.49	-	1.56	54.0	47.59	Tindale Oliver
Bozeman, MT	35.9	Dec-06	329	329	69.30	-	1.39	74.0	71.28	Tindale Oliver
Total Size	5,757.5	35	7,536		Average Trip Length:		2.66			

Figure C-1

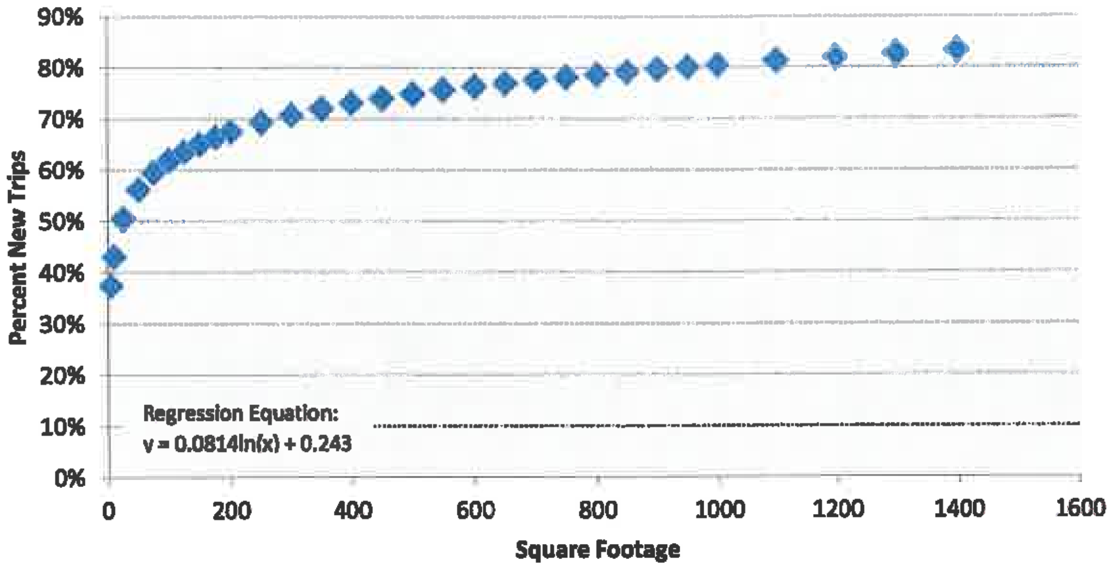
LUC 820/821/822: Retail/Shopping Center – Florida Curve Trip Length Regression



Source: Regression analysis based on FL Studies data for LUC 820/821/822

Figure C-2

LUC 820/821/822: Retail/Shopping Center – Florida Curve Percent New Trips Regression



Source: Regression analysis based on FL Studies data for LUC 820/821/822

Table C-24

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	312	170	-	9a-5p	4.70	79.0	-	Tindale Oliver
Clearwater, FL	44.6	Oct-89	210	106	20.40	9a-5p	4.50	78.0	101.10	Tindale Oliver
Orange Co, FL	23.8	1997	-	-	35.75	-	-	-	-	Orange County
Orange Co, FL	34.4	1998	-	-	19.61	-	-	-	-	Orange County
Orange Co, FL	46.3	2001	-	-	28.50	-	-	-	-	Orange County
Orange Co, FL	39.1	2002	-	-	10.48	-	-	-	-	Orange County
Orange Co, FL	116.7	2003	-	-	21.18	-	-	-	-	Orange County
Orange Co, FL	51.7	2007	-	-	40.84	-	-	-	-	LTEC
Orange Co, FL	36.6	-	-	-	15.17	-	-	-	-	Orange County
Orange Co, FL	218.0	2006	-	-	23.41	-	-	-	-	Orange County

Total Size	618.0	10	288
ITE (840)	648.0	18	
ITE (841)	28.0	14	
Blended total	1,294.0		

Average Trip Length:	4.60
Weighted Average Trip Length:	4.60
Weighted Percent New Trip Average:	78.5
Weighted Average Trip Generation Rate:	21.04
ITE Average Trip Generation Rate (LUC 840):	27.84
ITE Average Trip Generation Rate (LUC 841):	17.06
Blend of FL Studies and ITE Average Trip Generation Rate:	24.58

Table C-25

Land Use 850: Supermarket

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Palm Harbor, FL	62.0	Aug-07	163	62	106.26	4p-6p	2.08	86.0	121.77	Tindale Oliver

Total Size	62.0	1	163
ITE	1,144.0	22	
Blended total	1,206.0		

Average Trip Length:	2.08
Weighted Average Trip Length:	2.08
Weighted Percent New Trip Average:	86.0
Weighted Average Trip Generation Rate:	106.26
ITE Average Trip Generation Rate:	93.84
Blend of FL Studies and ITE Average Trip Generation Rate:	94.48

Table C-26

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	[illegible]	138	38	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Tindale Oliver
Pasco Co., FL	12.0	[illegible]	212	90	122.16	-	2.04	42.5	105.79	Tindale Oliver
Pasco Co., FL	15.1	[illegible]	1192	[illegible]	97.36	[illegible]	[illegible]	28.1	58.69	Tindale Oliver
Total Size	38.2	3	1,542			Average Trip Length:	[illegible]			
ITE (LUC 880)	66.0	6				Weighted Average Trip Length:	[illegible]			
ITE (LUC 881)	208.0	16				Weighted Percent New Trip Average:		52.4		
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
Blend of FL Studies and ITE Average Trip Generation Rate:	103.88

Table C-27

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
[illegible], FL	[illegible]	[illegible]	64	34			4.63	52.5	-	Tindale Oliver
Tampa, FL	16.9	Jul-92	68	39			7.38	[illegible]	-	Tindale Oliver
Total Size	31.90	2	132			Average Trip Length:	6.01			
ITE	779.0	19				Weighted Average Trip Length:	6.08			
Blended total	810.90					Weighted Percent New Trip Average:		54.2		

Table C-28

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	-	[illegible]	77	-	-	-	[illegible]	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	211	-	-	-	-	54.0	-	Kimley-Horn & Associates
Clearwater, FL	0.4	Aug-89	113	52	-	9a-4p	5.20	46.0	-	Tindale Oliver
Largo, FL	2.0	Sep-89	129	94	-	-	1.60	73.0	-	Tindale Oliver
Seminole, FL	[illegible]	Oct-89	-	-	-	-	-	-	-	Tindale Oliver
Marion Co., FL	2.3	Jun-91	69	29	-	24hr.	[illegible]	42.0	-	Tindale Oliver
Marion Co., FL	[illegible]	Jun-91	[illegible]	[illegible]	-	24hr.	1.75	[illegible]	-	Tindale Oliver
Marion Co., FL	[illegible]	Jul-91	57	26	-	[illegible]	[illegible]	45.6	-	Tindale Oliver
Collier Co., FL	-	Aug-91	182	56	-	[illegible]	0.88	59.3	-	Tindale Oliver
Collier Co., FL	-	Aug-91	[illegible]	[illegible]	-	-	1.38	[illegible]	-	Tindale Oliver
Collier Co., FL	-	Aug-91	142	68			[illegible]	47.8	-	Tindale Oliver
Hernando Co., FL	5.4	May-96	164	41	-	9a-4p	2.77	24.7	-	Tindale Oliver
Marion Co., FL	2.4	[illegible]	70	-	-	24hr.	3.55	54.6	-	Kimley-Horn & Associates
Marion Co., FL	2.7	[illegible]	50	-	246.66	24hr.	[illegible]	40.5	265.44	Kimley-Horn & Associates
Total Size	25.2	14	1,407			Average Trip Length:	2.38			
ITE	114.0	39				Weighted Average Trip Length:	2.49			
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
Blend of FL Studies and ITE Average Trip Generation Rate:	103.73

Table C-29

Land Use 931: Fine Dining 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	[illegible]	-	-	[illegible]	[illegible]	-	Kimley-Horn & Associates
St. Petersburg, FL	7.5	Oct-89	177	154	-	[illegible]	3.50	[illegible]	-	Tindale Oliver
Clearwater, FL	8.0	Oct-89	60	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Tindale Oliver
Total Size	15.5	3	313			Average Trip Length:	[illegible]			
ITE	90.0	10				Weighted Average Trip Length:	[illegible]			
Blended total	105.5					Weighted Percent New Trip Average:		76.7		
	99.0									

Weighted Average Trip Generation Rate:	110.63
ITE Average Trip Generation Rate:	83.84
Blend of FL Studies and ITE Average Trip Generation Rate:	86.03

Table C-30

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	6.1	[illegible]	242	175	187.51	9a-6p	2.75	72.1	[illegible]	Tindale Oliver
Hernando Co., FL	8.2	1996	154	93	[illegible]	9a-6p	4.15	60.2	258.43	Tindale Oliver
St. Petersburg, FL	5.0	1989	74	88	132.60	11:30-7p	2.00	92.0	[illegible]	Tindale Oliver
Kenneth City, FL	5.2	1989	238	175	117.88	4p-7:30p	[illegible]	71.9	[illegible]	Tindale Oliver
Pasco Co., FL	5.1	2002	134	88	82.47	9a-9p	3.71	77.1	235.81	Tindale Oliver
Pasco Co., FL	5.8	2002	182	102	116.87	9a-9p	3.41	56.5	225.77	Tindale Oliver
Orange Co., FL	8.0	1996	-	-	135.98	-	-	-	-	Orange County
Orange Co., FL	4.7	1996	-	-	132.32	-	-	-	-	Orange County
Orange Co., FL	11.2	1998	-	-	[illegible]	-	-	-	-	Orange County
Orange Co., FL	7.0	1998	-	-	126.40	-	-	-	-	Orange County
Orange Co., FL	4.6	1998	-	-	[illegible]	-	-	-	-	Orange County
Orange Co., FL	7.4	1998	-	-	147.44	-	-	-	-	Orange County
Orange Co., FL	6.7	1998	-	-	[illegible]	-	-	-	-	Orange County
Orange Co., FL	11.1	2000	-	-	[illegible]	-	-	-	-	Orange County
Orange Co., FL	7.3	2000	-	-	[illegible]	-	-	-	-	Orange County
Orange Co., FL	11.4	2001	-	-	81.67	-	-	-	-	Orange County
Orange Co., FL	9.8	2001	-	-	145.59	-	-	-	-	Orange County
Orange Co., FL	5.5	-	-	-	[illegible]	-	-	-	-	Orange County
Orange Co., FL	11.0	-	-	-	82.12	-	-	-	-	Orange County
Orange Co., FL	10.4	-	-	-	[illegible]	-	-	-	-	Orange County
Orange Co., FL	5.9	-	-	-	147.74	-	-	-	-	Orange County
Orange Co., FL	8.9	[illegible]	-	-	[illegible]	-	-	-	-	Orange County
Orange Co., FL	8.7	2010	-	-	105.84	-	-	-	-	Orange County
Orange Co., FL	9.5	[illegible]	-	-	[illegible]	-	-	-	-	Orange County
Orange Co., FL	11.2	[illegible]	-	-	[illegible]	-	-	-	-	Orange County
Total Size	194.8	25	1,102		Average Trip Length:		3.07			
ITE	250.0	50			Weighted Average Trip Length:		3.17			
Blended total	444.8									

Weighted Percent New Trip Average: 70.6

Weighted Average Trip Generation Rate: 98.67

ITE Average Trip Generation Rate: 107.20

Blend of FL Studies and ITE Average Trip Generation Rate: 103.46

Table C-31

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	[illegible]	-	-	-	2.70	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	[illegible]	-	-	-	-	65.0	-	Kimley-Horn & Associates
Pinellas Co., FL	2.20	Aug-89	81	48	502.80	11a-2p	1.70	58.0	304.31	Tindale Oliver
Pinellas Co., FL	4.30	Oct-89	[illegible]	260	[illegible]	1 day	2.30	57.0	[illegible]	Tindale Oliver
Tarpon Springs, FL	-	Oct-89	[illegible]	114	-	7a-7p	[illegible]	49.0	-	Tindale Oliver
Marion Co., FL	1.60	Jun-91	60	32	962.50	48hrs	[illegible]	[illegible]	[illegible]	Tindale Oliver
Marion Co., FL	4.00	Jun-91	75	46	625.00	48hrs	[illegible]	61.1	580.01	Tindale Oliver
Collier Co., FL	-	Aug-91	66	44	-	-	1.91	66.7	-	Tindale Oliver
Collier Co., FL	-	Aug-91	[illegible]	40	-	-	[illegible]	[illegible]	-	Tindale Oliver
Hernando Co., FL	[illegible]	May-96	136	82	[illegible]	9a-6p	[illegible]	[illegible]	315.27	Tindale Oliver
Hernando Co., FL	[illegible]	May-96	180	97	[illegible]	9a-6p	1.59	48.8	[illegible]	Tindale Oliver
Orange Co., FL	[illegible]	1996	-	-	[illegible]	-	-	-	-	Orange County
Lake Co., FL	[illegible]	Apr-01	[illegible]	252	[illegible]	-	[illegible]	[illegible]	1742.47	Tindale Oliver
Lake Co., FL	3.20	Apr-01	171	[illegible]	[illegible]	-	-	47.8	-	Tindale Oliver
Lake Co., FL	[illegible]	Apr-01	[illegible]	[illegible]	[illegible]	-	[illegible]	[illegible]	[illegible]	Tindale Oliver
Pasco Co., FL	[illegible]	Mar-02	[illegible]	45	283.12	7a-6p	-	[illegible]	-	Tindale Oliver
Pasco Co., FL	[illegible]	Apr-02	[illegible]	164	545.32	9a-6p	2.72	33.7	472.92	Tindale Oliver
Pasco Co., FL	4.42	Apr-02	168	[illegible]	[illegible]	9a-6p	[illegible]	71.4	1024.99	Tindale Oliver
Hernando Co., FL	[illegible]	Apr-07	[illegible]	-	640.74	7a-6p	2.12	[illegible]	[illegible]	Tindale Oliver
Hernando Co., FL	[illegible]	Apr-07	115	-	[illegible]	7a-6p	3.14	81.0	1512.25	Tindale Oliver
Hernando Co., FL	[illegible]	Apr-07	318	-	[illegible]	7a-6p	[illegible]	77.0	[illegible]	Tindale Oliver
Hernando Co., FL	4.47	Apr-07	[illegible]	-	458.17	7a-6p	[illegible]	[illegible]	[illegible]	Tindale Oliver
Total Size	60.6	72	4,463		Average Trip Length:		[illegible]			
ITE	213.0	71			Weighted Average Trip Length:		[illegible]			
Blended total	273.6									
	46.0									

Weighted Percent New Trip Average: 62.2

Weighted Average Trip Generation Rate: [illegible]

ITE Average Trip Generation Rate: 467.48

Blend of FL Studies and ITE Average Trip Generation Rate: [illegible]

Table C-32

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
Tampa, FL	5.5	[illegible]	[illegible]	[illegible]	[illegible]	9a-5p	[illegible]	[illegible]	[illegible]	Tindale Oliver
Jacksonville, FL	2.3	[illegible]	[illegible]	[illegible]	-	9a-5p	[illegible]	[illegible]	-	Tindale Oliver
Jacksonville, FL	[illegible]	[illegible]	[illegible]	74	-	9a-5p	[illegible]	[illegible]	-	Tindale Oliver
Jacksonville, FL	[illegible]	[illegible]	132	[illegible]	-	9a-5p	[illegible]	66.0	-	Tindale Oliver
Lakeland, FL	5.2	[illegible]	[illegible]	14	-	9a-4p	[illegible]	[illegible]	-	Tindale Oliver
Lakeland, FL	-	Mar-90	54	[illegible]	-	9a-4p	[illegible]	78.0	-	Tindale Oliver
Orange Co., FL	25.0	Nov-92	41	[illegible]	-	[illegible]	[illegible]	-	-	ICE, Inc.
Orange Co., FL	36.6	-	-	-	15.17	-	-	-	-	Orange County
Orange Co., FL	7.0	-	-	-	[illegible]	-	-	-	-	Orange County
Total Size	[illegible]	9	517		Average Trip Length:		[illegible]			
ITE	102.0	6			Weighted Average Trip Length:		[illegible]			
Blended total	188.2									
	151.1									

Weighted Percent New Trip Average: 72.2

Weighted Average Trip Generation Rate: 22.14

ITE Average Trip Generation Rate (adjusted): 31.10

Blend of FL Studies and ITE Average Trip Generation Rate: [illegible]

Table C-33

Land Use 944/945: Gasoline/Service 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-91	70	14	-	6am-7pm	1.80	23.0		Tindale Oliver
Collier Co. FL	-	Aug-91	168	40	-	-	1.01	23.0		Tindale Oliver
Total Size	0.6	2	238			Average Trip Length:	1.41			
						Weighted Average Trip Length:	1.00			
						Weighted Percent New Trip Average:		23.0		

Table C-34

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-91	111	80	-	6am-7pm	2.00	70.0	-	Tindale Oliver
Clearwater, FL	-	Nov-91	177	108	-	10am-5pm	1.30	61.0	-	Tindale Oliver
Collier Co. FL	11	Dec-99	304	-	80.24	-	2.50	57.0	-	Tindale Oliver
Collier Co. FL	8	Jul-99	186	-	22.75	-	1.96	71.0	-	Tindale Oliver
Total Size	29	4	778			Average Trip Length:	1.94			
Total Size (TOH)	19	2				Weighted Average Trip Length:	1.38			
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:		168.00
								Blend of FL Studies and ITE Average Trip Generation Rate:		43.94

Table C-35

Land Use N/A: Gasoline/Fast Food/Convenience Store

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Volusia Co. FL	-	-	-	-	318.00	-	2.40	33.0	727.06	Tindale Oliver
Indian River Co. FL	2.5	Mar-98	132	52	748.30	8a-6p	3.70	19.7	545.64	Tindale Oliver
Indian River Co. FL	3.0	Mar-98	107	84	563.10	8a-6p	2.00	39.3	442.60	Tindale Oliver
Indian River Co. FL	3.1	Mar-98	132	110	1,396.00	8a-6p	1.80	41.7	1,047.83	Tindale Oliver
Collier Co. FL	2.4	Nov-99	-	128	1,399.58	8a-6p	4.10	13.3	763.19	Tindale Oliver
Collier Co. FL	3.3	Nov-99	-	144	862.56	8a-6p	2.20	38.6	751.96	Tindale Oliver
Total Size	14.3	6	371			Average Trip Length:	2.70			
						Weighted Average Trip Length:	2.83			
						Weighted Percent New Trip Average:		32.1		
								Weighted Average Trip Generation Rate:		984.59

Appendix D
Multi-Modal Transportation Impact Fee:
Cost Component

Appendix D: MMTIF - Cost Component

This appendix presents the detailed calculations for the cost component of the multi-modal 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
- Transit Capital Costs

It should be noted that the cost estimates developed for this impact fee study reflect a large sample size from several communities for projects bid/completed since 2013. When compared to the smaller sample of improvements observed over the last two to three years, the data and estimates used in this study represent a conservative approach.

Curb & Gutter vs. Open Drainage

To determine the weighted average cost per lane mile for open drainage designed roadways, an adjustment factor was applied to the curb & gutter cost estimate. This factor was based on the design cost ratio from the most recent District 7 Long Range Estimates (LRE) provided by FDOT. Based on the LRE, the cost for open drainage-design roadway capacity expansion (new road construction or lane addition) is approximately 76 percent of the cost of curb & gutter-design roadway improvements.

Table D-1

Curb & Gutter vs. Open Drainage 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%
Average	**$4,049,786**	**$5,320,400**	**76%**

Source: FDOT District 7 Long Range Estimates, 2021

Design

County Roadways

The design 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 design-to-construction cost ratios from previously completed transportation impact fee studies throughout Florida. As shown in Table D-2, recent design factors ranged from 10 percent to 13 percent with a weighted average of 11 percent. For purposes of this study, the design cost for county roads was calculated at 11 percent of the construction cost per lane mile.

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 design-to-construction cost ratios from previously completed roads/transportation impact fee studies throughout Florida. As shown in Table D-2, 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 D-2

Design Cost Factor for County and State Roads – Recent Impact Fee Studies

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	$1,668,000	10%	$227,000	$2,060,000	11%
2015	Palm Beach	$224,000	$1,759,000	13%	$333,000	$3,029,000	11%
2016	Hillsborough	$348,000	$2,897,000	12%	$319,000	$2,897,000	11%
2017	St. Lucie	$220,000	$2,200,000	10%	$341,000	$3,100,000	11%
2017	Clay	$239,000	$2,385,000	10%	-	-	n/a
2018	Collier	$385,000	$3,500,000	11%	$385,000	$3,500,000	11%
Average		$240,167	$2,250,833	11%	$288,553	$2,660,500	11%

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 are necessary to have sufficient cross-section width to widen an existing road or, in the case of new construction, build a new road.

County Roadways

Given the limited data for ROW costs on county roads in Hernando County, the ROW-to-construction ratio was based on several recently completed transportation impact fee studies throughout Florida. As shown in Table D-3, ratios for county roads ranged from 32 percent to 60 with an average of 42 percent. For purposes of this update study, the ROW cost was estimated at 40 percent of the construction cost per lane mile for county roadways.

State Roadways

Similar to county roads, the ROW-to-construction ratio for state roads was based on several recently completed transportation impact fee studies throughout Florida. As shown in Table D-3, ratios for state roads ranged from 32 percent to 60 percent with an average of 43 percent. For purposes of this update study, the ROW cost was estimated at 40 percent of the construction cost per lane mile for state roadways.

Table D-3

Right-of-Way Cost Factor for County and State Roads – Recent Impact Fee Studies

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%
2016	Hillsborough	$1,448,000	$2,897,000	50%	$1,448,000	$2,897,000	50%
2017	St. Lucie	$990,000	$2,200,000	45%	$1,395,000	$3,100,000	45%
2017	Clay	$954,000	$2,385,000	40%	-	-	n/a
2018	Collier	$1,208,000	$3,500,000	35%	$1,208,000	$3,500,000	35%
Average		$944,983	$2,250,833	42%	$1,128,687	$2,616,000	43%

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 two improvements provided by Hernando County. These improvements include a recently bid improvement and an estimate for future consideration:

- Cortez Blvd Frontage Rd @ I-75
- Barclay Avenue from San Antonio Road to Powell Rd/Elgin Blvd

The Cortez Blvd improvement includes a curb & gutter design with a construction cost of $1.67 million per lane mile, which reflects the lower costs associated with frontage roads. The Barclay Avenue project features an open drainage design with a construction cost estimate of $2.73 million per lane mile. These local projects were supplemented with recent improvements from other communities in Florida to increase the sample size in estimating the construction cost for impact fee purposes.

Curb & Gutter Design

As shown in Table D-4, this review included approximately 155 lane miles of improvements across 13 different counties (including Hernando County). These improvements were summarized based on the county land use and demographic characteristics (urban vs suburban/rural in nature). For purposes of this analysis, Hernando County was considered a "suburban/rural" county with urban counties consisting of Broward, Hillsborough, Miami-Dade, Orange, and Palm Beach Counties. The suburban/rural counties experienced a weighted average cost of $2.80

million (excluding Hernando County), or $2.78 million (including Hernando County), for curb & gutter improvements.

Based on a review of the local projects, statewide projects, and discussions with County representatives, a construction cost of **$2.80 million per lane mile** for county roads (curb & gutter) was utilized for the roads impact fee calculation.

Open Drainage Design

As shown in Table D-5, this review included approximately 7.60 lane miles of improvements, one project from Hernando County and one project from Sarasota County. As previously mentioned, the Hernando County project had an estimated construction cost of $2.73 million per lane mile, while the Sarasota improvement had a construction cost of $2.17 million per lane mile. Combined, these improvements averaged approximately $2.34 million per lane mile. Due to this small sample size, the construction cost per lane mile estimate for open drainage improvements was based on the FDOT LRE ratio presented in Table D-1. This ratio (76 percent) was applied to the estimated construction cost of curb & gutter projects, which resulted is a construction cost estimate of **$2.13 million per lane mile** for open drainage county projects.

Table D-4

Construction Cost – County Road Improvements from Hernando County and Other Jurisdictions throughout Florida (Curb & Gutter Design)

County	Design Classification	District	Description	From	To	Year	Feature	Design	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile
URBAN Counties, Curb and Gutter													
Orange	Urban	5	Rouse Rd	Lake Underhill Rd	SR 50	2013	2 to 4	Urban	1.55	2	3.10	$7,582,000	$2,446,164
Orange	Urban	5	Lake Underhill Rd	Goldenrod Rd	Chickasaw Tr	2013	2 to 4	Urban	0.68	2	1.36	$6,171,833	$4,537,286
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	$3,253,744	$2,711,453
Hillsborough	Urban	7	Boyette Rd, Ph. III	Donneymoor Dr	Bell Shoals Rd	2014	2 to 4	Urban	1.80	2	3.60	$23,710,000	$6,586,111
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	$3,000,000	$4,166,667
Orange	Urban	5	Destination Pkwy 1B/2A	Tradeshow Blvd	Lake Cay	2017	2 to 4	Urban	0.78	2	1.56	$6,110,402	$3,916,924
Hillsborough	Urban	7	Bruce B. Downs Blvd. Seg. A	Bearss Ave	Palm Springs Blvd	2017	4 to 8	Urban	3.56	4	14.24	$37,250,000	$2,615,871
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	2018	0/2 to 4	Urban	1.24	2/4	3.34	$18,790,721	$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
Total (2013-2019), Urban Counties ONLY									Count:	12	55.24	$263,306,956	$4,681,313
RURAL Counties, Curb and Gutter													
Broward	Rural	4	[illegible] St	S. of [illegible] Park Blvd	[illegible] Rd	2011	2 to 4	Urban	12.40	2	24.80	$56,000,000	$2,258,065
Collier	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	Rural	5	SW 110th St	US 41	SW 200th Ave	2013	0 to 2	Urban	0.11	2	0.22	$424,765	$1,930,750
Marion	Rural	5	NW 35th St	NW 35th Avenue Rd	NW 27th Ave	2013	0 to 4	Urban	0.90	4	4.60	$8,616,736	$1,873,095
Marion	Rural	5	NW 35th St	NW 27th Ave	US 441	2013	2 to 4	Urban	1.10	2			
Sumter	Rural	5	C-466A, Ph. III	US 301 N	Powell Rd	2013	2 to 4/4	Urban	1.10	2	2.20	$4,284,842	$1,947,201
Collier	Rural	1	Golden Gate Blvd	Wilson Blvd	Desoto Blvd	2014	2 to 4	Urban	2.40	2	4.80	$14,083,524	$2,933,818
Brevard	Rural	5	St. Johns Heritage Pkwy	SE of I-95 Interchange	US 192 (Space Coast Pkwy)	2016	0 to 2	Sub-Urb	3.11	2	6.22	$16,558,567	$2,662,149
Sarasota	Rural	1	Bee Ridge Rd	[illegible] Blvd	Iona Rd	2013	2 to 4	Urban	2.68	2	5.36	$14,096,515	$2,629,951
St. Lucie	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	Rural	5	N. Hancock Rd Ext.	SR 50	Gatewood Dr	2014	0/2 to 4	Urban	1.30	2/4	3.00	$6,085,574	$2,028,525
Polk	Rural	1	CR 655 & CR 559A	Pace Rd & N of CR 559A	N. of CR 559A & SR 659	2014	2 to 4	Urban	2.80	2	5.60	$30,791,152	$5,498,420
Volusia	Rural	5	Howland Blvd	Courtland Blvd	N. of SR 415	2015	2 to 4	Urban	2.08	2	4.16	$11,120,180	$2,673,120
Polk	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	Rural	5	LPGA Blvd	Jimmy Ann Dr/Grand Reserve	Derbyshire Rd	2016	2 to 4	Urban	0.98	2	1.96	$5,758,279	$2,937,898
St. Lucie	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	$14,415,700	$4,072,232
Marion	Rural	5	NW/NE 35th St, Ph. 1a	US 441	400' E. of W Anthony Rd	2016	2 to 4	Urban	0.30	2	0.60	$1,770,250	$2,950,417
Volusia	Rural	5	Howland Blvd	Providence Blvd	Elkcam Blvd	2017	2 to 4	Urban	2.15	2	4.30	$10,800,000	$2,511,628
Volusia	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	Rural	5	CR 466A, Ph. IIIA	Poinsettia Ave	Century Ave	2018	2 to 4	Urban	0.42	2	0.84	$3,062,450	$3,645,774
Lee	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	Rural	1	Homestead Rd	S. of Sunrise Blvd	N. of Alabama Rd	2019	2 to 4	Urban	2.25	2	4.50	$14,141,919	$3,142,649
Hernando	Rural	7	Cortez Blvd Frontage Rd @ I-75			2020	0 to 2	Urban	0.62	2	1.24	$2,064,500	$1,665,0[illegible]
Total (2013-2020), Rural Counties ONLY									Count:	25	99.34	$277,421,519	$2,792,[illegible]
Total (2013-2019), Rural Counties ONLY, Excluding Hernando County									Count:	24	98.10	$275,357,019	$2,79[illegible]

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

Table D-5

Construction Cost – <u>County</u> Road Improvements from Hernando County and Other Jurisdictions throughout Florida (Open Drainage Design)

County	County Classification	Project	Description	From	To	Year	Feature	Design	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile
Alachua Counties, Open Drainage													
Sarasota	Rural	1	Honore Ave/Fruitville Rd Ext.	SR 681	Lorraine Rd	2023	2 to 2	Rural	1.70	2	5.40	$11,699,000	$2,166,481
Hernando	Rural	2	Barclay Ave	San Antonio Rd	Powell Rd/Elgin Blvd	2020	2 to 4	Rural	1.50	2	3.00	$8,000,000	$2,727,370
Total (2013+): Rural Counties Only										Count:	3	7.40	$17,699,000	$2,324,834

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

State Roadways

A review of construction cost data for recent state (and other roads built by FDOT) roadway capacity expansion projects identified three (3) improvements in Hernando County:

- SR 50 from Windmere Road to E. of US 301 (curb & gutter)
- CR 578 (County Line Road) from Suncoast Pkwy to US 41 @ Ayers Road (curb & gutter)
- CR 578 (County Line Road) from Springtime St to E. of Mariner Blvd (open drainage)

For the curb & gutter projects, these improvements range from $3.18 million per lane mile to $4.72 million per lane mile with a weighted average cost of $4.25 million per lane mile. For the open drainage improvement, the construction cost is approximately $6.28 million per lane mile, which is based on a very short segment with a high cost figure. It should be noted that the costs for both CR 578 improvements include the associated shared-use paths.

Curb & Gutter Design

In addition to the two local improvements (curb & gutter), a review of recently bid projects located throughout Florida identified 60 curb & gutter improvements from 30 different counties (see Table D-6). These improvements were then grouped into "urban" and "suburban/rural" counties, with the urban counties including Broward, Hillsborough, Miami-Dade, Orange, and Palm Beach Counties. The suburban/rural counties (excluding Hernando County) experienced a weighted average construction cost of approximately $3.97 million per lane mile. Based on a review of the local projects, statewide projects, and discussions with County representatives, a construction of **$4.20 million per lane mile** for state roads (curb & gutter) was utilized for the roads impact fee calculation, which reflects local cost factors in Hernando County and the inclusion of certain amenities, such as shared-use paths.

Open Drainage Design

In addition to the local improvement (open drainage), a review of recently bid projects located throughout the state of Florida identified 15 open drainage improvements from 8 different counties. These improvements were then grouped into "urban" and "suburban/rural" counties, with Hernando County being considered a "suburban/rural" county. The open drainage improvements for urban counties averaged $3.73 million per lane mile, and the suburban/rural counties averaged $2.21 million per lane mile (excluding Hernando County). Due to the small sample size and high variation of the open drainage improvement costs, the construction cost for these improvements was calculated based on the roadway design cost ratio estimates obtained from the FDOT District 7 LRE (76 percent of curb & gutter project cost, see Table D-1). Applying

this 76-percent ratio resulted in a construction cost estimate of **$3.19 million per lane mile** for open drainage projects.

Table D-6

Construction Cost – State Road Improvements (and Other Roads Built by FDOT) from Hernando County and Other Jurisdictions throughout Florida (Curb & Gutter Design)

County	County Classification	District	Description	From	To	Year	Improvement	Design	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile
URBAN Counties, Curb and Gutter													
Broward	Urban	4	Andrews Ave Ext	NW 18th St	Copans Rd	2013	2 to 4	Urban	0.59	2	1.18	[illegible]	[illegible]
Hillsborough	Urban	7	SR 45 (US 301)	S. of Tampa Bypass Canal	N. of Fowler Ave	2013	2 to 4	Sub-Urb	1.81	2	3.62	$15,758,[illegible]	[illegible]
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	[illegible]	[illegible]
Broward	Urban	4	SR 7 (US 441)	N. of Hallandale Beach	N. of [illegible] St	2014	4 to 6	Urban	1.79	2	3.58	[illegible]	[illegible]
Broward	Urban	4	[illegible]	Pompano Park Place	S. of Atlantic Blvd	2013	2 to 4	Urban	0.36	2	0.72	$3,177,[illegible]	[illegible]
Miami-Dade	Urban	6	SR 823/NW 57th Ave	W. 65th St	W. 84th St	2013	4 to 6	Urban	1.00	2	2.00	$17,896,[illegible]	[illegible]
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,[illegible]	[illegible]
Orange	Urban	5	SR 50	SR 429 (Western Beltway)	E. of West Oaks Mall	2014	4 to 6	Urban	2.56	2	5.12	[illegible]	[illegible]
Orange	Urban	5	SR 15 (Hoffner Rd)	Lee Vista Blvd	Conway Rd	2015	2 to 4	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
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	[illegible]	[illegible]
Broward	Urban	4	SW 30th Ave	Griffin Rd	SW 45th St	2016	2 to 4	Urban	0.74	2	1.48	[illegible]	[illegible]
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	[illegible]	[illegible]
Miami-Dade	Urban	6	NW 87th Ave/SR 25 & 93 [illegible]	NW 36th St	NW 103rd St	2016	0 to 4	Urban	1.93	4	7.72	[illegible]	[illegible]
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,[illegible]	[illegible]
Palm Beach	Urban	4	SR 80	W. of Lion Country Safari Rd	Forest Hill Blvd	2018	4 to 6	Urban	7.20	2	14.40	[illegible]	[illegible]
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	[illegible]	[illegible]
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	1.08	2	2.16	[illegible]	$4,847,277
Hillsborough	Urban	7	CR 580 (Sam Allen Rd)	W. of SR 39 (Paul Buchman Hwy)	E. of Park Rd	2018	2 to 4	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
Orange	Urban	5	SR 414 (Maitland Blvd)	E. of I-4	E. of CR 427 (Maitland Ave)	2019	4 to 6	Urban	1.39	2	2.78	[illegible]	[illegible]
Miami-Dade	Urban	6	SR 997 (Krome Ave)	SW 312 St	SW [illegible] St	2019	2 to 4	Urban	[illegible]	2	7.36	[illegible]	[illegible]
Total (2013-2019), Urban Counties ONLY									Count:	20	[illegible]	[illegible]	[illegible]
RURAL Counties, Curb and Gutter													
Lee	Rural	1	SR 78 (Pine Island)	Burnt Store Rd	W. of Chiquita Blvd	2013	2 to 4	Urban	1.94	2	3.88	[illegible]	[illegible]
Brevard	Rural	5	SR 507 (Babcock St)	Melbourne Ave	[illegible] Ave	2013	2 to 4	Urban	0.59	2	1.18	[illegible]	[illegible]
Lee	Rural	1	US 41 Business	[illegible] Rd	SR 739	2013	2 to 4	Urban	[illegible]	2	2.46	[illegible]	[illegible]
Brevard	Rural	5	Apollo Blvd	Sarno Rd	Eau Gallie Blvd	2013	2 to 4	Urban	0.74	2	1.48	[illegible]	[illegible]
Okeechobee	Rural	1	SR 70	NE 34th Ave	NE 80th Ave	2014	2 to 4	Urban	3.60	2	7.20	[illegible]	[illegible]
Martin	Rural	4	SR 714/Indian St	Turnpike/Martin Downs Blvd	W. of [illegible] Rd	2014	2 to 4	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
[illegible]	Rural	7	[illegible]	S. of [illegible] Ave	[illegible] St	2013	[illegible]	Urban	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Nassau	Rural	2	SR 200 (A1A)	W. of [illegible] Rd	W. of Rubin Ln	2013	4 to 6	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
Charlotte	Rural	1	US 41 (SR 45)	Enterprise Dr	Sarasota County Line	2014	4 to 6	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
Duval	Rural	2	SR 211 (A1A) [illegible]	[illegible] Rd	[illegible]	2014	[illegible]	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
Hardee	Rural	1	US 17	CR 76 [illegible]	[illegible]	2014	2 to 4	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
Hendry	Rural	1	SR 82 [illegible] Rd	Lee County Line	Collier County Line	2015	2 to 4	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
[illegible]	Rural	1	SR 45 (US 41) [illegible]	Gulf Coast Blvd	Blvd [illegible] Dr W	2015	4 to 6	Urban	1.14	2	[illegible]	[illegible]	[illegible]
Clay	Rural	2	SR 21	S. of [illegible]	Old Jennings Rd	2015	4 to 6	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
Putnam	Rural	2	SR 15 (US 17)	[illegible] Landing Rd	N. Boundary Rd	2015	2 to 4	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
[illegible]	Rural	5	SR 500 (US 192/441)	Canton Ave	Nova Rd	2015	4 to 6	Urban	[illegible]	2	[illegible]	$16,[illegible]	[illegible]
[illegible]	Rural	5	SR 500 (US 192/441)	Aeronautical Blvd	Budinger Ave	2015	4 to 6	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
Lake	Rural	5	SR 25 (US 27)	N. of Boggy Marsh Rd	N. of Lake Louisa Rd	2015	4 to 6	Sub-Urb	[illegible]	2	[illegible]	[illegible]	[illegible]
Seminole	Rural	5	SR 15/600	Shepard Rd	Lake Mary Blvd	2015	4 to 6	Urban	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Lucie	Rural	4	SR 614 (Indrio Rd)	W. of SR 9 (I-95)	E. of SR 607 (Emerson Ave)	2016	2 to 4	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
Seminole	Rural	5	SR 46	Mellonville Ave	E. of SR 415	2016	2 to 4	Urban	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
St. Lucie	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	[illegible]	[illegible]	[illegible]
Citrus	Rural	7	SR 55 (US 19)	W. Green Acres St	W. [illegible] Ct	2016	4 to 6	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
Walton	Rural	3	SR 30 (US 98)	Emerald Bay Dr	Tang-o-mar Dr	2016	4 to 6	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
[illegible]	Rural	2	SR 2[illegible]	S. of [illegible]	N. of [illegible]	2016	0 to 4	Urban	[illegible]	4	[illegible]	[illegible]	[illegible]
[illegible]	Rural	1	SR 35 (US 17)	S. of W. [illegible] St	N. of [illegible]	2016	[illegible]	Urban	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	Rural	2	SR 20 (SR [illegible] Rd)	E. of [illegible]	E. of [illegible] Ln	2017	2 to 4	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]

Table D-6 (continued)

Construction Cost – State Road Improvements (and Other Roads Built by FDOT) from Hernando County and Other Jurisdictions throughout Florida (Curb & Gutter Design), continued

County	County Classification	District	Description	From	To	Year	Feature	Design	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile
RURAL Counties, Curb and Gutter													
Okaloosa	Rural	3	[illegible]	CR 302 (Airport Rd)	[illegible]	2017	4 to 6	Urban	[illegible]	2	7.[illegible]	[illegible]	[illegible]
Bay	Rural	3	SR 390 (St. Andrews Blvd)	[illegible]	[illegible]	2017	[illegible]	Urban	[illegible]	4	[illegible]	[illegible]	[illegible]
[illegible]	Rural	7	SR 54	E. of CR 577 (Curley Rd)	[illegible] Rd	2017	[illegible]	Urban	[illegible]	[illegible]	11.[illegible]	[illegible]	[illegible]
Lake	Rural	5	SR 46 (US 441)	[illegible]	E. of Round Lake Rd	2017	[illegible]	Urban	[illegible]	4	[illegible]	[illegible]	[illegible]
[illegible]	Rural	[illegible]	SR 369 (US 319)	N. of SR 267	Leon Co. Line	2018	2 to 4	Urban	2.24	2	4.48	[illegible]	[illegible]
St. Lucie	Rural	4	SR 713 (Kings Hwy)	S. of SR 70	[illegible]	2018	[illegible]	Urban	[illegible]	2	[illegible]	[illegible]	[illegible]
Citrus	Rural	7	SR 55 (US 19)	W. Jump Ct	CR 44 [illegible] Fort Island Trl	2018	[illegible]	Urban	4.81	2	9.62	[illegible]	[illegible]705
[illegible]	Rural	1	SR 45A (US 41) (Venice Bypass)	Center Rd	Gulf Coast Blvd	2018	[illegible]	Urban	1.19	2	[illegible]	$[illegible],000	[illegible]66
[illegible]	Rural	5	SR 46	Orange Blvd	N. Oregon St (Wekiva Section 7B)	2019	[illegible]	Urban	1.30	2	2.60	$17[illegible]	[illegible]87
[illegible]	Rural	2	[illegible] National Cemetery Access Rd	[illegible] Rd	Arnold Rd	2019	[illegible]	Urban	3.26	2	6.52	$11[illegible]	$1,7[illegible]
Pasco	Rural	7	SR 52	W. of Suncoast Pkwy	E. of SR 45 (US 41)	2019	[illegible]	Urban	4.64	2	9.28	[illegible]	[illegible]67
Hernando	Rural	7	CR 578 (County Line Rd)	Suncoast Pkwy	US 41 @ Ayers Rd	2019	[illegible]	Urban	[illegible]	4	8.96	[illegible]	[illegible]
Hernando	Rural	7	SR 50	Windmere Rd	E. of US 301	2019	4 to 6	Urb/Rural	[illegible]	2	11.20	[illegible]	[illegible]
Putnam	Rural	2	SR 20	Alachua/Putnam Co. Line	SW 56th Ave	2019	2 to 4	Urban	6.95	2	13.90	[illegible]778	[illegible]29
Bay	Rural	3	SR 390 (St. Andrews Blvd)	SR 368 (23rd St)	E. of CR 2312 (Baldwin Rd)	2020	2 to 6	Urban	2.47	4	9.88	[illegible]711,427	[illegible]
Total (2013-2019): Rural Counties **ONLY**									Count:	42	[illegible]	[illegible]191	[illegible]
Total (2013-2019): **Hernando County ONLY**									Count:	2	17.16	[illegible]	[illegible]
Total (2013-2019): **Rural Counties** ONLY, Excluding Hernando County									Count:	40	246.39	[illegible]	[illegible]788

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

Table D-7

Construction Cost – State Road Improvements (and Other Roads Built by FDOT) from Hernando County and Other Jurisdictions throughout Florida (Open Drainage Design)

County	County Classification	District	Description	From	To	Year	Feature	Design	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile
URBAN Counties, Open Drainage													
Miami-Dade	Urban	6	SR 997 (Krome Ave)	[illegible]	[illegible]	2014	[illegible]	Rural	[illegible]	[illegible]	11.[illegible]	[illegible]	[illegible]
Miami-Dade	Urban	6	SR 997 (Krome Ave)	MP [illegible]	MP [illegible]	2015	[illegible]	Rural	[illegible]	[illegible]	[illegible]	$17,715,[illegible]	[illegible]
Miami-Dade	Urban	6	SR 997 (Krome Ave)	MP [illegible]	MP [illegible]	2015	[illegible]	Rural	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Miami-Dade	Urban	6	SR 997	N. of SW 8th St	MP [illegible]	[illegible]	[illegible] to 4	Rural	[illegible]	2	4.2[illegible]	$26,215,[illegible]	[illegible]
Miami-Dade	Urban	6	SR 997 (Krome Ave)/SW 177th Ave	MP [illegible]	MP [illegible] Rd	[illegible]	2 to 4	Rural	3.10	[illegible]	6.[illegible]	[illegible]	[illegible]
Miami-Dade	Urban	6	SR 997 (Krome Ave) (SW 177th Ave)	S of SW 23rd St	S of SW 136th St (Howard Dr)	2018	2 to 4	Rural	6.28	2	12.[illegible]	[illegible]3	$[illegible]
Total (2013-2019): **Urban Counties ONLY**									Count:	6	46.01	[illegible]	[illegible]993
RURAL Counties, Open Drainage													
[illegible]	Rural	1	US 17 (SR 35)	SW Collins St	S. of CR 760A	2013	2 to 4	Rural	[illegible]	2	12.0[illegible]	[illegible]	$1,[illegible]
Marion	Rural	5	SR 40	CR 328	[illegible] Ave (CR 225A)	2014	2 to 4	Rural	4.04	2	8.[illegible]	[illegible]	$1,[illegible]
Okaloosa	Rural	3	SR 123	N of Toms Creek	N of Turkey Creek	[illegible]	2 to 4	Rural	1.67	[illegible]	3.[illegible]	$11,[illegible]6	[illegible]
Okaloosa	Rural	3	SR 123	N of Turkey Creek	SR 85 N	2014	2 to 4	Rural	2.89	2	5.[illegible]	[illegible]	$1,[illegible]
Santa Rosa	Rural	3	SR 87	Eglin Air Force Base Boundary	2 miles S. of Yellow River Br	2015	2 to 4	Rural	5.43	2	10.86	[illegible]	$1,6[illegible]
Santa Rosa	Rural	3	SR 87	2 Mi S of Yellow River	CR 184	2015	2 to 4	Rural	3.26	2	6.[illegible]	[illegible]3	[illegible]17,921
[illegible]	Rural	[illegible]	SR 35 (US 17)	[illegible] County Line	CR [illegible] Rd	[illegible]	2 to 4	Rural	[illegible]	[illegible]	9.76	[illegible]	[illegible]
[illegible]	Rural	[illegible]	SR 80	[illegible]	CR [illegible]	[illegible]	[illegible]	Rural	11.18	[illegible]	22.[illegible]	[illegible]	[illegible]
Hernando	Rural	7	CR 578 (County Line Rd)	Springtime St	E. of Mariner Blvd	2017	[illegible]	Rural	[illegible]	[illegible]	1.34	[illegible]	[illegible]
Bay	Rural	[illegible]	[illegible]	SR 79	E. of NW Florida Beaches Intl. Airport	[illegible]	[illegible] to 4	Rural	[illegible]	[illegible]	7.[illegible]	[illegible]	[illegible]
Total (2013-2019): **Rural Counties ONLY**									Count:	10	87.[illegible]	[illegible]	[illegible]
Total (2013-2019): **Hernando County ONLY**									Count:	1	1.34	[illegible]	[illegible]
Total (2013-2019): **Rural Counties ONLY**, Excluding **Hernando County**									Count:	9	86.49	[illegible]	[illegible]

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 previously completed roads/transportation impact fee studies throughout Florida. As shown in Table D-8, recent CEI factors ranged from 3 percent to 17 percent with a weighted average of 9 percent. For purposes of this study, the CEI cost for county roads was calculated at 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 previously completed roads/transportation impact fee studies throughout Florida. As shown in Table D-8, 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 state roads was calculated at 11 percent of the construction cost per lane mile.

Table D-8

CEI Cost Factor for County and State Roads – Recent Impact Fee Studies

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%
2016	Hillsborough	$261,000	$2,897,000	9%	$319,000	$2,897,000	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
2018	Collier	$315,000	$3,500,000	9%	$385,000	$3,500,000	11%
Average		$202,100	$2,250,833	9%	$3,099,640	$28,866,000	11%

Source: Recent impact fee studies conducted throughout Florida

Roadway Capacity

As shown in Table D-9, the average capacity per lane miles was based on the projects in the Hernando-Citrus MPO's 2045 Long Range Transportation Plan (Cost Feasible Plan). The listing of projects reflects the mix of improvements that will yield the vehicle-miles of capacity (VMC) that will be built in Hernando County. The resulting weighted average capacity per lane mile of approximately 11,200 was used in the roads impact fee calculation. Based on discussions with Hernando County representatives, the planned improvements will primarily feature an "uninterrupted flow" roadway classification, resulting in a higher VMC per lane mile of improvement than many other jurisdictions in Florida.

Table D-9
Hernando County Planned Improvements – Long Range Transportation Plan

Jurisdiction	Description	From	To	Improvement	Length	Lanes Added	Lane Miles Added	Section Design(1)	Initial Capacity	Future Capacity	Added Capacity	Vehicle Miles of Capacity Added
Cost Feasible Plan												
County	Barclay Rd	Elgin Blvd	San Antonio Blvd	2 to 4 Lanes	[illegible]	2	[illegible]	OD	[illegible]	35,820	[illegible]	[illegible]
County	Barclay Rd	San Antonio Rd	[illegible]	2 to 4 Lanes	1.62	2	[illegible]	OD	[illegible]	35,820	[illegible]	[illegible]
County	Barclay Rd	[illegible]	Cortez Blvd (SR 50)	2 to 4 Lanes	[illegible]	2	0.56	OD	[illegible]	35,820	[illegible]	[illegible]
County	[illegible]	Cortez Blvd (SR 50)	[illegible] C	0 to 2 Lanes	[illegible]	2	[illegible]	OD	0	[illegible]	[illegible]	[illegible]
County	County Line Rd	[illegible] Rd	[illegible] Blvd	2 to 4 Lanes	[illegible]	2	5.40	OD	[illegible]	35,820	[illegible]	[illegible]
County	[illegible] Blvd	[illegible] Blvd	Elgin Blvd	2 to 4 Lanes	[illegible]	2	1.90	OD	[illegible]	35,820	[illegible]	[illegible]
County	[illegible] Blvd	Elgin Blvd	Cortez Blvd (SR 50)	2 to 4 Lanes	[illegible]	2	[illegible]	OD	[illegible]	35,820	[illegible]	[illegible]
County	[illegible] Rd	[illegible] Ave	[illegible] Ave	0 to 2 Lanes	[illegible]	2	[illegible]	OD	0	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	Jefferson St (SR 50)	[illegible] Rd	0 to 2 Lanes	0.78	2	1.56	OD	0	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	[illegible] Rd	[illegible] St	0 to 2 Lanes	[illegible]	2	[illegible]	OD	0	[illegible]	[illegible]	[illegible]
County	[illegible] Grove Rd Ext.	[illegible] Scooter Ave	[illegible] Grove Rd Ext.	0 to 2 Lanes	0.38	2	0.76	OD	0	[illegible]	[illegible]	[illegible]
County	[illegible] Grove Rd Ext.	[illegible] Grove Rd Ext.	N Suncoast Pkwy (SR 589)	0 to 2 Lanes	[illegible]	2	[illegible]	OD	0	[illegible]	[illegible]	[illegible]
County	Cortez Blvd (SR 50 EB Frontage)	[illegible] Blvd	[illegible] Blvd	0 to 2 Lanes	[illegible]	2	[illegible]	C&G	0	[illegible]	[illegible]	[illegible]
County	Cortez Blvd (SR 50 WB Frontage)	[illegible] Blvd	[illegible] Blvd	0 to 2 Lanes	[illegible]	2	[illegible]	C&G	0	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	Barclay Ave	California St	2 to 4 Lanes	1.67	2	[illegible]	OD	[illegible]	35,820	[illegible]	[illegible]
State	Broad St (US 41/SR 45)	County Line Rd	[illegible] Rd	2 to 4 Lanes	[illegible]	2	2.74	OD	[illegible]	[illegible]	[illegible]	[illegible]
State	Broad St (US 41/SR 45)	Spring Hill Dr	[illegible] Rd	4 to 6 Lanes	0.86	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	Cortez Blvd (SR 50)	Fort Dade Ave	2 to 4 Lanes	[illegible]	2	[illegible]	C&G	[illegible]	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	Fort Dade Ave	[illegible] Rd	2 to 4 Lanes	[illegible]	2	[illegible]	OD	[illegible]	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	[illegible] Rd	Ponce De Leon Blvd (US 98/SR 700)	2 to 4 Lanes	2.72	2	5.44	OD	[illegible]	35,820	[illegible]	[illegible]
State	Cortez Blvd (SR 50)	[illegible] Blvd (US 301/SR 35)	Sumter County Line	4 to 6 Lanes	[illegible]	2	10.02	OD	[illegible]	[illegible]	[illegible]	[illegible]
State	Cortez Blvd (SR 50)	N Suncoast Pkwy (SR 589)	[illegible] Rd	4 to 6 Lanes	[illegible]	2	[illegible]	OD	[illegible]	[illegible]	[illegible]	[illegible]
State	Ponce De Leon Blvd (US 98/SR 700)	Broad St (US 41/SR 45)	Jefferson St (SR 50A)	2 to 4 Lanes	[illegible]	2	0.72	OD	[illegible]	[illegible]	[illegible]	[illegible]
State	Ponce De Leon Blvd (US 98/SR 700)	[illegible] Rd	[illegible] Rd	2 to 4 Lanes	2.54	2	[illegible]	OD	[illegible]	[illegible]	[illegible]	[illegible]
State	Ponce De Leon Blvd (US 98/SR 700)	[illegible] Rd	[illegible] Rd	2 to 4 Lanes	[illegible]	2	[illegible]	OD	[illegible]	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	[illegible] Rd	I-75	0 to 2 Lanes	0.28	2	[illegible]	OD	0	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	I-75	[illegible] Rd	0 to 2 Lanes	0.72	2	1.44	OD	0	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	[illegible] Rd	[illegible] Rd	0 to 2 Lanes	[illegible]	2	[illegible]	OD	0	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	[illegible] Rd	[illegible] Rd	0 to 2 Lanes	[illegible]	2	[illegible]	OD	0	[illegible]	[illegible]	[illegible]
Developer	[illegible] Rd	Cortez Blvd (SR 50)	[illegible] Ave	2 to 4 Lanes	[illegible]	2	[illegible]	OD	[illegible]	[illegible]	[illegible]	[illegible]
Developer	[illegible] Rd	Cortez Blvd (SR 50)	Fort Dade Ave	0 to 2 Lanes	1.03	2	[illegible]	OD	0	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	[illegible] Rd	Cortez Blvd (SR 50)	2 to 4 Lanes	[illegible]	2	[illegible]	OD	[illegible]	[illegible]	[illegible]	[illegible]
Developer	[illegible]	[illegible] Rd	Cortez Blvd (US 98/SR 50)	0 to 2 Lanes	[illegible]	2	[illegible]	OD	0	[illegible]	[illegible]	[illegible]
Developer	[illegible] Rd	[illegible] Rd	[illegible] Rd	0 to 2 Lanes	[illegible]	2	[illegible]	OD	0	[illegible]	[illegible]	[illegible]
County	[illegible] Grove Rd Ext.	N Suncoast Pkwy (SR 589)	Ponce De Leon Blvd (US 98/SR 700)	0 to 2 Lanes	[illegible]	2	[illegible]	OD	0	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	[illegible] Rd	Cortez Blvd (US 98/SR 50)	2 to 4 Lanes	[illegible]	2	[illegible]	OD	[illegible]	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	[illegible] Rd	[illegible] Rd	2 to 4 Lanes	[illegible]	2	4.04	OD	[illegible]	[illegible]	[illegible]	[illegible]
County	[illegible] Rd	[illegible] Rd	[illegible] Willow St	0 to 2 Lanes	[illegible]	2	[illegible]	OD	0	[illegible]	[illegible]	[illegible]
Total (All Roads):							[illegible]					[illegible]
County/Developer Roads:							[illegible]		[illegible]			[illegible]
State Roads:							[illegible]		[illegible]			[illegible]
Curb & Gutter:							[illegible]		[illegible]			
Open Drainage:							[illegible]		[illegible]			
											VMC Added per Lane Mile	[illegible]

1) C&G = Curb & Gutter (Urban Design), OD = Open Drainage (Rural Design)

Source: Hernando-Citrus MPO Long Range Transportation Plan, Cost Feasible Plan. Improvements in Hernando County only

Transit Capital Costs

In the case of multi-modal fees, the marginal cost of adding transit infrastructure needs to be considered. This section details the difference in cost per person-mile of capacity between expanding a roadway without transit amenities versus expanding a roadway with transit amenities. This calculation also accounts for the change in roadway PMC that occurs when a bus is on the road.

First, Table D-10 calculates the person-miles of capacity added for each new transit vehicle on the road. This calculation adjusts for the fact that buses have a significantly higher person-capacity than passenger vehicles. This table also identifies transit capital cost variables that will be used to calculate the added capital cost of constructing/expanding a roadway with transit facilities.

Next, Table D-11 combines the roadway VMC and the transit PMC to calculate the marginal change in cost per PMC. First, the roadway characteristics, including cost and capacity, were used to calculate the roadway cost per VMC for a generic 24-mile roadway segment. Then, an adjustment factor was applied to recognize that incorporating transit along a segment of roadway decreases the vehicle-capacity as the bus makes intermittent stops and interrupts the free-flowing traffic. As shown in Table D-11, the bus blockage adjustment factor is much higher for a 2-lane roadway than for a 4-lane roadway. On a 2-lane road, all cars get caught behind the bus during a stop, while on a 4-lane roadway, there is an unobstructed travel lane that cars can use to pass-by or maneuver around the slower transit vehicle. This adjusted VMC was then converted to PMC using the vehicle-miles to person-miles adjustment factor previously discussed in this report. The additional person-capacity from the buses was added to the adjusted roadway PMC. The person-miles of capacity that a transit system would add to the stretch of roadway (Table D-10) mitigates the decrease in vehicle-miles of capacity due to the bus blockage adjustments.

Next, the capital cost of transit infrastructure was added to the capital cost of the roadway expansion for both new road construction (0 to 2 lanes) and lane addition (2 to 4 lanes). With the transit infrastructure included, the updated cost per PMC was calculated, which now reflects the total cost of building a new road with transit or expanding a roadway and adding transit amenities. When compared to the cost per PMC for simply building/expanding a roadway without transit, the added cost of transit is between two (2) percent and five (5) percent.

As a final step, the increased costs were then weighted by the lane mile distribution of new road construction and lane addition improvements in the Hernando-Citrus MPO's 2045 Long Range Transportation Plan; Cost Feasible Plan. As shown, the plan calls for a higher number of lane addition improvements through 2045. When the marginal cost of transit is included and weighted by this ratio, the resulting percent change is approximately 3.15 percent. Essentially, adding transit does not have a significant effect on the cost per person-mile of capacity for new road construction and lane addition improvements.

As it is currently structured, the transit model detailed in Tables D-10 and D-11 assumes that transit-miles and road-miles will be added to the system at the same rate. If the City/County builds more transit-miles, this will increase the bus traffic on existing roads, adding more stops, higher stop frequency, and creating additional bus blockage. As a result, the capital cost per person-mile for a roadway with transit would increase in relation to the ratio of added transit-miles vs. roadway-miles. For example, if the transit-mile investment was double that of roadway construction/expansion, the 3.15 percent change calculated in Table D-11 would increase to approximately 6.30 percent. The annual construction figures for transit-miles and road-miles should be tracked by the City/County and adjusted for in subsequent multi-modal fee update studies.

Table D-10

Multi-Modal Cost per Person-Mile of Capacity

Input	Local Transit	Source:
Transit Person-Miles of Capacity Calculation		
Vehicle Capacity[1]	35	1) Source: Local transit is assumed to have 25 seats with a 40 percent standing room capacity equivalent
Number of Vehicles (20% fleet margin)[2]	2	2) Cycle time (item 9) divided by headway time (item 6) increased by 20 percent to accommodate the required fleet margin
Service Span (hours)[3]	14	3) Source: Assumption based on current Hernando County routes
Cycles/Hour (aka Peak Vehicles)[4]	1.00	4) Headway time (item 6) divided by 60
Cycles per Day[5]	14	5) Service span (item 3) multiplied by the cycles/hour (item 4)
Headway Time (minutes)[6]	60	6) Source: Assumption based on current Hernando County routes
Speed (mph)[7]	19	7) Source: Integrated National Transit Database Analysis System (INTDAS). 6-yr average
Round Trip Length (miles)[8]	35.0	8) Source: Average trip length of current Hernando County
Cycle Time (minutes)[9]	111	9) Round trip length (item 8) divided by speed (item 7) multiplied by 60
Total Person-Miles of Capacity[10]	17,150	10) Vehicle capacity (item 1) multiplied by the cycles per day (item 5) multiplied by the round trip length (item 8)
Load Factor/System Capacity[11]	30%	11) Source: Optimistic assumption based on future goals
Adjusted Person-Miles of Capacity[12]	5,145	12) Total person-miles of capacity (item 10) multiplied by the load factor (item 11)
Capital Cost Variables		
Stops per Mile (w/o Shelter)[13]	3	13) Source: Model assumes 3 bench stops per mile
Shelters per Mile[14]	1	14) Source: Model assumes 1 shelter stop per mile
Vehicle Cost[15]	$450,000	15) Source: Hernando County Transit Dept (29 ft, low floor Gillig)
Simple Bus Stop[16]	$12,000	16) Source: Assumption based on local characteristics and industry knowledge
Sheltered Bus Stop[17]	$21,100	17) Source: Hernando County Transit Dept

Table D-11

Multi-Modal Fee: Transit Component Model

Item	New Road Construction		Lane Addition		Sources
	Roadway	Transit	Roadway	Transit	
Roadway Characteristics					
Roadway Cost per Mile[1]	$8,100,000		$8,100,000		1) Source: Table V-3, adjusted to cost "per mile"
Roadway Segment Length (miles)[2]	35.0		35.0		2) Source: Average length of Hurstville County transit route
Roadway Segment Cost[3]	$283,500,000	[DM]	$283,500,000	[DM]	3) Roadway cost per mile (Item 1) multiplied by the roadway segment length (Item 2)
Average Capacity Added (per mile)[4]	21,400	$1,360	21,400	$1,360	4) Source: Table V-4, adjusted to capacity "per mile"
VMC/PMC Added (entire segment)[5]	784,000	1,097,600	784,000	1,097,600	5) Roadway segment length (Item 2) multiplied by the average capacity added (Item 4) for both VMC and PMC
Roadway Cost per VMC/PMC[6]	$361.61	$258.29	$361.61	$258.29	6) Roadway segment cost (Item 3) divided by the VMC/PMC added (Item 5) individually
Transit Capacity					
Adjustment for Bus Blockage[7]	1.4%	-	1.4%		7) Source: 2010 Highway Capacity Manual, Equation 10-8
VMC/PMC Added (transit deduction)[8]	25,088	32,819	12,544	16,307	8) VMC added (Item 5) multiplied by the adjustment for bus blockage (Item 7). For PMC, multiply the VMC by 1.48 persons per vehicle
VMC/PMC Added (less transit deduction)[9]	758,912	1,064,781	771,456	1,081,293	9) VMC/PMC added (entire segment) (Item 5) less the VMC/PMC added (transit deduction) (Item 8) for VMC and PMC individually
PMC Added (transit addition ONLY)[10]		1,141		1,141	10) Source: Table D-10, Adjusted Person-Miles of Capacity (Item 12)
Net PMC Added (transit effect included)[11]		1,075,113		1,082,434	11) PMC added (less transit deduction) (Item 9) plus the PMC added (transit addition ONLY) (Item 10)
Road/Transit Cost per PMC (Road Capital)[12]		$263.61		$260.84	12) Road segment cost (Item 3) divided by the net PMC added (transit effect included) (Item 11)
Transit Infrastructure					
Buses Needed[13]	1	$400,000	1	$400,000	13) Number of vehicles (see Table D-10, Item 7) multiplied by the vehicle cost (see Table D-10, Item 15)
Stops per mile (both sides of street)[14]	3	$2,320,000	3	$2,320,000	14) Stops per mile (3) multiplied by the roadway segment length (Item 2) multiplied by the cost per stop (Table D-10, Item 16)
Shelters per mile (both sides of street)[15]	1	$1,477,000	1	$1,477,000	15) Shelters per mile (1) multiplied by the roadway segment length (Item 2) multiplied by the cost per shelter (Table D-10, Item 17)
Total infrastructure[16]		$4,197,000		$4,197,000	16) Sum of buses needed (Item 13), stops needed (Item 14), and shelters needed (Item 15)
Multi-Modal Cost per PMC					
Road/Transit Cost per PMC[17]		$268.50		$265.43	17) Sum of the roadway segment cost (Item 3) and the total transit infrastructure cost (Item 16) divided by the net PMC added (Item 11)
Percent Change[18]		4.34%		2.77%	18) Percent difference between the road/transit cost per PMC (Item 17) and the Roadway cost per PMC (Item 6)
Weighted Multi-Modal Cost per PMC					
Lane Mile Distribution[19]		24%		76%	19) Source: Appendix D, Table D-8, Items (e) and (f). Lane mile distribution of new road construction versus lane additions
Weighted Roadway Cost per PMC[20]		$86.93		$196.36	20) Roadway cost per PMC (Item 6) multiplied by the lane mile distribution (Item 19)
Weighted Road/Transit Cost per PMC[21]		$64.68		$201.74	21) Road/Transit cost per PMC (Item 17) multiplied by the lane mile distribution (Item 19)
Weighted Average Multi-Modal Cost per PMC					
Weighted Average Roadway Cost per PMC (new road construction and lane additions)[22]				$283.29	22) Sum of the weighted roadway cost per PMC (Item 20) for new road construction and lane additions
Weighted Average Road/Transit Cost per PMC (new road construction and lane additions)[23]				$266.42	23) Sum of the weighted road/transit cost per PMC (Item 21) for new road construction and lane additions
Percent Change[24]				5.95%	24) Percent difference between the weighted average road/transit cost per PMC (Item 23) and the weighted average roadway cost per PMC (Item 22)

Appendix E
Multi-Modal Transportation Impact Fee:
Credit Component

Appendix E: MMTIF - Credit Component

This appendix presents the detailed calculations for the credit component. Local fuel taxes that are collected in Hernando 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. **1st 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.

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 Hernando County for the current fiscal year. Table E-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 $740,000 of annual revenue will be generated from one penny of fuel tax in Hernando 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.

Table E-1
Estimated Fuel Tax Distribution Allocated to Capital Programs for Hernando County & Municipalities, FY 2020-21[1]

Tax	Amount of Levy per Gallon	Total Distribution	Distribution per Penny
Constitutional Fuel Tax	$0.02	$1,738,264	$869,132
County Fuel Tax	$0.01	$765,711	$765,711
9th Cent Fuel Tax	$0.01	$818,793	$818,793
1st Local Option (1-6 cents)	$0.06	$4,644,578	$774,096
2nd Local Option (1-5 cents)	$0.05	$3,139,973	$627,995
Total	**$0.15**	**$11,107,319**	
Weighted Average per Penny[2]			$740,488

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

For the calculated impact fee, the capital improvement credit includes capacity-expansion expenditures for roadway improvements in Hernando County.

Hernando County Capital Project Funding

A review of Hernando County's FY 2015-2019 historical funding and the FY 2020-2024 Capital Improvement Plan indicates that fuel tax revenues and impact fee revenues are the primary funding sources for transportation capacity expansion improvements. As shown in Table E-2, Hernando County allocates funding equivalent of approximately 0.2 pennies for the portion of non-impact fee revenues dedicated to capacity expansion projects such as new road construction, lane additions, sidewalks and intersection improvements.

Table E-2

County Fuel Tax Equivalent Pennies

Source	Cost of Projects	Number of Years	Revenue from 1 Penny[3]	Equivalent Pennies[4]
Hernando County CIP FY 2020-2024[1]	$372,970	5	$740,488	$0.001
Historical Expenditures FY 2015-2019[2]	$1,128,992	5	$740,488	$0.003
Total	**$1,501,962**	**10**	**$740,488**	**$0.002**

1) Source: Table E-5
2) Source: Table E-4
3) Source: Table E-1
4) Cost of projects divided by number of years divided by revenue from 1 penny (Item 3) divided by 100

State Capital Project Funding

In the calculation of the equivalent pennies of fuel tax from the State, expenditures on roadway capacity-expansion spanning a 15-year period (from FY 2010 to FY 2024) were reviewed. From these, a list of improvements was developed, including lane additions, new road construction, intersection improvements, interchanges, transit, sidewalks, etc. The use of a 15-year period, for purposes of developing a State credit for road 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 roadway capacity-expansion projects for the "historical" periods and the "future" period:

- FY 2010-2014 work plan equates to 17.4 pennies
- FY 2015-2019 work plan equates to 24.3 pennies
- FY 2020-2024 work plan equates to 42.6 pennies

The combined weighted average over the 15-year period of state expenditure for capacity-expansion roadway projects results in a total of 28.1 equivalent pennies. Table E-3 documents this calculation and the specific projects that were used in the equivalent penny calculations are summarized in Table E-6.

Table E-3
State Fuel Tax Equivalent Pennies

Source	Cost of Projects	Number of Years	Revenue from 1 Penny[4]	Equivalent Pennies[5]
Projected Work Program (FY 2020-2024)[1]	$157,618,157	5	$740,488	$0.426
Historical Work Program (FY 2015-2019)[2]	$90,096,830	5	$740,488	$0.243
Historical Work Program (FY 2010-2014)[3]	$64,444,998	5	$740,488	$0.174
Total	**$312,159,985**	**15**	**$740,488**	**$0.281**

1) Source: Table E-6
2) Source: Table E-6
3) Source: Table E-6
4) Source: Table E-1
5) Cost of projects divided by number of years divided by revenue from 1 penny (Item 3) divided by 100

Tables E-4 through E-8 provide additional detail for the summaries included previously in the report and in Appendix E, Tables E-1 through E-3.

Table E-4

Hernando County – Historical Roadway Expenditures

Project #	Project Name	Improvement	2017	2018	2019	2020	2021	Total
107[illegible]	Deltona-Forest Oaks Intersection Improvements	Intersection improvements to add turn lanes and sidewalks	$0	$0	$0	$2,874	$671,484	$674,358
107490	Forest Oaks @ US19 Intersection Improvements	Intersection improvements to add turn lanes and sidewalks	$0	$0	$4,899	$31,957	$0	$36,856
105800	Powell Road Widening West	Build-laning roadway	$7,401	$0	$0	$0	$0	$7,401
105860	SR50 Frontage Road E of I75	Two lane frontage road with sidewalks east of I-75 located on north and south side of SR 50	$0	$0	$0	$0	$934	$934
108520	Sunshine Grove @ Jacqueline Traffic Signal	Design and construct traffic signal on Sunshine Grove @ Jacqueline and install concrete separator on Sunshine Grove @ Chamboard St	$0	$0	$80,875	$54,696	$727	$136,298
107480	West Landover Traffic Management	Construct traffic signal at Landover @ Mariner	$0	$0	$361,913	$41,123	$0	$303,036
Total			$7,851	$0	$447,788	$119,618	$674,145	$1,129,902

Source: Hernando County Department of Public Works

Table E-5

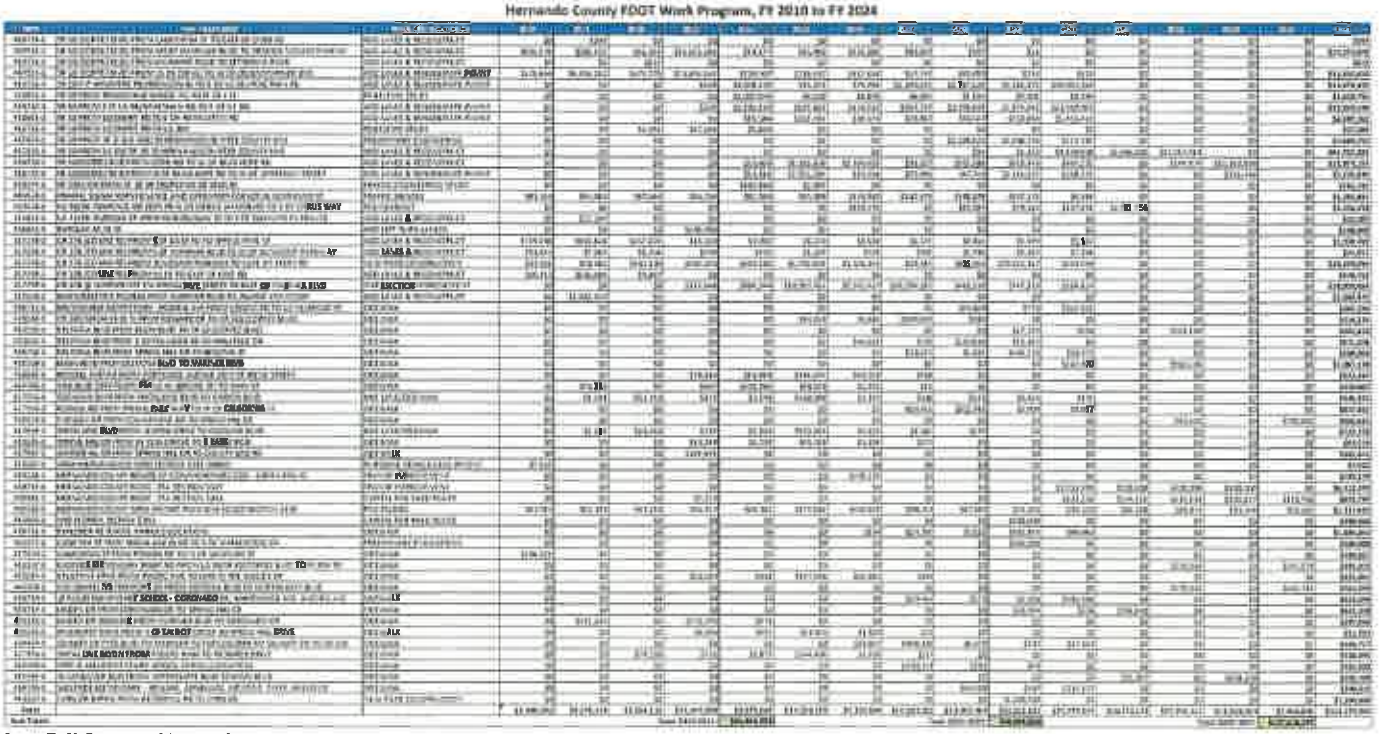
Hernando County – FY 2020-2024 Capital Improvement Plan: Capacity Expansion Improvements

CIP #	Project Name	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Total
Public Works Department							
109850	Cobblestone @ Spring Hill Intersection Improvements	$63,000	$175,000	$0	$0	$0	$238,000
107870	Howell Ave @ US 41 Intersection Improvements	$75,000	$0	$0	$0	$0	$75,000
110060	Seven Hills ADA Sidewalk Improvements	$59,970	$0	$0	$0	$0	$59,970
Total		$197,970	$175,000	$0	$0	$0	$372,970

Source: Hernando County Office of Management & Budget

Table E-6

Hernando County FDOT Work Program, FY 2019 to FY 2024



Source: Florida Department of Transportation

Table E-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
Total	*2,222,156,000,000*	*172,683,000,000*	*2,394,839,000,000*

Percent VMT	
@ 22.2 mpg	@ 6.6 mpg
87%	13%
91%	9%
94%	6%
93%	7%

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
Total	*100,097,117,117*	*26,164,090,909*	*126,261,208,026*

Total Mileage and Fuel	
2,394,839	miles (millions)
126,261	gallons (millions)
18.97	mpg

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 E-8

Annual Vehicle Distance Traveled In Miles and Related Data (2019) – By Highway Category and Vehicle Type[1/]

Revised: November 2020 TABLE VM-1

YEAR	ITEM	LIGHT DUTY VEHICLES SHORT WB[2]	MOTOR-CYCLES	BUSES	LIGHT DUTY VEHICLES LONG WB[2]	SINGLE-UNIT TRUCKS[3]	COMBINATION TRUCKS	SUBTOTALS ALL LIGHT VEHICLES[2]	SUBTOTALS SINGLE-UNIT 2-AXLE 6-TIRE OR MORE AND COMBINATION TRUCKS	ALL MOTOR VEHICLES
	Motor-Vehicle Travel (millions of vehicle-miles):									
2018	Interstate Rural	148,257	1,175	1,717	48,499	10,887	51,110	196,755	61,997	261,644
2018	Other Arterial Rural	234,142	2,607	2,339	96,414	18,238	30,068	330,556	48,306	383,808
2018	Other Rural	210,002	2,835	1,980	91,946	17,043	11,534	304,008	29,577	338,401
2018	All Rural	592,401	6,618	6,036	238,859	46,168	93,712	831,319	139,880	983,853
2018	Interstate Urban	404,357	2,558	2,683	100,785	19,926	45,444	505,142	65,371	575,753
2018	Other Urban	1,257,481	10,512	9,761	330,101	58,652	36,149	1,587,582	94,800	1,702,166
2018	All Urban	1,661,848	13,070	11,944	430,886	78,578	81,593	2,093,734	160,171	2,277,919
2018	Total Rural and Urban[3]	2,254,309	19,688	17,980	669,744	124,746	175,305	2,924,053	300,050	3,261,772
2018	Number of motor vehicles registered(2)	194,348,815	8,596,314	995,083	59,465,369	10,160,433	2,925,210	253,814,184	13,085,643	276,491,174
2018	Average miles traveled per vehicle	11,599	2,290	18,070	11,263	12,278	59,929	11,520	22,930	11,797
2018	Person-miles of travel (millions)[4]	3,765,896	22,846	381,176	1,128,489	124,746	175,305	4,894,385	300,050	5,598,457
2018	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
2018	Average fuel consumption per vehicle (gallons)	481	52	2,463	640	1,639	9,909	518	3,488	651
2018	Average miles traveled per gallon of fuel consumed	24.1	44.0	7.3	17.6	7.5	6.0	22.2	6.6	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 (WM) 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 F
Multi-Modal Transportation Impact Fee:
Calculated Impact Fee Schedule

Appendix F: MMTIF - Calculated Impact Fee Schedule

This Appendix presents the detailed impact fee calculations for each land use in the City of Brooksville multi-modal transportation impact fee schedule.

Table F-1

Calculated Multi-Modal Transportation Impact Fee Schedule

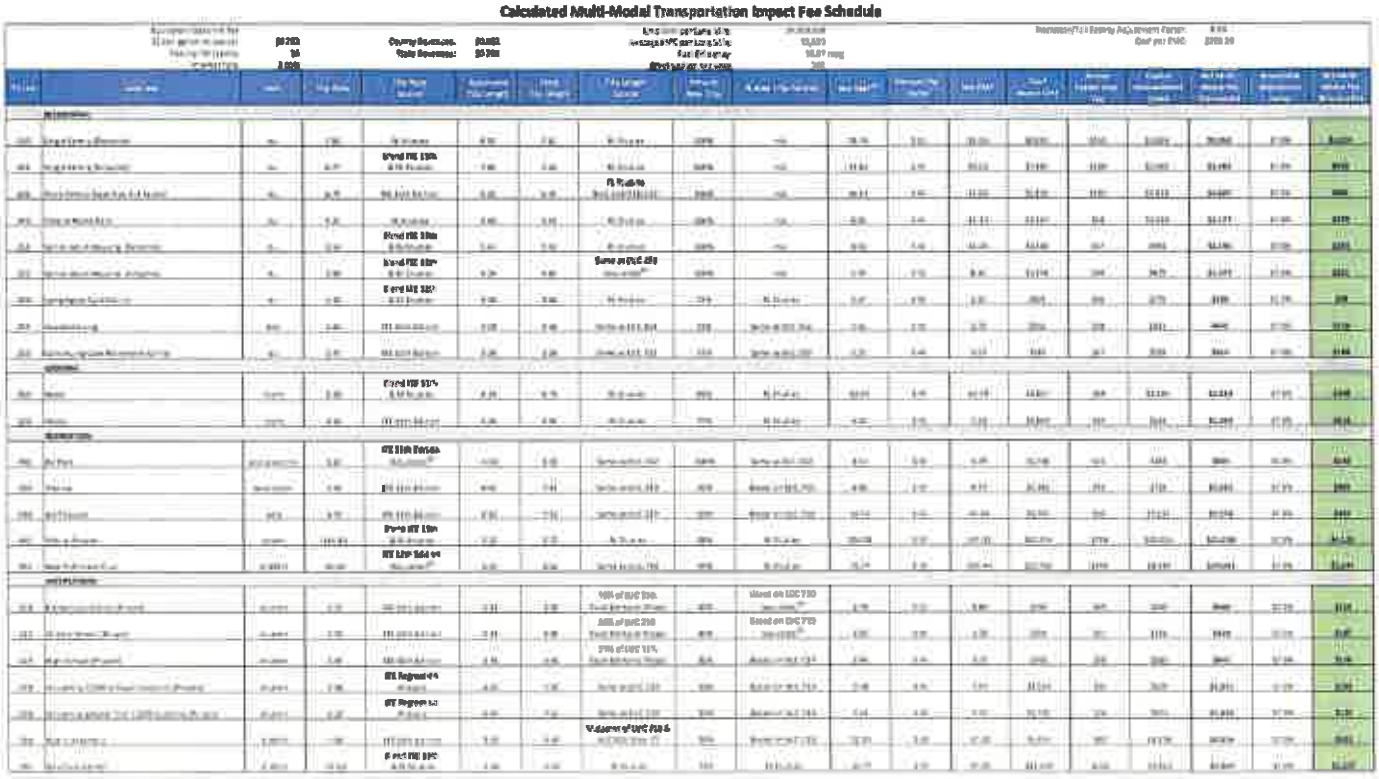


Table F-1 (continued)

Calculated Multi-Modal Transportation Impact Fee Schedule

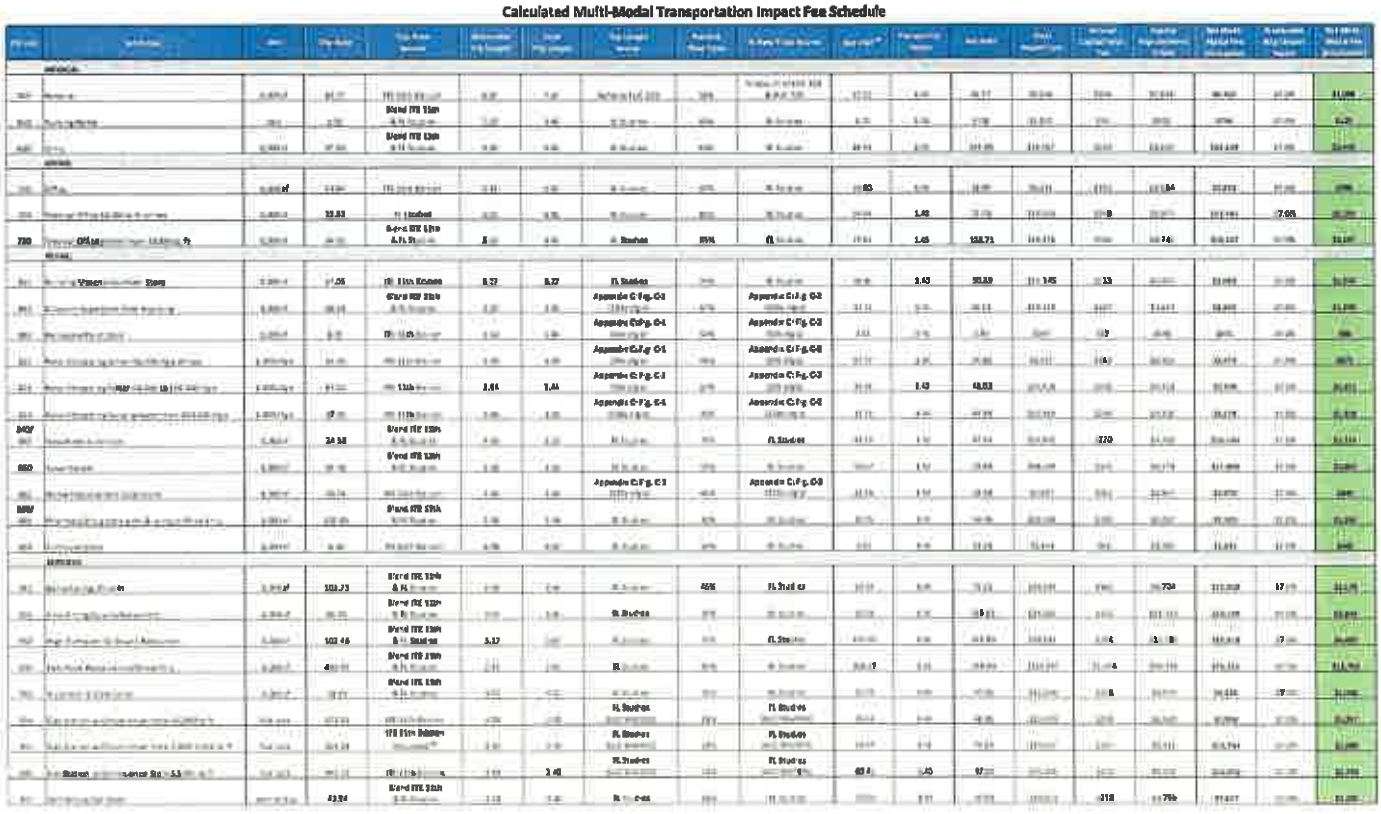


Table F-1 (continued)

Calculated Multi-Modal Transportation Impact Fee Schedule

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) The trip length for LUC 210 (5.42) was reduced by 20 percent based on the trip length ratio from single family to multi-family land uses (5.21 / 6.62 = 80%)
3) The ITE 11th Edition trip generation rate was adjusted to reflect the average occupancy rate of 60 percent based on data provided by the Florida Association of RV Parks and Campgrounds
4) The ITE 11th Edition trip generation rate for PM Peak Hour of Adjacent Traffic was adjusted by a factor of 10 to approximate the Daily TGR
5) The percent new trips for schools was estimated at 90% based on LUC 710, but was then adjusted to 82% to provide a conservative fee rate. This adjustment reflects the nature of elementary and middle school uses where attendees are unable to drive and are typically dropped off by parents on their way to another destination
6) Due to only slight variation, the trip generation rates for LUC 945 2,000 to 3,999 sf and 4,000 to 5,499 sf were combined into a weighted average trip generation rate for a single land use tier of 2,000 to 5,499 sq ft