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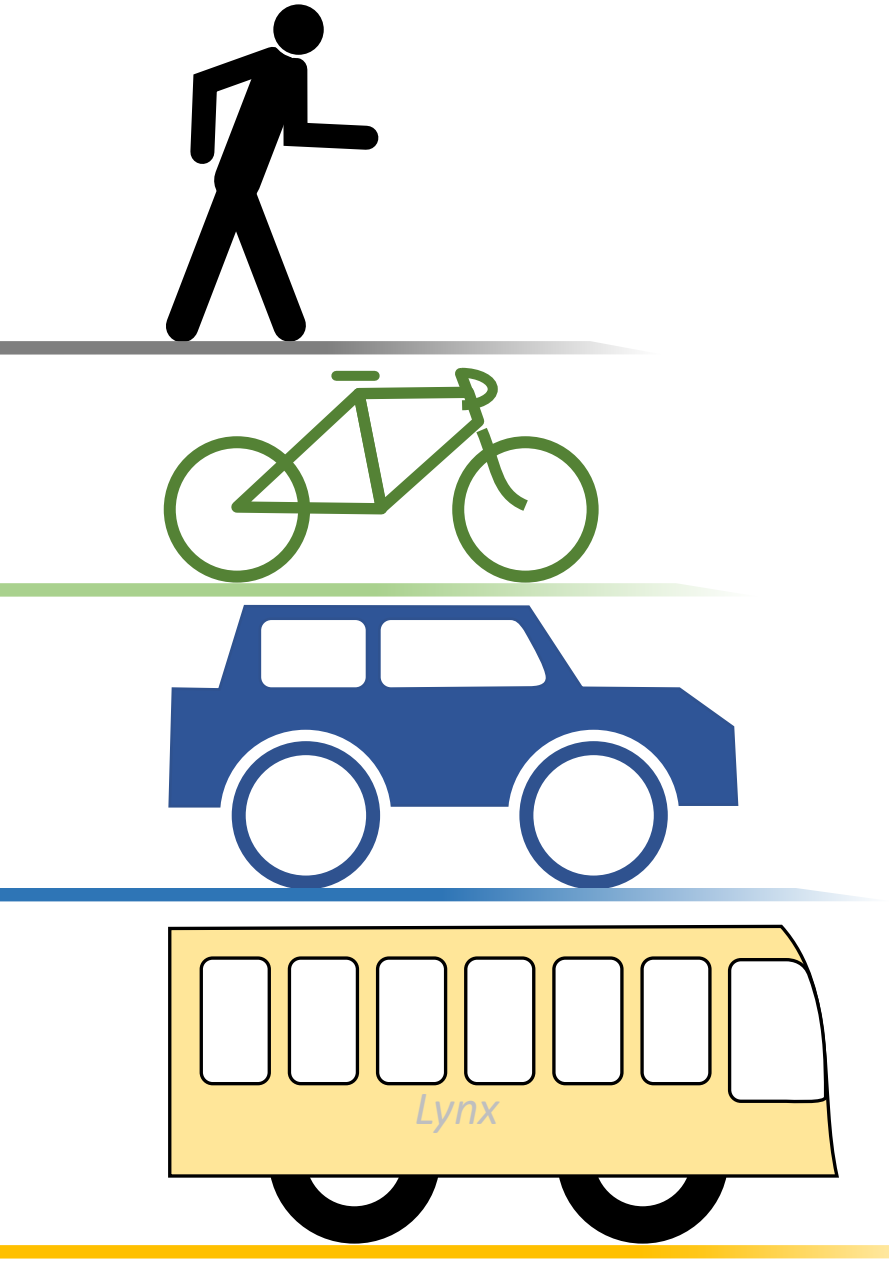
Seminole County, Florida
2020 Multi-Modal Mobility Fee Study



April 21, 2020

W.E. Oliver, P.E., LLC
Traffic Engineering
Transportation Planning

Seminole County
Florida's Natural Choice

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Seminole County, Florida
2020 Multi-Modal Mobility Fee Study

Prepared for:
Seminole County, Florida

Prepared by:

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Kittelson and Associates, Inc.

April 21, 2020

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SEMINOLE COUNTY, FLORIDA
2020 MULTI-MODAL MOBILITY FEE STUDY

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Seminole County, Florida

2020 MULTI-MODAL MOBILITY FEE STUDY

EXECUTIVE SUMMARY

This report documents a study to replace Seminole County's Road Impact Fee with a Mobility Fee. Seminole County most recently reviewed its road impact fee in 1995, when it re-endorsed a 1990 fee schedule. This 2020 update study was undertaken by Kittelson and Associates, Inc. and W.E. Oliver, P.E., LLC.

The County has had a road impact fee program in place since 1985. A four-district fee schedule was adopted, with fees ranging from $705 to $1,251 per single-family dwelling (Figure ES-1). The fee was composed of two components, an arterial component of $705 which was consistent throughout the county, and a collector component which varied by district. The collector component of the fee in three of the four districts have ended, and all remaining road impact fees will expire in 2021. To maintain a continuing flow of funds for needed mobility improvements, this study was undertaken to consider adoption of a modern mobility fee.

Impact fee methodologies have advanced since 1995. State laws have been passed requiring use of current information, and encouraging creative approaches to support local economic development and land development programs. The 1995 methodology did not incorporate any such features, and this update provided an opportunity for the County to review it's goals for improving the transportation system to accommodate growth that is occurring, review and update assumptions used in previous impact fee studies, and to incorporate several changes into the calculation of the impact fees.

Changes in calculation methodologies and data inputs from the 1990 impact fee study include:

Higher unit cost to build roadway capacity: The 1990 fee calculations estimated the cost of constructing new roads in the range of $169 to $253 per vehicle-mile of capacity. Recent Florida DOT and County road construction experience and anticipated future improvements have led to values on the order of $900 per vehicle-mile of capacity.

Use of Trip Length in the Fee Calculations: The 1990 fee calculations did not incorporate trip length as a consideration in the fee calculations. Thus, fees for land uses with high trip generation, but shorter trip lengths (generally retail uses), were charged disproportionately high fees compared to land uses with lower trip generation but longer trip lengths. This update incorporates trip lengths as a part of the calculation to more equitably assess land uses based on the amount of mobility system capacity consumed by a development.

Revised Fee Districts: With the advent of the SunRail system, Seminole County is seeking to encourage higher density development in the surrounding "Core" areas and provide for a more transit-oriented mobility strategy to accommodate growth. The revised districts are illustrated in Figure ES-1. Less dense suburban districts flank the Core district, where transit is less efficient

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and less roadway congestion is desired. A third, rural district is also defined, where land use densities are low, trips are longer, and because of that, a higher quality of roadway level of service is being pursued. These mobility strategies give rise to higher fees in the Rural district, moderate fees in the suburban district, and the lowest fees in the Core district.

Motor Fuel Tax Credit: The 1990 fee allowed a motor fuel tax credit of six cents per gallon as being committed to transportation system expansion. At present, Seminole County commits the substantial majority of its motor fuel tax proceeds to mobility system maintenance and operations, with only 0.09 pennies used to fund mobility system expansion. A State and Federal funding level of 10.99 cents per gallon was recognized.

Sales Tax Revenue Credit: Subsequent to the 1990 fee adoption, Seminole has adopted a sales tax to fund various capital needs. Portions of the sales tax are distributed to the school board and local municipalities, but the portion received by the Board of County Commissioners that is dedicated to funding mobility system expansion was also recognized as an equivalent motor fuel tax of 13.02 pennies per gallon of motor fuel.

New Land Uses in Fee Schedule: Additional land uses have been added into the fee schedule, including size-graduations for single-family homes, nursing homes, coffee/doughnut shop, and "passive" vs "active" warehousing uses. These uses reflect updated information from the latest ITE Trip Generation reference (10th Edition, 2017) and National Household Travel Survey.

Analysis of forecasted growth in travel in Seminole County has indicated an expected annual growth in travel of 100,225 person-miles on non-Interstate, non-Toll facilities. To expand the County's mobility system at a matching pace would cost an estimated $66.9 million per year. Recent funding levels for system expansion have been approximately $47.4 million per year, which includes $19.2 million per year of funding from the 2014 Local Government Infrastructure Sales Tax (LGIST) which will expire at the end of 2024. The existing road impact fee program currently generates approximately $3.1 million per year.

The existing road impact fees are considerably lower than in surrounding communities. This is the result of the long time since the road impact fee was updated, but Seminole County is also a relatively slower-growth community and funds a substantial portion of its mobility system expansion through the LGIST.

Fee schedules were developed in this study to reflect updated costs, expected rates of growth, mobility system expansion plans, and which have considered the "Core/Suburban/Rural" fee district concept. Fee schedules which replace the current rate of road impact fee collections (approximately $3.1 million per year) and which round-out an estimated shortfall in 2040 Transportation Plan funding ($7.0 million per year) were developed. In addition, mobility fee rates that would replace loss or re-allocation of the *capacity-funding portions only* of the LGIST were prepared for consideration by the Board of County Commissioners. (Other portions of the LGIST are allocated to the school board and local municipalities). These alternative fee schedules are included in Appendix E.

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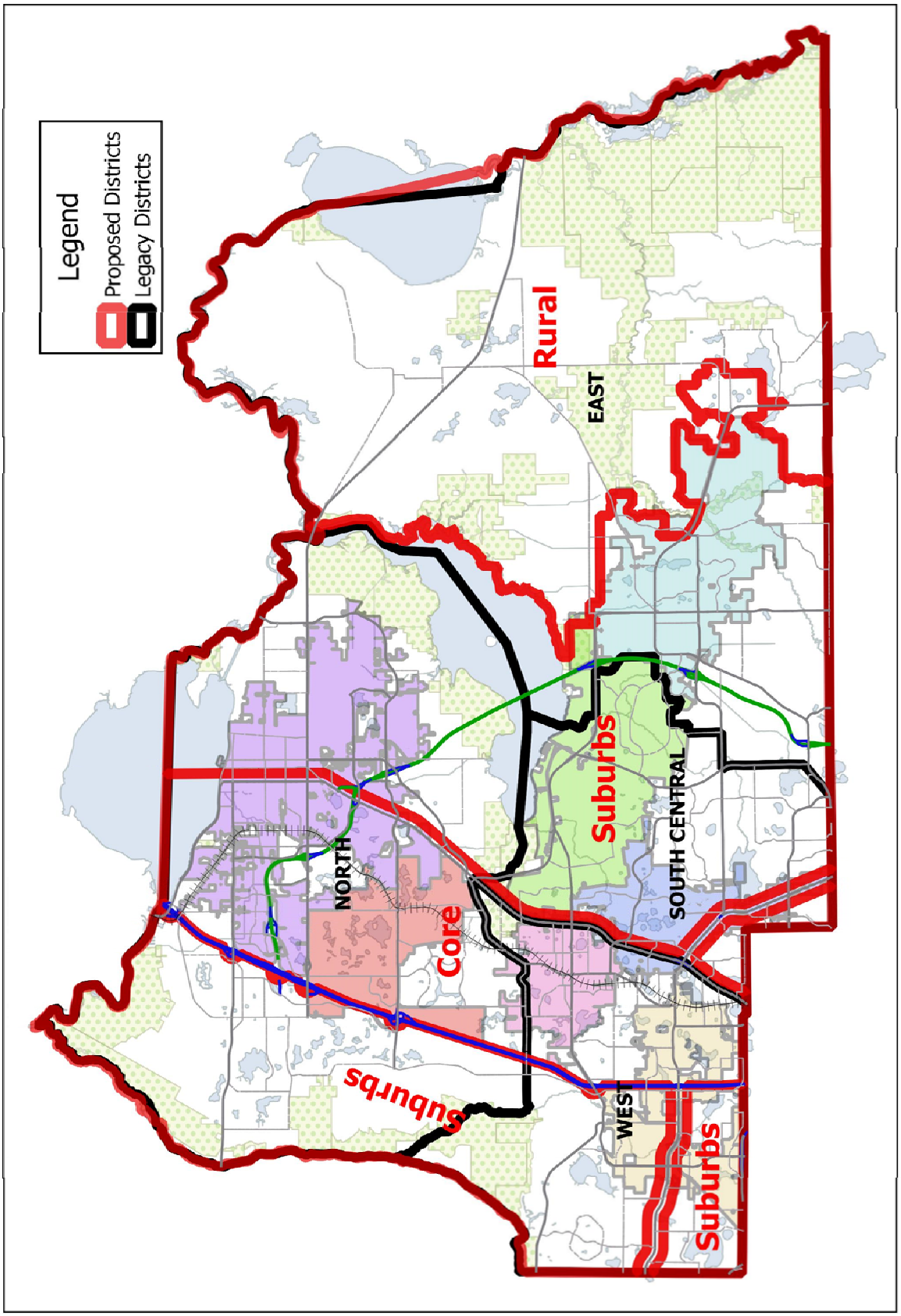
Figure ES-1: Legacy and Proposed Fee Districts



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The fee program adopted by the Board of County Commissioners implements the "Core/Suburban/Rural" fee district program and fee rates which fund the projected 2040 Transportation Plan funding shortfall, generating an estimated $7.01 million per year. Table ES-1 presents the adopted fee schedule. Fee schedules that include intermediate calculations are provided in Appendix F.

Table ES-1: Adopted Mobility Fee Schedule

			Fee District		
ITE Land Use Code	Land Use	Unit	Rural	Suburb	Core
210	Single Family (<=1,500 s.f.)	D.U.	$6,710	$2,234	$1,477
210	Single Family (1,501 to 2,500 s.f.)	D.U.	$8,284	$2,759	$1,824
210	Single Family (>2,500 s.f.)	D.U.	$11,101	$3,697	$2,444
n/a	Accessory Dwelling Unit	D.U.	$3,178	$1,000	$614
220	Multi-Family (1-2 Floor)	D.U.	n/a	$1,694	$1,040
221	Multi-Family (3+ Floor)(1)	D.U.	n/a	$1,259	$773
240	Mobile Home	D.U.	$2,891	$890	$529
310	Hotel	Room	$5,063	$1,671	$1,093
320	Motel	Room	$1,956	$629	$399
420	Marina	Berth	$1,411	$628	$483
430	Golf Course	Holes	$12,815	$5,565	$3,989
492/493	Fitness Center	1,000 sf	$9,928	$4,219	$2,932
610	Hospital	1,000 sf	$4,841	$2,119	$1,725
251/252	Independent Senior Living	D.U.	$2,932	$922	$566
620	Nursing Home	bed	$738	$298	$206
560	Church (Non-Sanctuary Space Only)	1,000 sf	$2,164	$894	$638
520/522/530	Private School	student	$556	$229	$161
565	Day Care (Child or Adult)	student	$506	$207	$128
710	Office	1,000 sf	$4,366	$1,873	$1,470
720	Medical Office	1,000 sf	$16,144	$6,979	$5,647
820	Retail < 20K Sq. Ft.	1,000 sf	$6,813	$2,748	$1,699
820	Retail (large >=20 ksf, Shop Ctr.)	1,000 sf	$9,124	$3,809	$2,467
Various	Convenience Retail	1,000 sf	$30,200	$12,169	$7,517
936/937	Coffee/Donut Shop	1,000 sf	$11,599	$4,559	$2,646
931/932	Restaurant - Sit Down	1,000 sf	$24,194	$10,092	$6,666
933/934	Restaurant - Fast Food	1,000 sf	$22,561	$8,867	$5,146
944	Gasoline Station	Fuel Pos.	$15,849	$6,260	$4,130
850	Supermarket	1,000 sf	$11,471	$4,676	$2,956
848	Garage / Auto Repair	1,000 sf	$5,464	$2,230	$1,567
912	Bank/Savings/Credit Union	1,000 sf	$9,040	$3,616	$2,428
110/140	Manufacturing	1,000 sf	$2,424	$1,042	$766
150/154/157	Passive Warehouse (Storage warehouse)	1,000 sf	$949	$408	$300
155/156	Active Warehouse (Parcel hub/fulfilment center)	1,000 sf	$4,346	$1,868	$1,373
151	Mini-Warehouses	1,000 sf	$553	$235	$163

Note: 1. This rate is applicable to all dwelling units in buildings of three or more floors, including units on floors 1 and 2.

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Seminole County, Florida
2020 Multi-Modal Mobility Fee Study

1. Introduction

Impact and mobility fees are a way for local governments to involve new developments in funding a portion of the mobility infrastructure needs they create in a community.[(1)] In contrast to historical "proportionate share" methods associated with concurrency of addressing the transportation impacts of developments, impact and mobility fees are viewed as predictable, equitable, and fair, creating a level playing field for developers[(2)]. If developed in concert with community mobility goals, they are an indication that a community takes seriously the delivery of a mobility system that is responsive to community needs.

Mobility fees are one-time, up-front charges for a portion of a development's transportation impacts. Payment is usually made at the time of building permit or certificate of occupancy issuance. Essentially, impact fees require that new development that adds travel to the mobility system pay an appropriate share of the capital facilities required to serve that development.

This 2020 Mobility Fee Study was undertaken by W.E. Oliver, P.E., and Kittelson and Associates, Inc. in response to requirements of Florida Statutes that such fees be developed using the "most recent and localized data". Seminole County's impact fees ordinance requires review and endorsement of its fees every four years to address statutory requirements.

Mobility strategies in Central Florida are shifting to orient towards the implementation of SunRail and associated enhancements to transit, bike, and walking modes of travel as well as upcoming major investments in the Interstate 4 corridor. These major investments, however, do not serve the entire county equally, so Seminole County is seeking to guide the form and location of future development through the fee program by more clearly defining and reinforcing differences in mobility strategies in their Core, Suburban, and Rural areas. In addition, they desire to better position themselves to address routine mobility system operational and maintenance needs and to respond to forecasted growth. Thus, this study considered the current transportation revenue program, and developed fee schedules for Board of County Commissioner consideration in light of these goals.

(1) Florida Statutes 163.3180 (2)

(2) "Impact Fees and Housing Affordability: A Practitioners Guide", Bowles, L.K., and Nelson, A.C., 2008.

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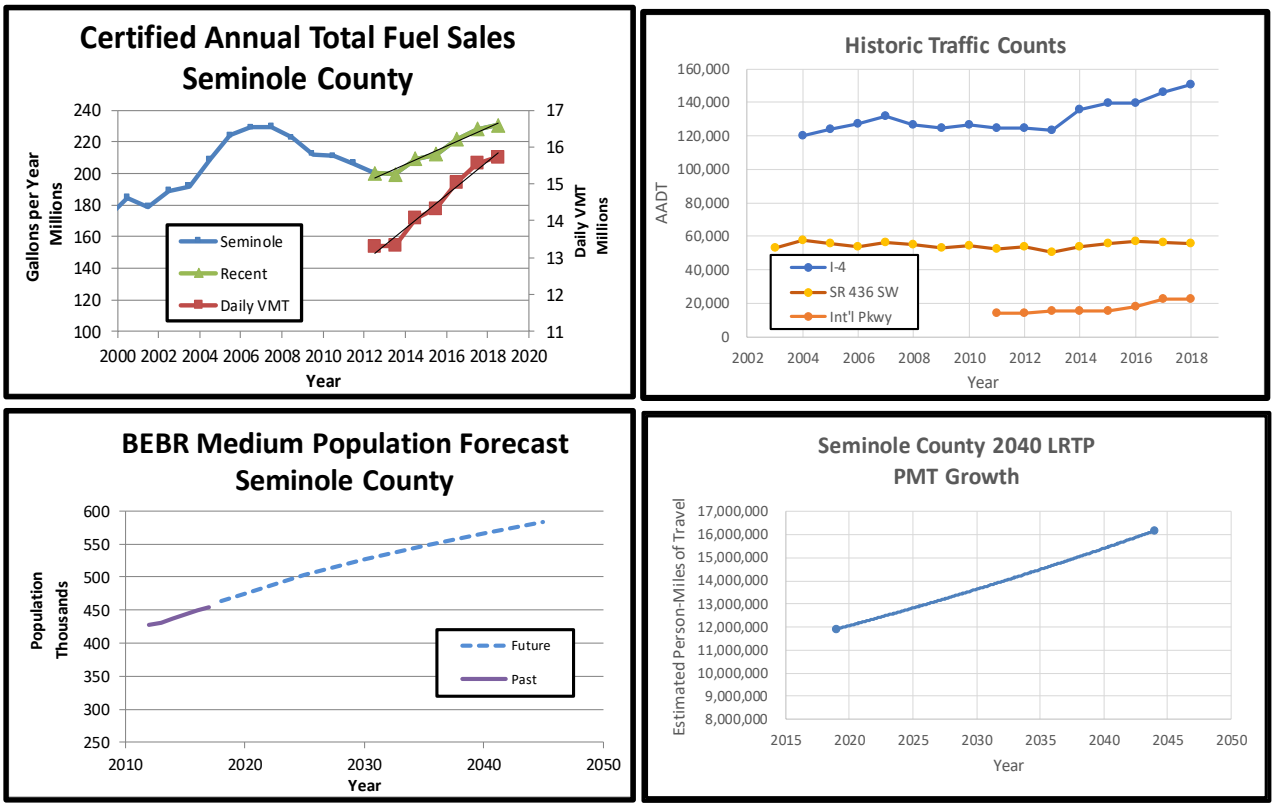
2. Outlook for Growth and Infrastructure Needs

Growth in Seminole County slowed during the "Great Recession" of 2007 to 2012 but has returned in recent years. Since 2012, growth has returned due to the Orlando metropolitan area continuing to expand into south Seminole County. Growth in central Seminole County is encouraged by the Central Florida Regional Growth Vision and is anticipated in response to advancement of SunRail and Interstate 4 construction plans. Growth in the northwestern County and in proximity to Interstate 4 is expected to accelerate, fueled by construction of the Wekiva Parkway and Interstate 4 improvements.

Indicators of growth include motor fuel sales in the County, historic traffic counts, tracking and forecasts of population growth from the University of Florida Bureau of Economic and Business Research (BEBR), and forecasts of growth in travel demand of Seminole County's 2040 Transportation Plan. Graphics illustrating the growth trends of these sources are provided in Figure 2-1.

There is a clear indication of increasing fuel consumption in Seminole County. The motor fuel sales graph indicates steady growth from 2000 to 2007, shows a contraction during the

Figure 2-1: Seminole County Travel Growth Indicators



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recession years of 2008-2012, but a return to growth from 2012 to 2018. Review of three traffic count stations (one on I-4, one in southwest, and one in northwest indicate growth in the I-4 corridor, but relatively stable traffic volumes at the other stations.

BEBR forecasts a future annual growth rate in population of 0.85 percent per year, with population increasing by 24 percent from 2019 to 2040. The forecast of Seminole County's 2040 Transportation Plan shows a higher 1.23 percent per year rate of travel growth. The faster rate of increase in travel than in population indicates an encouraged higher rate of employment growth in Seminole County, and is also partially due to the development of the Wekiva Parkway – an element of a beltway around the Orlando metropolitan area. The encouragement of employment growth is mirrored in the County's Comprehensive Plan, which has established Urban Centers and Corridors Overlay areas and High Intensity Planned development (HIP) areas to encourage more intense and high-value job creation and housing.

This impact fee update focuses on travel growth on County and State "surface" arterial roads, as opposed to toll roads and Interstate 4. Toll roads and Interstate highways are financed by user-paid tolls or federal funds that are allocated on a national level, and are not addressed through County-levied impact fees. Therefore, travel on these types of roads is excluded from consideration in this study.

For the 25-year (2019 to 2044) planning horizon, annual growth in travel on surface arterials is estimated to average 115,802 person-miles per year. (Person-miles of travel are used in this multi-modal analysis to allow mixing of transit and vehicle-travel, costs, and capacity. A person-mile of travel is one person traveling one mile be it on a bus or other motorized vehicle.) In early years, an annual growth of 106,100 person-miles per year is expected. To keep pace with this growth rate, the County would need to add the equivalent of 9.2 lane-miles of roadway per year at an annual cost of approximately $64.3 million. The 2040 Transportation Plan proposes to fund capacity at a slower rate, a rate of $48.2 million per year. An additional $4.4 million annually of bicycle, sidewalk, ITS, and safety needs have been identified in Seminole County's 2040 Transportation Plan, for a total annual need of $52.6 million. The funding rate in recent years has been approximately $47.4 million between State and Federal "surface arterial" funding, County sales tax, County gasoline tax, and roads impact fee funding.

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3. 2040 Long-Range Transportation Plan

To address mobility needs, Seminole County and local municipalities have developed a 2040 Transportation Plan. The Plan proposes the addition of 59.9 lane-miles of State and County "surface arterial" roadway over the roughly 22-year horizon of the Plan, or at a rate of 2.7 lane-miles per year.

The County's portion of this plan proposes the County participate in delivering 37.3 lane-miles of roadway additions, 50 miles of bike and pedestrian trails, and 46 miles of complete-streets projects. The Plan develops the walking, biking, and roadway travel network in three funding "Tiers". Tier 1 includes projects that are fundable with the current revenue program, including the LGIST that expires at the end of 2024. Tier 2 includes additional projects that could be funded if the LGIST is extended from 2025 through 2030, and Tier 3 includes additional projects that could be funded if the LGIST is extended from 2031 through 2040. The costs of County projects in these Tiers are $240 million, $150 million, and $250 million in 2017 dollars.

The County share of roadway lane-addition was estimated to cost $161.5 million, of which $151.5 million depends on Tier 2 and Tier 3 LGIST funding. Thus, the majority of County lane addition (94 percent) is dependent on extension of the LGIST. If fully funded, the Plan would add an estimated 0.77 person-miles of capacity per person-mile of growth in travel.

While action to renew the LGIST is not necessary now, to allow the County to consider alternative funding strategies to address unfunded portions of the Plan and SunRail needs, alternative mobility fee schedules are developed and discussed in Appendix E of this report, following discussion of other aspects of fee schedule development.

Reviewing the 2040 Transportation Plan by geographic subarea sheds additional light relevant to mobility fee development. Three geographic subareas of Seminole County, illustrated in Figure 3-1, have been proposed where varying development densities have emerged and different mobility strategies are planned in the 2040 Transportation Plan. The three geographic areas are characterized as Rural, Suburban, and Core – and each has very different development densities, needs, and ability to be served by alternate forms of mobility. Mobility strategies means the degree to which different modes of travel (e.g. car, rail and bus transit, bicycling, and walking) are relied upon and the quality of service to be provided by each mode.

Table 3-1 summarizes some simple measures contrasting the differences in district character that suggest different mobility strategies by 2044. (Note that the values in these tables exclude Toll and Interstate highway values and exclude the SunRail system.) The values in this table

Figure 3-1: Proposed Mobility Fee Districts

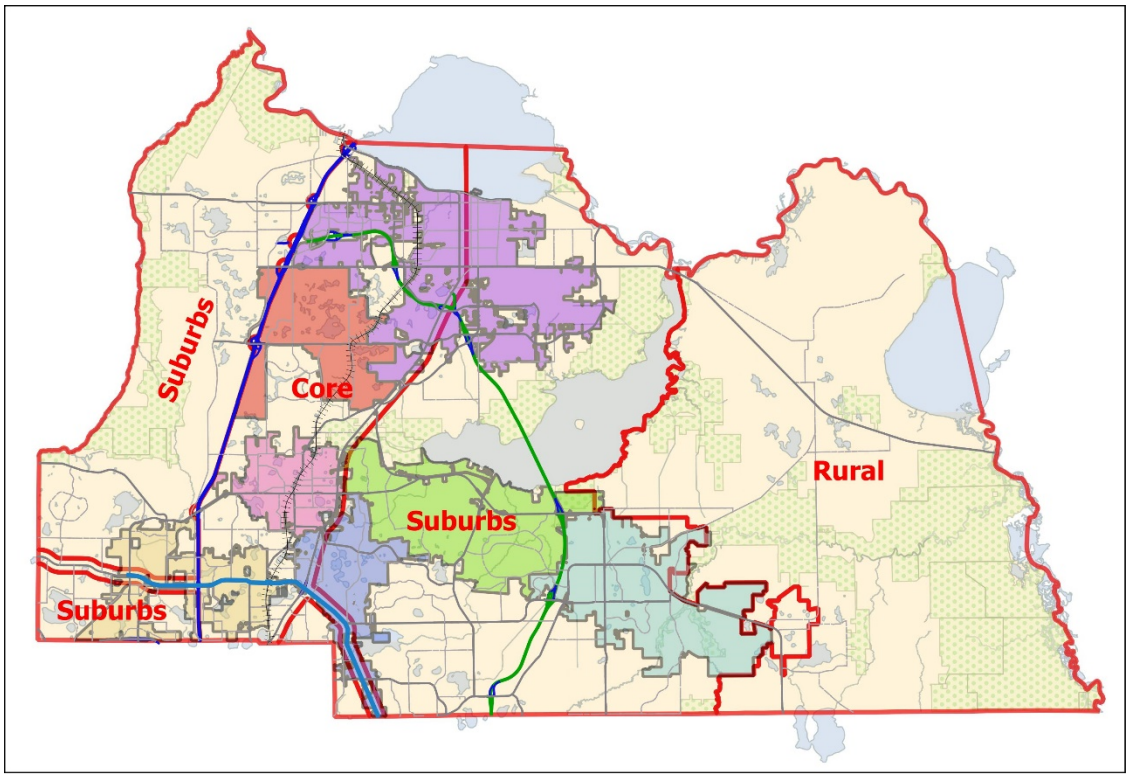

Table 3-1: 2044 Forecast Simple Mobility Measures

Measure	District			
	Rural	Suburban	Core	Total
Upland Area (sq mi):	94.7	176.6	49.3	320.6
2044 Population:	21,584	386,947	164,681	573,212
2044 Employment:	4,325	212,605	168,029	384,959
Population/Square Mile:	228	2,191	3,340	1,788
Employment/Square Mile:	46	1,204	3,408	1,201
Person Trip-ends:	60,845	2,262,438	1,453,495	3,776,778
Trip-ends/Square Mile:	642	12,812	29,483	42,937
Productions:Attraction Ratio:	2.33	0.90	0.67	0.82
Lane-Miles of Major Road:	93.6	642.1	474.7	1,210
Lane-Miles of Major Road per Square Mile:	1.0	3.6	9.6	3.8
Person-Miles of Arterial Road Capacity:	932,716	7,778,120	5,706,602	14,417,438
PTE/PMC:	0.065	0.291	0.255	0.262
Lynx Route-Miles:	0.0	57.4	70.9	128.3
Percent Major Roads Covered:	0%	27%	62%	40%
Lynx Bus-Miles/Day:	0	4,041	8,196	12,237
Bus-Miles/Person:	0.000	0.010	0.050	0.021
Person-Miles of Lynx Bus System Capacity:	0	121,221	245,877	367,098
Estimated Person-Miles of Travel:	739,654	5,327,717	4,799,359	10,866,729
Estimated Person-Miles of Mobilty System Capacity:	932,716	7,899,341	5,952,478	14,784,536
Proportion of Capacity by Bus:	0.0%	1.5%	4.1%	2.5%
PMT:PMC Ratio:	0.793	0.674	0.806	0.735

Notes:

1. Excludes Interstate and Toll roads, and SunRail.
2. Sources include Seminole County GIS Department, Seminole County 2040 LRTP.
3. 2044 values extrapolated by W.E. Oliver, P.E., LLC

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represent data compiled from Seminole County's 2040 Transportation Plan and indicate several items of interest, to wit:

- Greater densities of trip generation and greater levels of congestion are anticipated in the Core and Suburban areas than in the Rural area.
- Person trip-end density and the ratio of trip "productions" to "attractions" suggests different modal strategies are appropriate in the three districts. Trip productions are predominantly generated by homes and attractions are generated by employment land uses. In the Rural area, a substantial majority of trips are productions, or residentially generated, and a small proportion are attractions. Thus, trips generated by homes in the rural area must travel into the Suburban and Core districts to find land uses that meet their needs – resulting in longer trip lengths – whereas the Suburban and Core districts have more balanced productions and attractions, creating the opportunity for shorter trip lengths and for more travel to remain in its "home" district.
- The highest density of trip-ends is in the Core district, which supports the notion that more trips can be served via bicycling and walking, and that transit can operate more efficiently.
- The Core area provides significantly more lane-miles of roadway per square mile of land than in the Suburban area suggesting that, as the suburbs continue to develop and intensify, opportunities to create additional roadway corridors should be exercised– not only to serve automobile travel, but to create a "finer" roadway grid that allows transit routes to get closer to the land uses they serve and to create a network scale that supports bicycle and walking trips.
- The proportion of mobility system capacity provided by transit in the Core area in the Plan is substantially greater in proportion to the Suburban or Rural areas.

These characteristics of higher densities, shorter trip lengths, more roadway congestion, and more reliance on transit, bicycling, and walking in the central corridor of Seminole County, and less density, longer trip lengths, less roadway congestion, and less reliance on alternate modes of transportation are, in fact, anticipated in the 2040 Transportation Plan and thus should be, and are, reflected in the mobility fee structure.

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4. Impact Fee Guiding Principles

Several legal requirements and principles are either directly identified, or are implied, through case law or in State law that govern the development and assessment of impact fees.

Impact fees must meet principles described as the "dual rational nexus" test. That is, the fees assessed must be in proportion to the needs created by the development, and fees collected must be applied to render a benefit to the payer. Seminole County's mobility fee meets the first condition by basing the fee on the quantity of transportation system capacity consumed by the development and recognizing credits for transportation revenues generated by the development.

The second condition is achieved by establishing districts within which fees collected must be expended. Changes to the existing districts are proposed in this study, and the County's Impact Fee ordinance currently requires that fees collected in a given district be expended within that district. However, a concept common in many impact fee programs recognizes that travel generated within any district, to some extent, extends into adjacent districts. Some communities allow a degree of flexibility to allow some of the funds collected in one district to be expended in adjacent districts, provided the expenditures benefit the travel from the originating district. This flexibility is attractive when fees are relatively low, enabling collected fees to be spent and the benefits of improvements to be realized, more quickly.

Table 4-1 provides an estimate of the percentage of travel generated in each of the County's three proposed fee districts that stays in the "home" district and how much travels into the adjacent districts. These estimates were derived from the transportation planning model used to develop Seminole County's 2040 Transportation Plan, and can be used as a basis to estimate the extent to which funds collected in one district might be used in the adjacent districts.

Table 4-1: Cross-District Travel Estimates

Travel "In" District	"Home" District		
	Rural	Suburban	Core
Rural	52.4%	9.5%	5.8%
Suburban	41.4%	58.2%	32.7%
Core	6.2%	32.3%	61.5%
	100.0%	100.0%	100.0%

F.S. 163.3180 generally requires that a development cannot be required to cure pre-existing deficiencies. This is achieved in Seminole County's impact fee by establishing fees at rates that do not exceed the quantity of capacity consumed by the development paying the fee, recognizing fee credits, and charging at a rate that does not improve quality of service beyond the quality that past growth also funds for itself.

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F.S. 163.3180 also requires that fees be expended in accordance with a local government's plan. An adopted, cost-affordable Comprehensive Plan Transportation Element or Metropolitan Planning Organization's (in this case MetroPlan Orlando MPO's) transportation plan can serve this purpose. While Seminole County's current 2040 Transportation Plan depends upon yet-to-be-approved renewals of the infrastructure sales tax, it does represent a goal that the County is currently working toward funding, in conjunction with SunRail funding needs. This mobility fee study is one of the pieces of the future funding puzzle. It is recommended that as the revenue picture for transportation changes, the County and MPO update the adopted 2040 Transportation Plan and the mobility fee to reflect the revenue plan.

F.S. 163.31801 requires that fees be based on most recent data. This fee update study considers data from regional transportation planning programs, a local transportation plan study completed in 2018, and actual recent construction costs encountered in the region. The most currently available information regarding interest rates, fleet fuel efficiency, and other fee parameters were compiled, as discussed in subsequent sections of this report. Travel demand characteristics (trip generation rates, trip lengths, and percent new trips) of various land uses were accepted from prior and nearby studies, as these parameters were expected to be similar in Seminole County.

F.S. 163.31801 also requires that if new fees or increases in fees are adopted, that a 90-day or greater notice be provided.

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5. General Fee Equation

The general impact fee equation is:

Fee = Capacity Needed x Cost of Capacity - Credits

For a multi-modal mobility fee, the capacity needed is the product of person-trip rate x trip length x percent new trips x capacity addition ratio / 2. This calculation yields the quantity of mobility system capacity that is needed to address the capacity consumed by a development in units of person-miles of capacity. Person-trips are used to integrate transit and other modes into the mobility system costs and modal strategy. The trip rate indicates the number of person-trips generated on a daily basis, the trip length is the average length of person-trips from the site. Percent new trips is the proportion of trips that represent additional, new travel that is generated by the land use. For example, some retail land uses (e.g. a convenience store, fast food, or gasoline station) "capture" traffic from the adjacent street. The "captured" trips are not additional travel added to the system. The percent new trips factor adjusts the computation to acknowledge this characteristic.

The capacity addition ratio is a quality of service indicator, representing the long-term quality of service desired for the travel. This factor varies by fee district and the modal strategy (e.g. the mix of roads and transit) for each fee district. This factor is "capped" by the quality of service funded by the existing population to prevent setting fee rates that improve quality of service.

Finally, the factor of two in the denominator recognizes that the demand for travel arises from the need to travel between two land uses, and allocates the responsibility for the travel equally between the two uses.

The cost of capacity is what it costs to deliver mobility system capacity, expressed as a cost per person-mile of capacity. The cost to deliver a unit of capacity will vary by geographic subarea, as it is typically more costly to provide facilities in the urban areas because of impacts to surrounding land uses. The cost is also affected by modal strategy – Seminole County's 2040 Transportation Plan proposes that in the rural area, mobility system capacity will primarily be added through road construction. In the suburban and core districts, however, greater emphasis will be placed on transit, bicycling and walking systems. When person-miles of travel is multiplied by the cost per person-mile of capacity, the result is the cost to provide the infrastructure capacity needed to serve the development at the desired quality of service and adopted modal strategy. In this study, the costs of SunRail are not considered, as it is the subject of other studies with funding decisions yet to be made.

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Credits are issued to land uses in recognition that their travel generates revenues that are used to provide capacity in the transportation system. For example, when a vehicle drives to a development, it burns gasoline, and some motor fuel taxes are often used to construct transportation system capacity. Or, citizens that travel also generate sales tax revenues, a portion of which are used to fund mobility system infrastructure. Funds that Seminole County relies upon for expansion of the mobility system come from the County's "9th-cent" motor fuel tax, a portion of the Local Government Infrastructure Sales Tax, and impact fees.

Seminole County levies ten of the allowed 15 pennies of motor fuel taxes per gallon, and allocates revenues from 14.91 of these 15 pennies to maintain and operate their transportation system. A small portion of the 9th Cent tax on gasoline provides $218,764 per year to fund Lynx capital needs.

The Federal government and State levy motor fuel taxes as well, and allocates a portion of them to expanding Federal and State highways. Federal and State expenditures for transportation system expansion are administered by the Florida Department of Transportation (FDOT). FDOT's Work Program for the past six years (2013 to 2019) and planned for the coming five years (2020-2024) was reviewed and an annual funding level of $25.7 million was derived, which is the equivalent of 10.68 pennies per gallon of motor fuel tax. An additional 0.31 pennies of equivalent motor fuel tax revenue is provided based on typical Federal capital funding rates for Lynx bus system expansion capital costs.

The Board of County Commissioners receives 55.6 percent of the LGIST (the other 44.4 percent is directed to the School Board or shared with municipalities). 44.1 percent of the County's 55.6 percent of LGIST is committed to developing the County's mobility system. For purposes of establishing a credit to each land use, it was assumed that the sales tax credit would be allocated to various developments in equal proportion to the needs created. For example, if one development creates the need for $1 million of capacity, and another creates the need for $2 million, the sales tax would be allocated to help each in that 1:2 proportion – thus creating the ability to credit the sales tax as if it were a motor fuel tax, allocating it based on the quantity of travel generated. The share of LGIST committed to mobility system expansion is $18.5 million in 2018, and over the 25-year horizon of this mobility fee study is the equivalent of 13.02 pennies per gallon of gasoline tax.

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6. Fee Parameters

a. District Strategies

Changes to the existing fee district boundaries to reflect a "Rural", "Suburban", and "Core" area strategy is adopted in this update study, as is discussed in Section 3. Based on both technical and policy merits, fees are highest in the Rural district, and step down in the Suburban district, and are lowest in the Core district. This strategy supports Seminole County's Comprehensive Plan Land Use and Transportation Element issues and policies encouraging infill and higher-density development in the urbanized areas of the County, and protection of rural character in rural areas.

b. Land Uses in Fee Schedule

Seminole County's historical fee schedule included 36 land use categories. Two land uses, "Utility Substation" and "Racquet Club" were eliminated from the fee schedule. Replacing "Racquet Club" is "Fitness Center". In addition, single-family residential uses were stratified into three size ranges to reflect differences in travel generation. The size ranges are 0-1,500 s.f., 1,501 to 2,500 s.f., and greater than 2,500 s.f. A new land use, Coffee/Donut Shop, was added, and retail land uses were re-organized to provide for Convenience Retail (e.g. convenience stores), small retail (<20,000 s.f.), and large retail (>=20,000 s.f.).

c. Travel Demand Variables

Three travel demand parameters are multiplied to calculate the amount of transportation system capacity that is used by a land development activity: (1) number of trips generated, (2) length of the trips, and (3) percent of the trips that are newly generated rather than captured from existing travel on the roadway system. Trip generation rates and percent new trips information was compiled from the Institute of Transportation Engineers' (ITE) Trip Generation 10th Edition (2017) reference. This data, and trip length data, was then compared to similar data from fee schedules of nearby communities (Volusia, Orange, and Osceola Counties) and information from literature available on the internet to ensure consistency and reasonableness.

Trip lengths were adjusted by district, estimates of the extent to which travel generated in each district relies on Toll roads or Interstate 4, and estimates of the extent to which travel generated in each district travels into adjacent districts were developed using information extracted from the 2040 Transportation Plan model. Data and analyses supporting these variables are provided in Appendix A.

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d. Facility Costs

Actual costs of recent State road construction projects were obtained from FDOT involving 23.7 lane-miles of roadway construction in the Suburban and Core districts. FDOT Cost per Mile tables were consulted to estimate a State rural construction cost as well, since there was no actual rural area construction recently in Seminole County. Seminole County's recent road construction experience is also limited, so costs from Orange County's Capital program were consulted as a basis to develop County roadway costs. Using this central Florida information, County road construction costs were estimated at approximately 76 percent of the State construction costs.

This information, summarized in Table 6-1, indicates costs per lane-mile of $4.3 million, $8.6 million, and $10.5 million per lane-mile for the FDOT to add lanes to an existing road in the rural, suburban, and core areas, respectively. These costs include design, right-of-way, drainage, environmental mitigation, construction, and construction inspection cost elements. Supporting data is provided in Appendix B.

Table 6-1: Estimated Cost per Lane-Mile for Roadway Expansion

	Location	Design/CEI Cost/ Lane-Mile	Design/CEI as % of Construction	Right-of-Way Cost/ Lane-Mile	Right-of-Way as % of Construction	Construction Cost/ Lane-Mile	Total Cost/ Lane-Mile	Capacity per Lane	Cost per Vehicle-Mile of Capacity
State	Core	$946,757	15%	$3,155,856	49%	$6,416,907	$10,519,520	10,047	$1,047
State	Suburb	$899,870	15%	$1,799,740	31%	$5,870,582	$8,570,192	10,848	$790
State	Rural	$521,243	17%	$694,991	22%	$3,091,099	$4,307,333	9,650	$446
	76%								
County	Core	$719,535	15%	$2,398,450	49%	$4,876,849	$7,994,835	9,545	$838
County	Suburb	$683,901	15%	$1,367,803	31%	$4,461,642	$6,513,346	10,306	$632
County	Rural	$396,145	17%	$528,193	22%	$2,349,235	$3,273,573	9,168	$357

To develop a weighted mix of State and non-State road improvements, the County's 2040 Transportation Plan was consulted, which indicates a 44:46 lane-mile relationship between State road and County road widening.

Plans for transit service in Seminole County's 2040 Transportation Plan include the expansion of Lynx transit service in the Core and Suburban areas to provide increased access to the SunRail system, as well as improve commuter services. Lynx's current Transit Development Program (2018) indicates service expansion at a rate of 3.3 percent per year over the ten-year horizon of the plan. This rate of expansion was extrapolated through 25 years, with service increases focused on the Core and Suburban areas for this fee study. This rate of service expansion increases daily bus-miles of service from 4,421 in 2019 to 9,948 by 2044. This service expansion would come from added routes, increased frequency of buses, and lengthening the hours

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of service. A capital cost per mile computation is provided in Appendix C, indicating costs of approximately $465 per person-mile of capacity.

Bicycle and pedestrian travel demands are small relative to the personal vehicle. Nonetheless, bike and pedestrian facilities are important on a road for safety and mobility reasons, and they are a standard part of the urban street and rural roadway scene. Bicycle and pedestrian facility costs are included in standard roadway cross-sections for which costs are estimated, and their costs are thereby included in the mobility fee. Their costs have been estimated at from 1.7 to 5.0 percent of roadway costs, depending on the setting. Bike and pedestrian facilities on or off of the major road network could be funded with mobility fees provided the County is reasonably sure they will help to serve the travel demands for which developments are being assessed.

Table 6-2 summarizes the combination of roadway and transit person-trip cost per person-mile of capacity to a system person-trip capacity by district, based on the mix of State vs non-State and estimated type of road section for roads (see Appendix B) and transit capacity added in each fee district. The combination mixes road and transit capacity based on the proportions of transit system and road system expansion planned, using person-miles of capacity. As indicated in Section 3, transit system expansion is relatively small compared to the road system expansion plans, but is largest in the Core district.

Using these relationships, mixed-mode costs per person-mile of capacity of $367.30, $638.68, and $601.81 per person-mile of capacity for the Rural, Suburban, and Core districts were developed. These costs are, not surprisingly, substantially greater than the $121 to $188 per person-mile of capacity developed in Seminole County's 1995 Impact Fee Update study. (Note, the 1995 costs per *vehicle*-mile of capacity have been converted here to dollars per *person*-mile of capacity using a factor of 1.4 person-miles per vehicle-mile to allow comparison.) As modal strategies (e.g. mix of transit vs roadway capacity) are modified in a district, these unit costs will also vary.

Data and analyses supporting mobility system costs are provided in Appendix B.

e. Revenue Credits

As discussed previously, Seminole County levies ten of the allowed 15 pennies of motor fuel taxes per gallon, and allocates the majority of the revenues from these ten pennies to maintain and operate their transportation system. The only current County-level motor fuel tax commitment to capital facilities is a $218,764 annual commitment (in 2019) to fund Lynx capital needs. This annual commitment was determined to be an equivalent of 0.09 penny of County motor fuel tax credit against the mobility fee.

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Table 6-2: Computation of Mixed-Mode Cost per Person-Mile of Capacity

	District			
	Rural	**Suburb**	**Core**	**Total**
2010 Person-Miles of Capacity:				
Road	591,557	6,908,514	5,114,446	12,614,518
Bus	0	40,400	92,240	132,640
Sub-Total:	591,557	6,948,914	5,206,687	12,747,158
2040 Person-Miles of Capacity:				
Road	932,716	7,778,120	5,706,602	14,417,438
Bus	0	52,563	245,877	298,440
Sub-Total:	932,716	7,830,683	5,952,478	14,715,878
Change in PMC:				
Road	341,159	869,606	592,155	1,802,920
Bus	0	12,163	153,636	165,800
Sub-Total:	341,159	881,769	745,792	1,968,720
Capital Cost/PMC:				
Road	$457.20	$641.09	$637.45	$605.10
Bus	$0.00	$466.67	$464.45	$464.62
Capital Cost:				
Road	$155,979,123	$557,492,067	$377,468,137	1,090,939,327
Bus	$0	$5,676,355	$71,357,168	77,033,523
Combined:				
PMC Added:	341,159	881,769	745,792	1,968,720
Total Cost:	$155,979,123	$563,168,422	$448,825,305	$1,167,972,850
Weighted Cost/PMC:	**$457.20**	**$638.68**	**$601.81**	**$593.27**

Notes:

1. PMC=Person-Miles of Capacity
2. Quantities of capacity added by mode are based on Seminole County 2040 Transportation Plan and Lynx 2018 Transit Development Plan, as discussed in text.

The Federal government and State of Florida levy motor fuel taxes as well, and allocate a portion of them to expanding Federal and State highways. Federal and State expenditures for transportation system expansion are administered by the Florida Department of Transportation (FDOT). FDOT's Work Program for the past six years (2013 to 2019) and planned for the coming five years (2020-2024) was reviewed and an annual funding level of $25.7 million was derived,

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which is the equivalent of 10.68 pennies per gallon of motor fuel tax. In addition, an effective State and Federal motor fuel tax rate of 0.31 pennies per gallon results from the transit system expansion assumptions incorporated into this analysis (see transit plan assumptions worksheet in Appendix C), which is also added to the credit.

An equivalent LGIST credit was incorporated by comparing the potential annual sales tax revenues that might be shifted into transportation system expansion to the annual revenues generated by a one penny motor fuel tax. If extended through 2044, the sales tax commitment would be equivalent to 13.02 pennies per gallon of motor fuel tax. In the alternative fee schedules in Section 8, various termination dates of the sales tax are considered, which affects the number of equivalent pennies of motor fuel tax associated with this revenue source. The calculation of the sales tax to motor fuel tax equivalency, extended through 2044, is also provided in Appendix C. When the sales tax lapses earlier than 2044, then a smaller number of equivalent pennies are recognized.

For purposes of computing the revenue credits, the Interstate and toll roads portions of the trip length and a 0.5-mile local trip length add-on are included, because motor fuel tax revenues are generated without regard to which road system a vehicle is driven upon – on a toll road, on a state road, or on a local street. Thus, in this calculation, the equivalent gasoline tax is estimated assuming a longer trip length than used in the travel demand equation. Since the taxes are a recurring revenue, the present value of 25 years of this source is recognized as the credit.

The maximum total equivalent motor fuel and sales tax credit estimated for this update is 24.10, as summarized in Table 6-3. The 1995 study identified an estimated 6 pennies per gallon motor fuel tax credit.

Table 6-3: Equivalent Pennies of Motor Fuel Tax Credit

Source	Number of Pennies
State/Federal for Roads, Bikes, Sidewalks	10.68
State/Federal for Transit	0.31
County Motor Fuel	0.09
County Sales Tax	13.02
Total	**24.10**

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f. Other Fee Parameters

Other parameters that are used to calculate the fees are discussed in this section.

Interest rate – the present value factor for the capacity-expanding revenue credits is based on 25 years at a 3.3% discount rate. The discount rate is based on FDOT's guidance on construction cost inflation for transportation planning purposes. A copy of this data source is provided in Appendix D.

Finance Period – The 25-year finance period is commonly used in transportation impact fee analyses, and represents the typically assumed life of transportation capital investments.

Equivalent days/year – for estimating revenue credits, 326.9 (= 365*6.27/7) days per year were used. 6.27 days per week is used to reflect that the amount of travel on Saturdays and Sundays are less than on a typical weekday. A worksheet summarizing the value calculated is also provided in Appendix D.

Fuel Efficiency – 22.0 mpg for light vehicles, from FHWA Table VM-1, provided in Appendix D.

Toll/Interstate Travel Discount – the proportion of travel generated in each fee district that uses the toll or Interstate highway system was estimated by executing three select-zone (all traffic analysis zones in each of the three fee districts) traffic assignment using the model and highway network from Seminole County's 2040 Transportation Plan, and tracking the proportion of travel on the toll and Interstate highways. This analysis indicated that 8.3, 30.2 and 38.5 percent of the travel generated by the Rural, Suburban, and Core fee districts, respectively, will be served by Interstate 4 and the Greeneway and Wekiva Parkway toll roads.

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7. Example Fee Calculation

An example fee calculation is provided in this section for a 1,501 to 2,500 s.f. single-family detached home in the Suburban fee district. The general fee equation, is as presented previously but here it also recognizes the potential for an across-the-board discount decision by the Board of County Commissioners:

Fee = (Capacity Needed x Cost of Capacity – Credits) x Discount Percentage

Each of these components is described below, with the example calculation. Note that the calculations here use rounded values and results are slightly different from the "un-rounded" actual fee schedule calculations of Appendices F and G, which apply additional decimals.

Capacity Needed is the capacity needed to address the quantity of new travel generated by the land use that makes use of the mobility system for which the fee is calculated. It is the product of trips generated, the length of trips on the non-local road system, the percentage of trips that are added (as opposed to captured from traffic already passing by the site). This quantity is divided by two to reflect division of the demand arising between the two land uses at the origin and destination ends of the trip. This quantity is further reduced in Seminole County's fee to deduct the portion of travel that makes use of State and toll roads.

For the single-family home, this calculation is:

Trip rate x Conversion to Person-Trips x Standard Trip length x District Trip Length Factor x Percent new trips X (1-Interstate and toll proportion) / 2

9.44 x 1.4 x 6.62 x 1.08 x 100% x (1-0.302) / 2 = 32.98 person-miles of travel

The weighted unit cost per person-mile of capacity applied to a land use depends upon the fee district in which the land use is located, the proportion of travel the land use generates in each fee district (which is a function of trip length – shorter trips have higher proportions of travel in the "home" district), the unit cost of capacity for each district (which considers modal strategy), and the quality of service to be delivered in each district as expressed by the capacity addition ratio (CAR), as follows:

(% travel in Rural x Rural cost per pmc x Rural CAR + % travel in Suburb x Suburb cost per pmc x Suburb CAR + % travel in Core x Core cost per pmc x Core CAR)

(0.09 x $457.20 x 1.69 + 0.53 x $638.68 x 0.75 + 0.38 x $601.81 x 0.59) = $459.49

($460.22 in "un-rounded" calculation)

Total Impact Cost is:

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Assessable person-miles of travel x weighted unit cost
32.98 x $460.22 = $15,178 ($15,173 in "un-rounded" calculation)

The credit is calculated as:

Present value of (Trip rate x Trip length for revenue x Percent new trips x equivalent days per year x number of equivalent dollars of gas tax/ (vehicle miles per gallon x 2), at 3.3% APR for 25 years.

[(9.44 x 7.65 x 100% x 326.9 x 0.2410/ (22.0 x 2)] x 16.8451
= $2,178.14

Thus, the resulting gross potential fee is:
$15,173 – $2,178 = $12,995

Recognizing that development that is already in Seminole County (e.g. prior growth) also generates gasoline and sales tax revenues that fund infrastructure needs allows the County to not assess the full potential fee amount. It is common in communities to recognize these additional revenues and to provide an "across-the-board" reduction in the fees charged. The extent to which fees can be reduced depends on the capability of revenues generated by prior growth to address needs, and are related to community goals for mobility services and quality of service. Seminole County's goals and overall mobility infrastructure funding capability is addressed in the next section of this report.

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8. Fee Schedule

The magnitude of an impact fee should be considered in the context of community goals and other sources of revenue that are available for transportation purposes.

As discussed in Section 3, Seminole County's 2040 Transportation Plan provides for adding 0.77 person-miles of capacity per person-mile of growth in travel, under the assumption that the LGIST will continue through the 25-year "horizon" of this study. In the Rural district the capacity addition ratio is 1.69 person-miles of travel per person-mile of travel growth, in the Suburban district the ratio is 0.75, and in the Core district the ratio is 0.59. These "goals" affect the rate at which mobility system capacity needs to be built, and in this case results in a 2019 annual financial need of $52.6 million. The current revenue program (motor fuel taxes, sales tax, and impact fees) generates an estimated $47.4 million per year, leaving a $5.2 million per year shortfall. In this revenue program, the legacy road impact fees are assessed at a rate that is discounted by about 89 percent and they generate approximately $3.1 million of the $47.4 million per year.

Consistent with Comprehensive Plan policies, the Board of County Commissioners elected to adopt a fee schedule that makes up the estimated 2040 Transportation Plan funding shortfall. The County's mobility system needs and revenues, in the context of this fee program, is summarized in Figure 8-1. A full fee schedule summary is provided in Table 8-1, and fee schedules with interim calculations for the Rural, Suburb, and Core fee districts are provided in Appendix F.. The fee rates increase compared to the legacy fee rates, but remain lower than fees in neighboring jurisdictions. The fee rates are 21.2 percent of the maximum fee rates that could be assessed. In this revenue program, growth pays for 20 percent of the capital costs.

During the public engagement phase of this study, the City of Altamonte Springs communicated that it wished to implement it's own mobility fee program. In the process of reaching agreement on this, the City committed to funding, when needed, the portions of 2040 Transportation Plan projects that were estimated to be funded by the equivalent County Mobility Fee revenues expected to be collected from development within the City. Thus, the County mobility fee will not be collected within the City, and the City's equivalent annual commitment is reflected as one of the "Potential Revenue Sources" in Figure 8-1 to partially fund the 2040 Transportation Plan.

It is always of interest for communities to be aware of how their fees compare to the fees of nearby communities. Table 8-2 provides such a summary of the current fees levied by nearby communities.

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Figure 8-1: Mobility Fee Program Summary

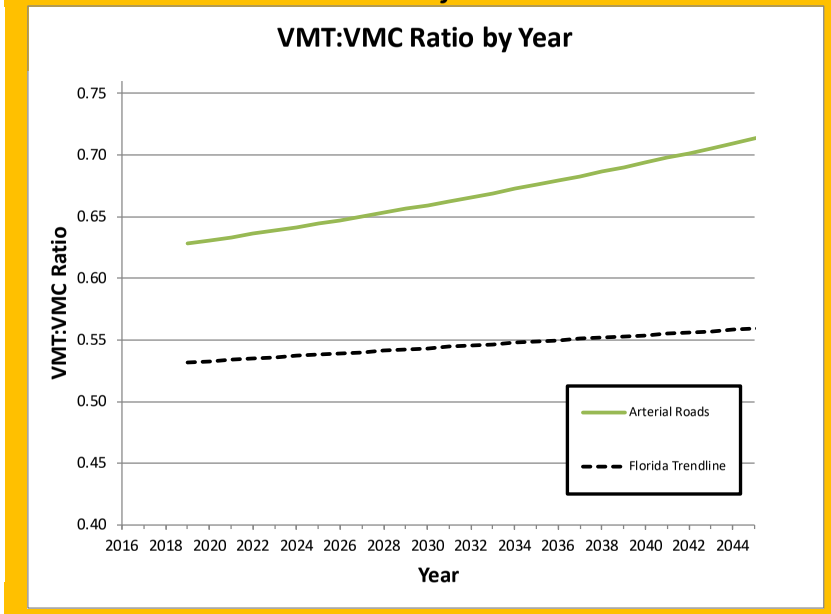
Goals and Needed Revenues

"Needs"	Total	Rural	Suburban	Core
2018 Art RN PMT:	8,458,314	437,329	3,911,875	3,577,598
Growth Rate:	1.31%	2.18%	1.30%	1.24%
PMT Growth per year:	106,066	9,745	51,484	44,838
Capacity Addition Ratio:	**0.771**	**1.69**	**0.75**	**0.59**
Capacity Addition Goal:	81,755	16,508	38,724	26,523
Cost per PMC:	$643	$457.20	$638.68	$601.81
Bike/Ped and Other Needs:	$4,361,785	$0	$2,240,985	$2,120,800
% Bike/Ped & Other Funded:	100.0%	100.0%	100.0%	100.0%
$$ Needed/Year:	**$52,603,605**	**$7,547,564**	**$26,973,539**	**$18,082,501**
Lane-Mi/Year:	17.40	5.14	7.00	5.27

Potential Revenue Sources

				Growth	Base	Total	% of Need
2nd LOGT:	# Pennies/% to Capital>	0	63.6%				0%
County Gas Taxes:	# Pennies>>	0.086		$3,633	$190,312	$193,945	0%
State/Federal Gas Tax:	# Pennies/Gal>>	10.989		$2,519,389	$22,390,087	$24,909,477	47%
Infrastructure Sales Tax:	nd/BCC Share to Cap>:	2045	32.5%	$744,320	$18,463,200	$19,207,520	37%
Altamonte Springs:	Commitment					$1,289,469	2%
Mobility Fees:	% of full fee:	21.2%		$7,003,195	$0	$7,003,195	13%
		Totals:		$10,270,537	$41,043,599	$52,603,605	100%
		Share of Revenues:		20.0%	80.0%		
				Goal Surplus/Shortfall:		$0	

Network Performance



Mobility Fees

	Rural	Suburban	Core
Single-Family (1,501 to 2,500 s.f.)/du:	**$8,284**	**$2,759**	**$1,824**
Multi-Family (1-2 Floor)/du:	n/a	$1,694	$1,040
Office/ksf:	$4,366	$1,873	$1,470
Retail (>20,000 sf)/ksf:	$9,124	$3,809	$2,467
Industrial/ksf:	$2,424	$1,042	$766

Notes:

1. This analysis is based on estimates of non-Toll and non-Interstate (e.g. "surface" arterial and collector) travel and costs. It includes the capital portion of transit costs for a 277 percent growth in service, focused in the Core and Suburban areas.
2. This scenario approximates Seminole County's 2040 Transportation Plan including its Tiers 1-3 funding, with some differences. The costs of transportation improvements are greater than those of the LRTP because they are based on actual recent experience, whereas the 2040 Transportation Plan costs are based on FDOT "cost per mile" estimates which tend to underestimate frequently encountered additional costs. The LRTP rate of capacity addition is represented by the CAR values of 1.69, 0.75, and 0.59 in the rural, suburban, and core areas, respectively.
3. Mobility fee rates are based on the proposed "Core/Suburbs/Rural" fee district structure, backsolved to result in balancing adjusted needed revenues.
4. The LGIST is assumed to continue indefinitely, at it's current allocation percentage to expansion of the mobility system.

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Table 8-1: Adopted Fee Schedule

ITE Land Use Code	Land Use	Unit	Fee District		
			Rural	Suburb	Core
210	Single Family (<=1,500 s.f.)	D.U.	$6,710	$2,234	$1,477
210	Single Family (1,501 to 2,500 s.f.)	D.U.	$8,284	$2,759	$1,824
210	Single Family (>2,500 s.f.)	D.U.	$11,101	$3,697	$2,444
n/a	Accessory Dwelling Unit	D.U.	$3,178	$1,000	$614
220	Multi-Family (1-2 Floor)	D.U.	n/a	$1,694	$1,040
221	Multi-Family (3+ Floor)(1)	D.U.	n/a	$1,259	$773
240	Mobile Home	D.U.	$2,891	$890	$529
310	Hotel	Room	$5,063	$1,671	$1,093
320	Motel	Room	$1,956	$629	$399
420	Marina	Berth	$1,411	$628	$483
430	Golf Course	Holes	$12,815	$5,565	$3,989
492/493	Fitness Center	1,000 sf	$9,928	$4,219	$2,932
610	Hospital	1,000 sf	$4,841	$2,119	$1,725
251/252	Independent Senior Living	D.U.	$2,932	$922	$566
620	Nursing Home	bed	$738	$298	$206
560	Church (Non-Sanctuary Space Only)	1,000 sf	$2,164	$894	$638
520/522/530	Private School	student	$556	$229	$161
565	Day Care (Child or Adult)	student	$506	$207	$128
710	Office	1,000 sf	$4,366	$1,873	$1,470
720	Medical Office	1,000 sf	$16,144	$6,979	$5,647
820	Retail < 20K Sq. Ft.	1,000 sf	$6,813	$2,748	$1,699
820	Retail (large >=20 ksf, Shop Ctr.)	1,000 sf	$9,124	$3,809	$2,467
Various	Convenience Retail	1,000 sf	$30,200	$12,169	$7,517
936/937	Coffee/Donut Shop	1,000 sf	$11,599	$4,559	$2,646
931/932	Restaurant - Sit Down	1,000 sf	$24,194	$10,092	$6,666
933/934	Restaurant - Fast Food	1,000 sf	$22,561	$8,867	$5,146
944	Gasoline Station	Fuel Pos.	$15,849	$6,260	$4,130
850	Supermarket	1,000 sf	$11,471	$4,676	$2,956
848	Garage / Auto Repair	1,000 sf	$5,464	$2,230	$1,567
912	Bank/Savings/Credit Union	1,000 sf	$9,040	$3,616	$2,428
110/140	Manufacturing	1,000 sf	$2,424	$1,042	$766
150/154/157	Passive Warehouse (Storage warehouse)	1,000 sf	$949	$408	$300
155/156	Active Warehouse (Parcel hub/fulfilment center)	1,000 sf	$4,346	$1,868	$1,373
151	Mini-Warehouses	1,000 sf	$553	$235	$163

Note: 1. This rate is applicable to all dwelling units in buildings of three or more floors, including units on floors 1 and 2.

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Table 8-2: Mobility Fees of Nearby Communities

	Agency	Seminole County			Lake County[1]		Orange County[2]		Orlando		Osceola County[3]				Volusia County
	Adoption Year	Proposed			2019		2014		2018		2017				2018
	District	Rural	Suburb	Core	C,N/C	S, N/W	AMA	non-AMA	Downtown	City-Other	Standard	Mixed-Use	TOD	Rural	All
Land Use	Single Family (1,501 to 2,500 s.f.)	$8,284	$2,759	$1,824	$1,000	$2,706	$3,898	$3,761	$3,574	$4,123	$9,055	$6,792	$4,529	$14,313	$5,379
	Multi-Family (1-2 Floor)	n/a	$1,694	$1,040	$494	$1,336	$2,524	$2,435	$2,365	$2,729	$6,326	$4,744	$3,164	n/a	$3,213
	Hotel	$5,063	$1,671	$1,093	$416	$1,125	$1,978	$1,910	$2,372	$2,736	$6,581	$4,935	$3,290	n/a	$2,974
	Office	$4,366	$1,873	$1,470	$935	$2,531	$4,748	$4,575	$4,352	$4,576	$5,700	$4,276	$2,850	n/a	$3,970
	Retail (large >=20 ksf, Shop Ctr.)	$9,124	$3,809	$2,467	$1,095	$2,964	$6,135	$5,876	$5,742	$6,038	$13,745	$10,106	$6,737	n/a	$6,390
	Manufacturing	$2,424	$1,042	$766	$638	$1,728	$2,163	$2,088	$2,270	$2,391	$3,997	$2,998	$1,999	n/a	$2,002

Notes:

1. Effective February 1, 2020.
2. Study in progress
3. Osceola Manufacturing rate is for "Warehouse", no Manufacturing/Light Industrial rate.

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9. Conclusion

Analysis of growing transportation trends in Seminole County illustrate that travel demands on the non-toll, non-Interstate highway system are growing at a faster pace than funding to expand system capacity. Annual revenues of $64.3 million are required to add capacity at the same rate that travel is estimated to increase. Seminole County's 2040 Transportation Plan proposes a mobility system expansion program that adds 0.77 person-miles of capacity per person-mile of growth in travel. This program requires $52.6 million per year. The current revenue program provides an estimated $47.4 million per year.

This study presented alternative defensible fee rate schedules for consideration by Seminole County. These fee schedules considered different mobility strategies, different quality of service goals, and different revenue programs. These alternatives are summarized in Appendix E.

The County has elected to convert the road impact fee program to a mobility fee program with the following considerations:

- Adopt the rural/suburb/core district concept, which will introduce higher fees for rural areas and potentially lower fees for the Core area.
- Modify the impact/mobility fee ordinance to reflect the updated fee districts and rates.
- Modify the impact/mobility fee ordinance to provide for annual indexing.

These measures would increase estimated 2021 impact fee revenues from $3.1 million to $7.0 million, or by 126 percent. Total annual revenues for mobility system expansion (State and County) would be on the order of $52.6 million.

Adoption of different fee schedules for different fee districts implies delivery of a different quality of service, long-term. The County should monitor the quality of service in each fee district and retain its objectivity in that regard when planning and scheduling the allocation of all capital funds.

The County will be making significant decisions regarding its mobility program as the future status of SunRail funding becomes clearer and as the LGIST revenue program nears expiration/renewal. As those decisions are made, the County should re-visit its mobility fees as they are one element of the overall mobility funding program.

As a final reminder, since fee increases are proposed, a 90-day advance notice must be published.

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Appendix A

Travel Characteristics Analysis

Appendix A: Travel Characteristics Analysis

4/20/2020

		Trip Rate			Trip Length						% New Trips					
ITE LUC	Land Use	Unit	Rate	Method	Orange (1)	Osceola (2)	Lake (3)	Volusia (4)	Recommended for Seminole	Method	Orange	Osceola	Lake	Volusia	Recommended for Seminole	Method
210	Single Family Detached	D.U.	9.44	4	6.62	5.08	8.41	TOA	6.62	2	100%	100%	100%	TOA	100%	2
220	Multi-Family 1-2 Floor	D.U.	7.32	4	5.10	5.08	5.35	TOA	5.18	2	100%	100%	100%	TOA	100%	2
221	Multi-Family 3-10 Floor	D.U.	5.44	4	5.10	5.08	5.35	TOA	5.18	2	100%	100%	100%	TOA	100%	2
240	Mobile Home	D.U.	4.17	TOA	4.60	5.08	4.60	TOA	4.76	2	100%	100%	100%	TOA	100%	2
310	Hotel	Room	8.36	4	6.26	5.73	7.05	TOA	6.35	2	66%	75%	72%	TOA	71%	2
320	Motel	Room	3.35	4	4.34	n/a	7.05	6.26	5.88	2	77%	n/a	72%	66%	72%	2
420	Marina	Berth	2.41	4	n/a	6.32	n/a	n/a	6.32	3	n/a	100%	n/a	n/a	100%	1
430	Golf Course	Holes	30.38	4	6.62	3.16	n/a	n/a	4.89	2	90%	50%	n/a	n/a	90%	5
492/493	Fitness Center	1,000 sf	39.34	4	5.15	3.16	n/a	n/a	4.16	2	94%	50%	n/a	n/a	62%	LUC 565
610	Hospital	1,000 sf	10.72	4	6.62	5.85	6.04	2.59	6.17	avg 3 longest	78%	75%	77%	89%	80%	2
251/252	Independent Senior Living	D.U.	4.00	4	5.42	5.08	6.90	n/a	5.16	LUC 220	100%	100%	n/a	n/a	100%	LUC 210/220
620	Nursing Home	bed	3.06	4	2.59	2.07	3.46	n/a	2.71	2	89%	90%	89%	n/a	89%	2
560	Church (Non-Sanctuary Space Only)	1,000 sf	6.95	4	3.91	2.43	5.19	2.59	3.53	2	90%	90%	90%	89%	90%	2
520/522/530	Private School	student	2.02	4	3.31	n/a	6.98	n/a	3.31	5	80%	n/a	90%	n/a	85%	2
565	Day Care (Child or Adult)	student	4.09	4	2.03	1.22	2.66	TOA	1.97	2	73%	40%	73%	TOA	62%	2
710	Office	1,000 sf	9.74	4	5.15	5.23	6.92	TOA	5.19	avg 2 shorter	92%	75%	92%	TOA	92%	5
720	Medical Office	1,000 sf	34.80	4	5.15	5.23	7.32	5.55	5.81	2	92%	75%	89%	88%	86%	2
820	Retail < 20K Sq. Ft.	1,000 sf	100.62	4,6	1.87	1.92	2.18	n/a	n/a	4,6	56%	40%	56%	n/a	38%	4,6
820	Retail (large >=20 ksf, Shop Ctr.)	1,000 sf	48.16	4,6	2.29	2.88	3.01	n/a	n/a	4,6	62%	60%	76%	n/a	68%	4,6
851/853/960	Convenience Retail	1,000 sf	670.00	Blended	1.51	1.03	2.46	TOA	1.67	2	28%	25%	47%	TOA	27%	avg 2 lower
936/937	Coffee/Donut Shop	1,000 sf	792.21	4	n/a	n/a	n/a	n/a	0.96	Rest	n/a	n/a	n/a	n/a	15%	4
931/932	Restaurant - Sit Down	1,000 sf	98.66	4	3.14	n/a	3.32	TOA	3.23	2	77%	n/a	74%	TOA	76%	2
912/913/934	Restaurant - Drive In	1,000 sf	472.19	Blended	2.05	0.96	2.46	TOA	0.96	5	57%	25%	47%	TOA	50%	4
944	Gasoline Station	Fuel Pos.	172.01	4	1.90	1.03	2.53	n/a	1.82	1	23%	25%	23%	n/a	50%	4
850	Supermarket	1,000 sf	106.78	4	2.08	1.92	n/a	TOA	2.00	2	56%	50%	n/a	TOA	53%	2
848	Garage / Auto Repair	1,000 sf	25.82	4	3.62	2.86	n/a	TOA	3.24	2	72%	60%	n/a	TOA	66%	2
912	Bank/Savings/Credit Union	1,000 sf	101.30	4	2.45	1.03	2.58	TOA	2.02	2	46%	40%	46%	TOA	44%	2
110/140	Manufacturing	1,000 sf	4.445	4	5.15	6.97	11.15	TOA	6.06	2	92%	90%	92%	TOA	92%	2
150/154/157	Passive Warehouse (Storage wareh	1,000 sf	1.74	4	5.15	6.97	11.15	TOA	6.06	from LUC 110	n/a	n/a	n/a	TOA	92%	from LUC 110
155/156	Active Warehouse (Parcel hub/fulfilm	1,000 sf	7.97	4	n/a	n/a	n/a	TOA	6.06	from LUC 110	n/a	n/a	n/a	TOA	92%	from LUC 110
151	Mini-Warehouses	1,000 sf	1.51	4	3.51	4.30	4.38	TOA	4.06	2	92%	90%	92%	TOA	92%	2

Sources:
1. "Orange County Transportation Impact Fee Study Update Study", Tindale-Oliver & Associates, April, 2018.
2. "Osceola County Mobility Fee Technical Memoriandum" Keith & Schnars, et al, March 6, 2015.
3. Lake County , Florida "Transportation Impact Fee 2017 Update Study (Draft)", Kittelson and Associates, Inc.
4. "Road Impact Fee Study for Volusia County", Duncan & Associates, September, 2018. (Cites TOA as a source for many land uses, thus values are not repeated in some cases)

"Method" key:
1-central tendency/one source
2-average
3-majority
4-developed from ITE 10th Ed. Data
5-judgement
6-regression on data, see p A-2. Other communities have different size categories.
"from LUC xxx" - value chosen as comparable to the indicated Land Use Code
Blended-trip rate from a selection of convenience uses in ITE 10th Ed.
TOA-Tindale-Oliver compilation of studies.

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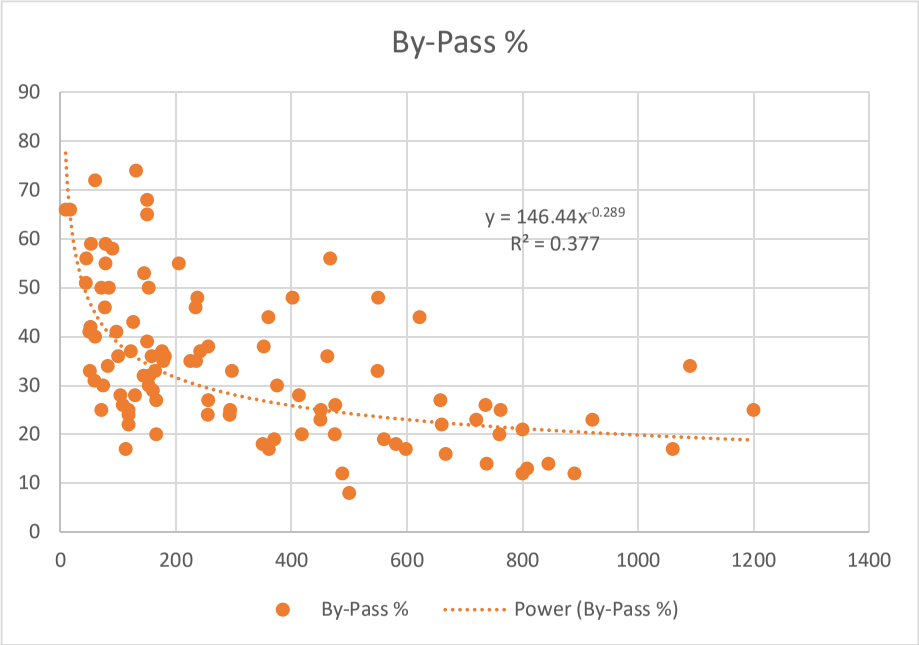
Summary of LUC 820: Shopping Center Travel Generation

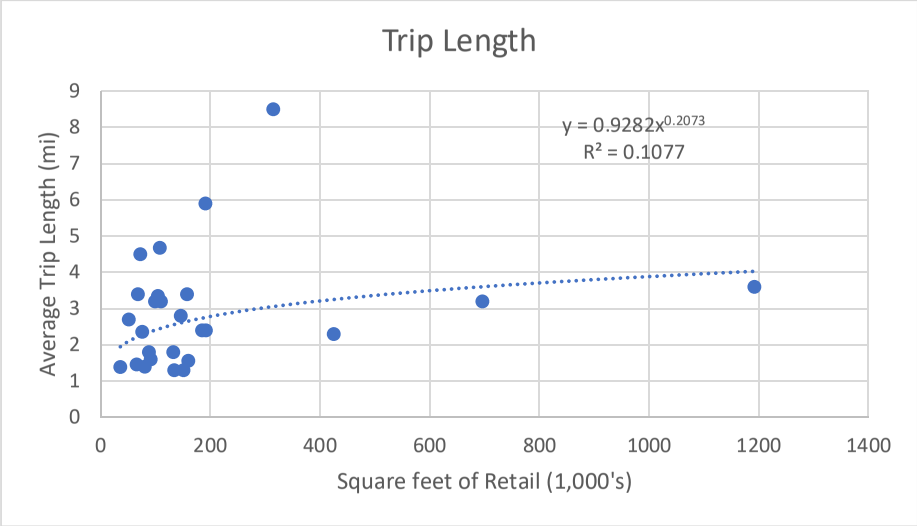
Daily Trip-Ends = e^(0.68 x ln(ksf) + 5.57)
Source: ITE Trip Generation, 10th Edition, Land Use Code 820

ByPass % = 146.44*ksf^-0.289
By-Pass data from ITE 10th Edition, regression curve to right.

Trip Length = 0.9282 x ksf^0.2073
Trip Length data compiled by Tindale-Oliver & Assoc., regression curve to below right.

Shop Ctr Size (ksf)	Trip Gen/ksf	Trip Length (mi)	% New Trips	Veh-Mi/ ksf
300	42.3	3.03	71.8	92.0
200	48.2	2.78	68.3	91.6
20	100.6	1.73	38.4	66.7





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Source: W.E. Oliver, P.E., LLC

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4/20/2020

Percent of Trip Length in District

Travel originating in:

		Rural			Suburb			Core		
	% TL in >>>	**Rural**	**Suburb**	**Core**	**Rural**	**Suburb**	**Core**	**Rural**	**Suburb**	**Core**
Assessable trip length (miles)	0.0	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%
	0.5	97.6%	2.4%	0.0%	1.0%	95.8%	3.2%	0.0%	3.5%	96.5%
	1.0	95.2%	4.8%	0.0%	1.9%	91.6%	6.5%	0.0%	7.0%	93.0%
	1.5	92.9%	7.1%	0.0%	2.9%	87.5%	9.7%	0.0%	10.5%	89.5%
	2.0	90.5%	9.5%	0.0%	3.8%	83.3%	12.9%	0.0%	14.0%	86.0%
	2.5	88.1%	11.9%	0.0%	4.8%	79.1%	16.2%	0.0%	17.5%	82.5%
	3.0	85.7%	14.3%	0.0%	5.7%	74.9%	19.4%	0.0%	21.0%	79.0%
	3.5	83.3%	16.7%	0.0%	6.7%	70.7%	22.6%	0.0%	24.5%	75.5%
	4.0	81.0%	18.6%	0.5%	7.6%	66.6%	25.8%	1.5%	26.6%	72.0%
	4.5	78.6%	20.5%	1.0%	8.6%	62.4%	29.1%	2.9%	28.6%	68.5%
	5.0	76.2%	22.4%	1.4%	9.5%	58.2%	32.3%	4.4%	30.7%	65.0%
	5.5	73.8%	24.3%	1.9%	9.4%	57.0%	33.6%	5.8%	32.7%	61.5%
	6.0	71.4%	26.2%	2.4%	9.3%	55.7%	35.0%	6.0%	33.6%	60.4%
	6.5	69.1%	28.1%	2.9%	9.2%	54.5%	36.3%	6.2%	34.5%	59.3%
	7.0	66.7%	30.0%	3.3%	9.0%	53.3%	37.7%	6.4%	35.4%	58.2%
	7.5	64.3%	31.9%	3.8%	8.9%	52.0%	39.0%	6.7%	36.2%	57.1%
	8.0	61.9%	33.8%	4.3%	8.8%	50.8%	40.4%	6.9%	37.1%	56.0%
	8.5	59.5%	35.7%	4.8%	8.7%	49.6%	41.7%	7.1%	38.0%	54.9%
	9.0	57.2%	37.6%	5.2%	8.6%	48.3%	43.1%	7.3%	38.9%	53.8%
	9.5	54.8%	39.5%	5.7%	8.5%	47.1%	44.4%	7.5%	39.8%	52.7%
	10.0	52.4%	41.4%	6.2%	8.4%	45.9%	45.8%	7.7%	40.7%	51.6%
	10.5	49.9%	42.4%	7.7%	8.3%	44.6%	47.1%	7.9%	41.6%	50.5%
	11.0	47.6%	43.3%	9.1%	8.1%	43.4%	48.5%	8.1%	42.5%	49.4%
	11.5	45.6%	44.3%	10.2%	8.0%	42.2%	49.8%	8.4%	43.3%	48.3%
	12.0	43.7%	45.2%	11.1%	7.9%	40.9%	51.2%	8.6%	44.2%	47.2%
	12.5	41.9%	46.2%	11.9%	7.8%	39.7%	52.5%	8.8%	45.1%	46.1%
	13.0	40.3%	47.1%	12.6%	7.7%	38.5%	53.8%	9.0%	46.0%	45.0%

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Source: Seminole LRTP OUATS 2040 model, W.E. Oliver, P.E., LLC

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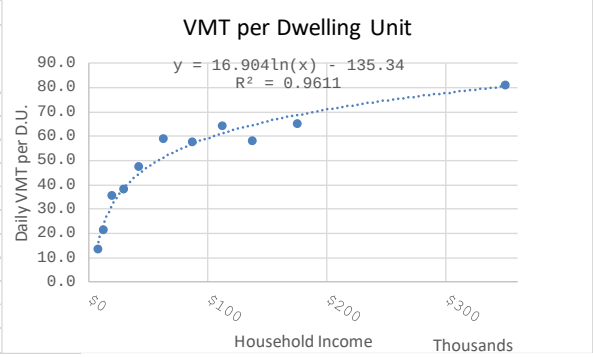
Development of travel quantity by household size

The National Household Transportation Survey (NHTS) provides information relative to the amount of travel generated by households of various incomes. The 2017 NHTS data was accessed to produce the following distribution of travel by household income for homeowners:

Derived total HH income	Travel Day Vehicle Miles			
	Trips/Day	Trip Length	VMT/DU	Central Range Value (for Plot)
Less than $10,000	2.58	5.22	13.4	$8,000
$10,000 to $14,999	2.97	7.25	21.5	$12,500
$15,000 to $24,999	3.81	9.32	35.5	$20,000
$25,000 to $34,999	4.46	8.56	38.1	$30,000
$35,000 to $49,999	5.36	8.81	47.2	$42,500
$50,000 to $74,999	5.72	10.29	58.8	$62,500
$75,000 to $99,999	6.34	9.04	57.3	$87,500
$100,000 to $124,999	6.38	10.05	64.1	$112,500
$125,000 to $149,999	6.65	8.69	57.8	$137,500
$150,000 to $199,999	6.57	9.93	65.2	$175,000
$200,000 or more	6.63	12.21	80.9	$350,000



The next step was to relate size of dwelling unit to income. Using data from Seminole County property appraiser's files, a relationship between household size and property value was established. Then, using rules of thumb regarding mortgage amounts and advice on the proportion of income that should be allocated to housing costs for qualifying purposes, the household income was related to household size. Using these relationships, the relative travel generated by household size (e.g. 1,500 s.f.and 2,500 s.f.) was estimated by considering the lifecycle income levels. The lifecycle income levels recognize that income levels increase beyond the minimum qualifying levels as one remains in the home. These relationships led to the household income ranges for the up to 1,500 s.f., 1,500 to 2,500 s.f., and over 2,500 s.f. size ranges. This analysis is summarized on the following page.

Finally, the amount of travel generated by household size range travel relationships of 0.81, 1.00, and 1.31, respectively, that are applied in the mobility fee schedules was established, as summarized in the following table:

Derived total HH income	Travel Day Vehicle Miles				Owners			
	Trips/Day	Trip Length	VMT/DU	#DU (Weighted)	% by HHInc	Contrib to VMT/DU	Group %	Group Contrib to VMT
Less than $10,000	2.58	5.22	13.4	1,782	2.1%	0.28	18.9%	2.54
$10,000 to $14,999	2.97	7.25	21.5	1,471	2.6%	0.56	23.4%	5.04
$15,000 to $24,999	3.81	9.32	35.5	2,382	6.4%	2.29	57.7%	20.47
$25,000 to $34,999	4.46	8.56	38.1	2,181	8.1%	3.08	35.1%	13.38
$35,000 to $49,999	5.36	8.81	47.2	2,881	12.1%	5.70	64.9%	30.63
$50,000 to $74,999	5.72	10.29	58.8	3,682	19.9%	11.71	32.0%	18.83
$75,000 to $99,999	6.34	9.04	57.3	2,791	16.1%	9.24	25.9%	14.87
$100,000 to $124,999	6.38	10.05	64.1	2,111	12.8%	8.19	20.5%	13.17
$125,000 to $149,999	6.65	8.69	57.8	1,195	6.7%	3.87	10.8%	6.23
$150,000 to $199,999	6.57	9.93	65.2	1,131	6.7%	4.35	50.7%	33.09
$200,000 or more	6.63	12.21	80.9	1,115	6.5%	5.25	49.3%	39.87
	57	99		**Wtd Average VMT/DU:**	**54.53**			
						< 1,500 s.f., $25,000 to $49,999:		44.01
								80.7%
						1500-2499 s.f., $50,000 to $150,000:		53.10
								97.4%
						>2,500 s.f., over $150,000:		72.96
								133.8%

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Source: NAL69F20 Seminole County Property Appraiser, 2018

		90%	4.00% 30 yr	12.00%		32%	80.00%	
Size	**Home Just Value**	**Mortgage**	**P&I**	**Taxes, Ins**	**Monthly Payment**	**Qualifying Monthly Take- home Paycheck**	**Qualifying Gross Annual Household Income**	**Lifecycle Annual Income**
1,000	$57,043	$51,339	$245	$29	$275	$858	$12,868	$19,302
1,500	$141,717	$127,545	$609	$73	$682	$2,131	$31,968	$47,953
2,500	$311,065	$279,959	$1,337	$160	$1,497	$4,678	$70,170	$140,339
5,000	$734,435	$660,992	$3,156	$379	$3,534	$11,045	$165,673	$248,509

Notes:

1. Size to value relationship: Size=0.005905 x Value + 663
2. Mortgage assumed at 90% of Just Value.
3. P&I assumed at 4%, 30-yr mortgage.
4. Taxes and Insurance at 12% of P&I
5. Qualifying Monthly Take-home paycheck = Monthly payment/0.32
6. Annual Gross Household Income = Monthly Gross Paycheck *12/0.80
7. Lifecycle Annual Income is household income over lifecycle of occupancy.

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Appendix B

Cost Component Analysis

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Appendix B

Mobility System Capital Costs Analysis

Worksheets provided in this Appendix provide the basis for the cost per person-mile of capacity used in this report. The worksheet pages are arranged from back to front, and the information derived and sources are summarized below.

Page B-8 and B-9: FDOT "Transit Costs" summary. This information feeds to worksheet on page C-6, where the transit cost per person-mile of capacity is estimated.

Page B-7: Summarizes non-State road lane addition costs. These costs are compared to State costs to provide an indication that non-State costs are 76 percent of the State costs. This relationship feeds to page B-3.

Page B-6: Compares Urban vs Rural road construction costs for State lane-addition projects to estimate a rural district road cost. This information feeds to page B-3.

Page B-5: Summarizes actual costs from recent State non-Interstate, non-Toll facility roadway lane addition projects. These projects are located only in the Core and Suburban districts. This information feeds to Page B-3.

Page B-4: Summarizes lane-addition projects from Seminole County 2040 Transportation Plan to identify the proportion of lane-miles of capacity addition on State vs County. This proportion feeds to Page B-2.

Page B-3: Uses relation of rural to urban section roads from FDOT Generalized costs table (page B-6) and relationship between State and County road cost per lane-mile from page B-7, to develop costs per lane-mile and vehicle-mile of capacity for State and County roads in the Core, Suburb, and Rural areas. This information feeds to page B-2.

Page B-2: Uses the State and County road costs per lane-mile, capacity per lane-mile, and estimated mix of State and County road projects by fee district to develop a weighted cost per vehicle-mile of capacity for each of the three fee districts. These values are then forwarded to Table 6-2 of the report.

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Road Unit Cost by District:

State:	District Core	District Suburb	District Rural	
PDE,Des, CEI %:	15%	15%	17%	
ROW %:	49%	31%	22%	
Const/Ln-Mi:	$6,416,907	$5,870,582	$3,091,099	
Total:	$10,523,727	$8,571,050	$4,296,628	
Cap/Ln	10,047	10,848	9,650	
$/vmc	$1,047	$790	$445	
County:				
PDE,Des, CEI	15%	15%	17%	
ROW	49%	31%	22%	
Const	$4,876,849	$4,461,642	$2,349,235	0.76
Tot	$7,998,033	$6,513,998	$3,265,437	
Cap/Ln	9,545	10,306	9,168	0.95
$/vmc	$838	$632	$356	

Mix of section by District (%):

State	Rural	Suburb	Core
Urban:	0%	33%	26%
Suburban:	61%	20%	0%
Rural:	21%	0%	0%
Non-State			
Urban:	0%	47%	74%
Suburban:	0%	0%	0%
Rural:	18%	0%	0%
	100%	100%	100%

Mixed Road Cost in District:

	Rural	Suburb	Core
$$/vmc:	$640.08	$897.52	$892.43
$$/pmc:	$457.20	$641.09	$637.45

Develop Road Component of Cost per Lane-Mile and Cost per Vehicle-Mile and Person-Mile

	Location	Design/CEI Cost/ Lane-Mile	Design/CEI as % of Construction	Right-of-Way Cost/ Lane-Mile	Right-of-Way as % of Construction	Construction Cost/ Lane-Mile	Total Cost/ Lane-Mile	Capacity per Lane	Cost per Vehicle-Mile of Capacity	Cost per Person-Mile of Capacity
State	Core	$946,757	15%	$3,155,856	49%	$6,416,907	$10,519,520	10,047	$1,047	$748
State	Suburb	$899,870	15%	$1,799,740	31%	$5,870,582	$8,570,192	10,848	$790	$564
State	Rural	$521,243	17%	$694,991	22%	$3,091,099	$4,307,333	9,650	$446	$319
	76%									
County	Core	$719,535	15%	$2,398,450	49%	$4,876,849	$7,994,835	9,545	$838	$598
County	Suburb	$683,901	15%	$1,367,803	31%	$4,461,642	$6,513,346	10,306	$632	$451
County	Rural	$396,145	17%	$528,193	22%	$2,349,235	$3,273,573	9,168	$357	$255

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Seminole County 2040 Transportation Plan Lane Addition Projects

Priority	Description	Length (mi)	Existing Lanes	Improved Lanes	Lane-Mi Added
County Projects					
27	Slavia Rd Capacity Improvements: Red Bug Lake Rd to W SR 426	0.9	2	4	1.8
32	Sand Lake Road Capacity Improvements: Hunt Club Blvd to SR 434	1.9	2	4	3.8
41	SR 434 Widening: SR 417 to E Mitchell Hammock Rd	3.5	2	4	7.0
92	CR 46A(HE Thomas Jr. Pkwy): Orange Blvd (CR 431) to Rinehart Rd	1.0	4	6	2.0
93	CR 15 (Upsala Road) Capacity Improvements: CR 46A to SR 46	2.0	2	4	4.0
94	SR 46 Capacity Improvements: Upsala Rd to Persimmon Ave	2.1	4	6	4.2
115	CR 419 Capacity Improvements: Snowhill Road to Orange County Line	2.6	2	4	5.2
116	Longwood Lake Mary Road Capacity Improvements: CR 427/Ronald Reagan Blvd. to Greenway Blvd	1.0	2	4	2.0
117	Longwood Lake Mary Road Capacity Improvements: Greenway Blvd to Lake Way Rd	0.8	2	4	1.6
119	EE Williamson Capacity Improvements: Tollgate Trail to Lake Emma Rd	0.9	2	4	1.8
126	Tuskawilla Road Capacity Improvements: Red Bug Lake Rd to East Lake Dr	1.1	4	6	2.2
130	Slavia Road Extension: SR 426 to Dr Edward Stoner Rd	1.0	0	2	2.0
142	Dean Road Capacity Improvements: SR 426 to Orange County Line	0.6	2	4	1.2
144	E Main Ave Extension: Florida Central Pkwy to CR 427/Ronald Reagan Blvd.	0.4	2	4	0.8
145	SR 426/CR 419 Widening: N Pine Ave to Lockwood Blvd	3.0	4	6	6.0
				County Sub-Total:	**45.6**
State Projects (Excludes I-4, Greeneway)					
S-52	SR 436: Maitland Ave (CR 427) Weathersfield Ave. to Palm Spring Dr Lynchfield Dr	0.5	0	1	0.5
S-57	SR 426 Capacity Improvement: Hall Rd to Tuskawilla Rd	1.0	4	6	2.0
S-53	CR 419: Avenue B to Bishop Dr.	1.2	2	4	2.4
S-42	SR 426/CR 419: Pine Ave. to Avenue B	1.4	2	4	2.8
S-45	SR 414/Maitland Blvd: Bear Lake Rd. to Orange/Seminole Co. Line	2.2	4	6	4.4
S-41	SR 419 Capacity Improvements: SR 434 to US Hwy 17-92	2.5	2	4	5.0
S-38	SR 434: SR 436 to Montgomery Rd.	2.5	4	6	5.0
S-56	SR 434: SR 417 to Mitchell Hammock Rd.	3.4	2	4	6.8
S-22	SR 46: SR 415 to CR 426	7.5	2	4	15.0
				State Sub-Total:	**43.9**

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Source: Seminole County 2040 Transportation Plan

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Recent FDOT Projects:

Item Number	Description	Prior Road Type	Prior Capacity	Improved Road Type	Improved Capacity	District	Length	Cost	Lane-Mi Added	Cost/ Lane-Mi	VMC Added	Cost/ VMC
240196 1	SR 15/600 (US 17/92) FROM SHEPARD RD TO LAKE MARY BLVD	4DU	39,800	6DU	59,900	C	3.645	$68,912,977	7.29	$9,453,083	73,265	$941
240200 3	SR 46 (WEKIVA PKWY) FROM ORANGE BLVD TO N. OREGON ST/WAYSIDE DR	4DU	39,800	6DU	59,900	S	1.302	$24,175,657	2.60	$9,284,046	26,170	$924
240216 2	SR 46 FROM MELLONVILLE AVE TO SR 415	2DU	17,700	4DU	39,800	S	2.83	$53,275,433	5.66	$9,412,621	62,543	$852
240233 3	SR 434 FROM I-4 TO RANGELINE RD	4DU	39,800	6DU	59,900	C	1.788	$45,392,115	3.58	$12,693,544	35,939	$1,263
407355 1	SR 415 FROM SR 46 TO VOLUSIA CO LINE	2DU	17,700	4DU	39,800	S	0.897	$18,681,498	1.79	$10,413,321	19,824	$942
415030 5	SR 434 FROM SMITH STREET TO FRANKLIN STREET	2UU	14,200	2DU	17,700	S	0.557	$6,178,930	0.42	$14,790,975	1,950	$3,169
415030 6	SR 426/CR 419 FROM PINE AVENUE TO AVENUE B	2DU	17,700	4DU	39,800	S	1.405	$14,148,637	2.81	$5,035,102	31,051	$456
419369 1	SR 436 INTERSECTIONS FROM W OF WILLSHIRE BLVD TO LAKE HOWELL RD-flyover	6DU	59,900	8DU	80,100	C	1.174	$51,382,371	2.35	$21,883,463	23,715	$2,167
						Totals/Averages:	**13.598**	**$282,147,618**	**26.50**	**$10,647,180**	**274,455**	**$1,028**
						Discard #6, #8.						
						Core:		$114,305,092	10.87	$10,519,519	109,203	$1,047
						Suburb:		$110,281,225	12.87	$8,570,192	139,587	$790
										Core:Suburb Ratio:		1.32

Source: Florida DOT
W.E. Oliver, P.E., LLC
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5/10/2019

Florida DOT Cost-per-Mile Models

August, 2018 Update

Model	Construction Cost per Mile Rural	Construction Cost per Mile Urban
New Construction Undivided 2 Lane Road	$2,202,091	$4,981,800
New Construction Undivided 3 Lane Road	$2,673,585	$4,703,745
New Construction, 4 Lane Divided Road	$4,312,786	$7,448,544
New Construction Undivided 5 Lane Road	$3,801,863	$5,844,178
New Construction Extra Cost for 1 Single Additional Lane	$531,724	$1,815,382
Widen Existing 2 Lane Arterial to 4 Lane Divided	$2,862,158	$5,456,415
Widen Existing 4 Lane Divided Arterial to 6 Lane Divided	$2,599,515	$4,683,454
Widen Existing 6 Lane Divided Arterial to 8 Lane Divided	$2,879,092	$5,366,049
	$21,862,816	$40,299,568
	Ratio of Rural Cost to Urban:	**54.3%**

Other Miscellaneous Costs:

Widen 4 Lane Suburban Roadway with 6.5' Paved Shoulder and Convert to C&G Outside	$2,656,004
Two Directional, 12' Shared Use Path	$285,525.80
Rails to Trails project (12' width)	$268,188.64
Sidewalk construction; 5' one side, 4 inch depth	$153,868.56
Mid-Block Pedestrian/Bike Crossing	$133,271.39
Widen Divided Rural 4-Lane to Allow for Left Turn Lane, 300'	$170,509.92
Widen Divided Rural 4-Lane for Right Turn Lane, 300'	$164,626.61

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Source: FDOT Long-Range Estimating Models, August, 2018

County Road Projects

On:From/To	Exist RT	Improv RT	Length (mi)	Exist Capacity	Improved Capacity	Lane-Miles Added	VMC Added	Total Cost	Cost/ Ln-Mi
Palm Parkway Connector Rd: Palm Parkway to Apopka Vineland Rd	0	4D	1.60	0	37,600	6.4	60,160	$10,500,000	$1,640,625
Rouse Road: Lake Underhill to 50	2U	4D	1.70	15,900	37,600	3.4	36,890	$9,128,477	$2,684,846
CR 535: Fiquette to 429	2U	4D	1.58	15,900	37,600	3.2	34,286	$10,519,651	$3,329,003
Holden Ave: John Young Parkway to Orange Blossom Trail	0 and 2U	4D	0.49+.757	0 and 15,900	37,600	3.5	34,699	$13,783,354	$3,949,385
I-Drive: S Westwood Blvd to N Westwood Blvd	4D	6D	2.47	37,600	56,600	4.9	46,854	$20,687,700	$4,194,586
John Young Parkway 6 lane: SR 528 to Turnpike	4D	6D	2.65	37,600	56,600	5.3	50,350	$26,433,288	$4,987,413
Wetherbee Rd: Turnpike to Orange	2U	4D	0.99	15,900	37,600	2.0	21,483	$10,471,986	$5,288,882
Boggy Creek Rd (North and South)	2U	4D	2.62	15,900	37,600	5.2	56,854	$35,075,483	$6,693,794
Destination Parkway: Tradeshow Blvd to E. of Lake Cay	0	4D	0.80	0	37,600	3.2	30,080	$26,422,824	$8,257,133
Econlockhatchee Trail: Lake Underhill to SR 50	2U	4D	2.00	15,900	37,600	4.0	43,400	$35,141,818	$8,785,455
Kennedy Blvd: Forest City to I-4	2U	4D	1.75	16,700	37,600	3.5	36,575	$34,168,355	$9,762,387
Taft Vineland Rd: 441 to Orange Ave	2U	4D	2.03	15,900	37,600	4.1	44,051	$42,780,409	$10,537,047
All American: Orange Blossom Trail to Forest City	2U	4D	0.70	15,900	37,600	1.4	15,190	$20,077,909	$14,341,364

Discard Low and High:

Total Lane-Mi:	42.3	435,522	$264,613,345	**$6,261,259**	**<<Cost/Ln-Mi**
Capacity per Lane-Mi:>>		10,305		**$607.58**	**<<Cost/Veh-Mi**
Persons per Vehicle:			1.399	$434.29	<<Cost/Pers-mi

Source: Orange County Proposed Capital Budget 2017/2018

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Transit Costs

Public transportation provides a cost-effective means to maximize the passenger carrying capacity of surface transportation facilities statewide. Transit ridership and new services in Florida continue to grow with 30 urban fixed-route systems, comprised of bus and traditional fixed guideway rail service, as well as vanpools. Currently, Florida's premium transit services include 2 commuter rail systems, 1 heavy rail system, 1 light rail trolley, 2 people movers and several Bus Rapid Transit (BRT) systems. Demand-response and deviated-route services are also included in non-urbanized areas.

This report offers recent Florida-specific estimates of transit system, operating, fixed guideway construction, new vehicle, and bus stop amenity costs. By providing these cost estimates, FDOT can assist transit agencies and local governments in determining various components and financial requirements of transit service operations. Note that this report only covers urban systems and is provided for planning purposes only. For general information on statewide transit programs, please visit http://www.dot.state.fl.us/transit/.

Transit System Costs

Actual 2013 Florida Costs

Itemized Expenses	Total Expenditures ($ 000,000)	Percent (%)
Wages and Salaries	472	39
Fringes	188	16
Purchased Transportation Vehicles	164	14
Materials and Supplies	211	17
Utilities	14	1
Services	127	10
Casualty and Liability	23	2
Other	11	1

General Expenses	Total Expenditures ($ 000,000)	Percent (%)
Vehicle Operations Expenses	738	61
Vehicle Maintenance Expenses	217	18
Non-Vehicle Maintenance Expenses	70	6
General Administrative Expenses	192	16

Operating Costs

Actual 2013 Florida Costs

Typical Operating Costs	Cost Per Revenue Hour ($)	Cost Per Revenue Mile ($)
Rail Modes		
Automated Guideway	321	26.27
Commuter Rail	566	18.35
Heavy Rail	218	9.85
Light Rail	201	22.73
Urban Motor Bus		
Up to 50 Buses	61	3.88
50 to 200 Buses	92	5.66
Over 200 Buses	84	6.43
Other Modes		
Demand Responsive	50	3,22
Vanpool	29	1.56

New Vehicles

Actual 2014 Florida Costs

Vehicle Type	Average Costs (000s of $)
Passenger Van (12 passengers)	26
23' Cutaway Bus	70
30' Motor Coach (10 year Bus)	180
40' Motor Coach	536
Intercity (Over the Road Bus)	800
60' Articulated Bus (Diesel Hybrid)	900

Bus Stop Amenities

Actual 2014 Florida Costs

Bus Stop Component	Average Costs (000s of $)
Shelter (Installation and Materials, including bench)	16
Shelter (Installation Only)	8
Bench (All-inclusive)	5
5' X 8' Boarding and Alighting Pads*	2

* Larger concrete landing pads with culverts can cost up to $30,000.

CONTACTS

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Appendix C

Revenue Credit Analysis

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January 11, 2019

Sales Tax Revenue Forecast for Transportation

For Seminole County, Florida:

- 25 percent goes to schools.
- Of the remaining 75 percent, 25.87 percent goes to local governments.
- Thus, BoCC gets (0.75 x (1-0.2587)=) 55.6 percent of the sales tax.
- Of the portion the BoCC gets, approximately 44 percent goes to Transportation Capital, and 35 percent goes to transportation operations and maintenance, based on a review of the distribution of projects in the Sales Tax program.
- Assumed that sales tax revenues are related to population growth, wage growth, and "consumer confidence". And, the tax rate was assumed to remain at 1% for the 25-year horizon of this study. Population growth is based on BEBR's estimate of 2017 population of 454,635 and BEBR's 2018 mid-range forecast of 582,600 by 2045. That's a 0.89 percent per year growth rate.
- Wages per capita were assumed to increase at a rate of 1.1 percent per year.
- "Consumer confidence" is based on review of recent and historical sales tax proceeds per capita, which ranges from values as low as $125/capita during the recent recession and up to $186/capita, from the Florida Office of Economic and Demographic Research September, 2018, forecast for Seminole County. For the attached forecast, a yield of $172.71 per capita was used, which is the average of years 2017, 2018, and 2019.
- Split of revenues between "Base" and "Growth" is tied to 2015 population as the "base", as this is the year the current sales tax was initiated.
- Discount rate of 3.3 percent per year was applied, based on FDOT Construction Cost Index forecasts.

Motor Fuel Tax Revenue Forecast for Transportation

- Assumed motor fuel revenues depend on growth in vehicle-miles of travel (vmt) in Seminole County, and fleet fuel efficiency.
- County-wide travel is forecasted to grow at a faster rate than population, as forecasts indicate faster growth in employment than population.
- Fleet fuel efficiency improvements at 1.23 percent per year were based on recent trends reported in FHWA report VM-1.
- Seminole County commits only the 9th cent motor fuel tax to transportation capital.
- Review of FDOT's past six years and upcoming five years of work program indicate an average of 10.68 equivalent pennies per gallon of State and Federal revenue is expended on mobility facility expansion.

Sales Tax Revenue:

2019 Revenue Estimate 1 %:	**$ 86,087,709**	Source: LGFI, 2018
Share to Schools:	25%	
Share to BoCC:	74%	$64,565,782
$$ to BoCC:	$47,864,766	
Proportion to transportation Capital:	44%	$20,975,970
Proportion to transportation O&M:	35%	$16,729,301
Year Sales Tax Ends (9/30 of):	2045	
Income Inflation Rate:	2.95%	
Sales tax rate:	1.00%	
Sales tax 1% equivalent gas tax pennies:	**13.15** pennies	

Total to Capital	Total to O&M
$496,805,457	$396,225,206
55.63%	

				85.1%		14.9%							
Year 2020 to 2044 totals :			**$3,224,830,873**	**$668,864,115**	**$533,449,901**	**$116,892,138**	**$93,226,857**			**$429,192,622**	**$342,300,859**	**$67,612,836**	**$53,924,347**
Year	**Population**	**Annual Sales Tax/capita @ 1%**	**Sales Tax Proceeds (YOC)**	**YOC Revenue from Base for Transportation Capital**	**YOC Revenue from Base for O&M**	**YOC Revenue from Growth for Transportation Capital**	**YOC Revenue from Growth for O&M**	**YOC Total for Transportation Capital**	**Discount Factor**	**PV Revenue from Base for Capital**	**PV Revenue from Base for O&M**	**PV Revenue from Growth for Capital**	**PV Revenue from Growth for O&M**
2019	462,760	$164.00	$75,894,795	$17,933,922	$14,303,128	$558,461	$445,399	$18,492,384	1.000	$17,933,922	$14,303,128	$558,461	$445,399
2020	466,878	$169	$78,829,793	$18,463,200	$14,725,251	$744,320	$593,629	$19,207,520	1.033	$17,873,379	$14,254,842	$720,542	$574,665
2021	471,031	$174	$81,878,293	$19,008,098	$15,159,833	$942,213	$751,458	$19,950,312	1.067	$17,813,039	$14,206,718	$882,975	$704,213
2022	475,222	$179	$85,044,685	$19,569,078	$15,607,240	$1,152,751	$919,372	$20,721,829	1.102	$17,752,904	$14,158,757	$1,045,766	$834,046
2023	479,450	$184	$88,333,527	$20,146,614	$16,067,851	$1,376,568	$1,097,876	$21,523,182	1.139	$17,692,971	$14,110,959	$1,208,917	$964,167
2024	483,715	$190	$91,749,555	$20,741,194	$16,542,056	$1,614,331	$1,287,503	$22,355,525	1.176	$17,633,241	$14,063,321	$1,372,432	$1,094,578
2025	488,019	$195	$95,297,687	$21,353,322	$17,030,256	$1,866,734	$1,488,806	$23,220,056	1.215	$17,573,712	$14,015,844	$1,536,316	$1,225,283
2026	492,360	$201	$98,983,032	$21,983,515	$17,532,865	$2,134,505	$1,702,366	$24,118,020	1.255	$17,514,385	$13,968,528	$1,700,572	$1,356,284
2027	496,741	$207	$102,810,897	$22,632,307	$18,050,306	$2,418,403	$1,928,788	$25,050,711	1.297	$17,455,258	$13,921,371	$1,865,203	$1,487,585
2028	501,160	$213	$106,786,792	$23,300,247	$18,583,019	$2,719,223	$2,168,705	$26,019,470	1.339	$17,396,330	$13,874,373	$2,030,214	$1,619,189
2029	505,619	$219	$110,916,443	$23,987,899	$19,131,453	$3,037,793	$2,422,780	$27,025,693	1.384	$17,337,601	$13,827,534	$2,195,609	$1,751,099
2030	510,117	$226	$115,205,796	$24,695,846	$19,696,073	$3,374,982	$2,691,704	$28,070,829	1.429	$17,279,071	$13,780,854	$2,361,391	$1,883,318
2031	514,656	$233	$119,661,026	$25,424,687	$20,277,357	$3,731,695	$2,976,198	$29,156,382	1.476	$17,220,738	$13,734,330	$2,527,565	$2,015,849
2032	519,234	$239	$124,288,549	$26,175,037	$20,875,796	$4,108,878	$3,277,019	$30,283,915	1.525	$17,162,602	$13,687,964	$2,694,133	$2,148,695
2033	523,854	$246	$129,095,026	$26,947,532	$21,491,896	$4,507,521	$3,594,955	$31,455,052	1.575	$17,104,662	$13,641,755	$2,861,101	$2,281,860
2034	528,514	$254	$134,087,380	$27,742,825	$22,126,179	$4,928,655	$3,930,829	$32,671,480	1.627	$17,046,918	$13,595,701	$3,028,472	$2,415,346
2035	533,216	$261	$139,272,797	$28,561,590	$22,779,182	$5,373,359	$4,285,501	$33,934,949	1.681	$16,989,369	$13,549,803	$3,196,250	$2,549,156
2036	537,960	$269	$144,658,745	$29,404,519	$23,451,456	$5,842,760	$4,659,870	$35,247,279	1.737	$16,932,014	$13,504,060	$3,364,439	$2,683,295
2037	542,746	$277	$150,252,977	$30,272,324	$24,143,571	$6,338,035	$5,054,874	$36,610,359	1.794	$16,874,852	$13,458,471	$3,533,042	$2,817,764
2038	547,575	$285	$156,063,549	$31,165,741	$24,856,112	$6,860,411	$5,471,493	$38,026,152	1.853	$16,817,884	$13,413,036	$3,702,065	$2,952,567
2039	552,447	$293	$162,098,828	$32,085,525	$25,589,682	$7,411,172	$5,910,750	$39,496,697	1.914	$16,761,108	$13,367,755	$3,871,510	$3,087,708
2040	557,362	$302	$168,367,502	$33,032,455	$26,344,902	$7,991,656	$6,373,713	$41,024,110	1.977	$16,704,524	$13,322,626	$4,041,383	$3,223,189
2041	562,320	$311	$174,878,598	$34,007,330	$27,122,410	$8,603,261	$6,861,497	$42,610,592	2.043	$16,648,130	$13,277,650	$4,211,686	$3,359,014
2042	567,323	$320	$181,641,490	$35,010,977	$27,922,865	$9,247,448	$7,375,265	$44,258,425	2.110	$16,591,927	$13,232,825	$4,382,425	$3,495,186
2043	572,370	$330	$188,665,917	$36,044,245	$28,746,943	$9,925,739	$7,916,234	$45,969,984	2.180	$16,535,914	$13,188,152	$4,553,603	$3,631,708
2044	577,462	$339	$195,961,991	$37,108,006	$29,595,342	$10,639,726	$8,485,671	$47,747,732	2.252	$16,480,090	$13,143,630	$4,725,224	$3,768,583

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Source: W.E. Oliver, P.E., LLC

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6/14/2019

Summary of Sales Tax Program (Resolution 2014-R-67)
Seminole County Portion Only

	O&M	Capital/ System Expansion	Stormwater/ Subdivison Rehab	Total
Roads Capacity	$32,000,000	$121,350,000		$153,350,000
Resurfacing	$68,000,000			$68,000,000
Bridges	$12,000,000			$12,000,000
Minor roadway		$5,000,000		$5,000,000
Safety	$5,000,000			$5,000,000
New Signals		$3,500,000		$3,500,000
Signals/SignsUpgrades	$6,500,000			$6,500,000
Trails		$10,000,000		$10,000,000
Sidewalks		$15,000,000		$15,000,000
Stormwater			$40,000,000	$40,000,000
Subdiv Rehab			$35,000,000	$35,000,000
Totals:	$123,500,000	$154,850,000	$75,000,000	$353,350,000
	34.95%	43.82%	21.23%	

Source: W.E. Oliver, P.E., LLC
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Gasoline Tax Revenue:

Annual Impvmt in MPG: 1.9%/yr Eqn from FHWA VM-1 data

Annual VMT Growth Rate: 1.23%

	9th Cent	Totals
Effective Pennies:	0.086	0.09
Yield per Penny to BoCC to Capital:	$200,432	$200,432
Share to Capital:	9%	
Share to BoCC:	100.0%	
Number of Pennies Levied:	1	
Est total yield of 1 Penny in 2019:	$2,342,590	<<Updated to 2018 LFGI

State/Federal Gas Tax to road const	
$0.0000	
$0.1068	State Arterials <<<Determined from 2013-2018 FDOT Work
$0.1099	Total-adds in Transit (Bus) capital
Computed:	$143,011,997
2013-2018 Actual:	$139,017,785 from FDOT program summary

				Non-State/Federal Motor Fuel Tax:								***State and Federal Motor Fuel Tax:***				
										$37,783,032						
			2020-2044 Totals:		**$5,175,257**	**$4,211,206**	**$964,051**			**$2,698,754**	**$533,962**	**$664,866,788**	**$519,738,292**	**$145,128,496**	**$331,312,937**	**$83,995,059**
Year	**VMT/Day**	**Fuel Eff (mpg)**	**Gals/yr**	**YOC 9th Cent Revenues to Capital**	**Total Non-State/ Federal YOC $$**	**YOC $$ From Base**	**YOC $$ From Growth**	**FDOT Inflation Factor**	**Conv't from Year to PV**	**Present Value $$ from Base**	**Present Value $$ from Growth**	**Total S/F Gas Tax to Road Cons't (YOC)**	**S/F Gas Tax from Base (YOC)**	**S/F Gas Tax from Growth (YOC)**	**S/F Gas Tax from Base (PV)**	**S/F Gas Tax from Growth (PV)**
2018	15,823,623	22.43	230,610,820	$197,311	$197,311	$197,311	$0	0.029	1.059	$186,346	$0	$25,348,553	$26,112,196	-$763,644	$24,661,112	-$721,207
2019	16,018,751	22.87	255,684,909	**$218,764**	$218,764	$218,764	$0	0.029	1.090	$200,784	$0	$28,104,676	$25,613,456	$2,491,220	$23,508,345	$2,286,473
2020	16,216,284	23.30	253,989,089	$217,313	$217,313	$213,242	$4,071	0.030	1.122	$190,016	$3,627	$27,918,273	$25,133,643	$2,784,630	$22,396,084	$2,481,328
2021	16,416,253	23.74	252,395,384	$215,949	$215,949	$208,009	$7,940	0.031	1.157	$179,780	$6,862	$27,743,094	$24,671,701	$3,071,393	$21,323,431	$2,654,565
2022	16,618,688	24.18	250,898,672	$214,669	$214,669	$203,046	$11,623	0.033	1.195	$169,884	$9,725	$27,578,577	$24,226,649	$3,351,928	$20,269,872	$2,804,480
2023	16,823,619	24.61	249,494,207	$213,467	$213,467	$198,333	$15,134	0.033	1.235	$160,640	$12,258	$27,424,199	$23,797,578	$3,626,621	$19,274,810	$2,937,376
2024	17,031,078	25.05	248,177,584	$212,341	$212,341	$193,855	$18,486	0.033	1.275	$151,997	$14,494	$27,279,477	$23,383,641	$3,895,836	$18,334,504	$3,054,623
2025	17,241,094	25.48	246,944,707	$211,286	$211,286	$189,596	$21,690	0.033	1.317	$143,908	$16,463	$27,143,960	$22,984,053	$4,159,907	$17,445,496	$3,157,478
2026	17,453,701	25.92	245,791,768	$210,299	$210,299	$185,542	$24,758	0.033	1.361	$136,332	$18,191	$27,017,230	$22,598,079	$4,419,151	$16,604,580	$3,247,097
2027	17,668,929	26.35	244,715,217	$209,378	$209,378	$181,680	$27,699	0.033	1.406	$129,230	$19,702	$26,898,896	$22,225,036	$4,673,861	$15,808,786	$3,324,542
2028	17,886,811	26.79	243,711,745	$208,520	$208,520	$177,998	$30,522	0.033	1.452	$122,566	$21,017	$26,788,596	$21,864,284	$4,924,312	$15,055,355	$3,390,793
2029	18,107,380	27.22	242,778,265	$207,721	$207,721	$174,485	$33,236	0.033	1.500	$116,309	$22,155	$26,685,988	$21,515,225	$5,170,763	$14,341,722	$3,446,752
2030	18,330,669	27.66	241,911,889	$206,980	$206,980	$171,132	$35,848	0.033	1.550	$110,430	$23,132	$26,590,757	$21,177,301	$5,413,456	$13,665,506	$3,493,250
2031	18,556,712	28.09	241,109,920	$206,294	$206,294	$167,928	$38,366	0.033	1.601	$104,901	$23,966	$26,502,605	$20,849,987	$5,652,619	$13,024,485	$3,531,055
2032	18,785,542	28.53	240,369,831	$205,660	$205,660	$164,866	$40,795	0.033	1.654	$99,698	$24,669	$26,421,255	$20,532,790	$5,888,466	$12,416,592	$3,560,874
2033	19,017,193	28.96	239,689,255	$205,078	$205,078	$161,937	$43,142	0.033	1.708	$94,798	$25,255	$26,346,447	$20,225,249	$6,121,198	$11,839,899	$3,583,361
2034	19,251,701	29.39	239,065,973	$204,545	$204,545	$159,133	$45,412	0.033	1.765	$90,181	$25,735	$26,277,936	$19,926,929	$6,351,007	$11,292,606	$3,599,121
2035	19,489,101	29.83	238,497,903	$204,059	$204,059	$156,449	$47,610	0.033	1.823	$85,827	$26,119	$26,215,494	$19,637,422	$6,578,073	$10,773,032	$3,608,711
2036	19,729,429	30.26	237,983,088	$203,618	$203,618	$153,876	$49,742	0.033	1.883	$81,719	$26,417	$26,158,906	$19,356,343	$6,802,564	$10,279,606	$3,612,649
2037	19,972,720	30.69	237,519,693	$203,222	$203,222	$151,411	$51,811	0.033	1.945	$77,841	$26,636	$26,107,970	$19,083,329	$7,024,642	$9,810,858	$3,611,412
2038	20,219,011	31.13	237,105,988	$202,868	$202,868	$149,046	$53,822	0.033	2.009	$74,177	$26,786	$26,062,496	$18,818,038	$7,244,459	$9,365,411	$3,605,442
2039	20,468,339	31.56	236,740,347	$202,555	$202,555	$146,776	$55,779	0.033	2.076	$70,714	$26,873	$26,022,305	$18,560,146	$7,462,159	$8,941,978	$3,595,147
2040	20,720,742	31.99	236,421,240	$202,282	$202,282	$144,598	$57,684	0.033	2.144	$67,439	$26,903	$25,987,229	$18,309,349	$7,677,880	$8,539,349	$3,580,908
2041	20,976,258	32.42	236,147,224	$202,048	$202,048	$142,506	$59,542	0.033	2.215	$64,340	$26,883	$25,957,110	$18,065,357	$7,891,752	$8,156,392	$3,563,075
2042	21,234,924	32.85	235,916,941	$201,851	$201,851	$140,495	$61,355	0.033	2.288	$61,406	$26,817	$25,931,797	$17,827,898	$8,103,899	$7,792,044	$3,541,973
2043	21,496,780	33.29	235,729,108	$201,690	$201,690	$138,563	$63,127	0.033	2.363	$58,627	$26,709	$25,911,151	$17,596,712	$8,314,439	$7,445,304	$3,517,903
2044	21,761,865	33.72	235,582,515	$201,564	$201,564	$136,705	$64,859	0.033	2.441	$55,993	$26,566	$25,895,037	$17,371,554	$8,523,483	$7,115,235	$3,491,144

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Source: W.E. Oliver, P.E., LLC

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Florida DOT Work Program -- Construction

Type of Work	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
ADD LANES & RECONSTRUCT	$16,973,600	$554,720	$6,968,434	$88,224,234	$2,433,647	$2,236,293	$25,669,554	$0	$14,148,637	$0	$0
ADD LANES & REHABILITATE PVMNT	$204,216	$1,461,635	$259,493	$19,496	$60,340	$305	$9,970,923	$0	$0	$0	$0
NEW ROAD CONSTRUCTION	$0	$0	$0	$0	$0	$0	$4,175,118	$0	$0	$0	$0
ADD RIGHT TURN LANE(S)	$0	$0	$0	$0	$0	$0	$371,312	$6,804,850	$1,550,267	$59,455	$0
ADD TURN LANE(S)	$824,943	$576,721	$1,722,436	$6,045	$294	$0	$0	$419,273	$0	$0	$0
INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$2,561,234	$1,375	$742,762	$0	$0	$0	$0
BIKE PATH/TRAIL	$7,170,955	$8,996	$1,100,322	$51,703	$414	$0	$366,897	$0	$0	$0	$0
PEDESTRIAN SAFETY IMPROVEMENT	$0	$0	$0	$0	$0	$1,561,332	$55,778	$0	$0	$0	$0
SIDEWALK	$2,799,707	$1,464,962	$480,688	$581,168	$266,518	$2,811	$14,905	$0	$0	$0	$0
LIGHTING	$937,199	$163,261	$955	$0	$0	$0	$0	$350,000	$0	$0	$0
SAFETY PROJECT	$51,411	$941	$683,675	$5,177	$1,481,284	$75,350	$0	$0	$0	$0	$0
OTHER ITS	$0	$0	$0	$0	$0	$0	$692,128	$0	$0	$0	$0
TRAFFIC OPS IMPROVEMENT	$960,000	$80,786	$808,852	$10,558	$10	$0	$54	$1,441,321	$0	$0	$0
TRAFFIC SIGNALS	$0	$0	$327,130	$8,974	$1,456,699	$72,826	$0	$0	$0	$0	$0
LANDSCAPING	$400,295	$0	$20,180	$1,422,021	$44,626	$140,447	$71,421	$0	$0	$4,266,758	$4,066,878
MISCELLANEOUS CONSTRUCTION	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
BRIDGE REPLACEMENT	$0	$0	$0	$0	$0	$0	$10,205,986	$0	$0	$0	$0
BRIDGE-REPAIR/REHABILITATION	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
DRAINAGE IMPROVEMENTS	$7,242,596	$81,025	$0	$400	$126	$856	$0	$0	$0	$0	$0
EMERGENCY OPERATIONS	$0	$0	$0	$1,362	$58,090	$0	$0	$0	$0	$0	$0
PAVE SHOULDERS	$4,299,040	$333	$1,143	$2,685	$413	$0	$0	$0	$0	$0	$0
RELOCATE UTILITY SYSTEMS	$0	$0	$0	$0	$0	$2,600,122	$0	$0	$0	$0	$0
RESURFACING	$4,844,706	$678,430	$2,706,662	$1,234,720	$74,090	$4,872,048	$9,814,282	$1,807,709	$8,538,905	$0	$0
Program Totals:	$46,708,668	$5,071,810	$15,079,970	$91,568,543	$8,437,785	$11,563,765	$62,151,120	$10,823,153	$24,237,809	$4,326,213	$4,066,878
Accumulative Average:	$46,708,668	$25,890,239	$22,286,816	$39,607,248	$33,373,355	$29,738,424	$34,368,809	$31,425,602	$30,626,958	$27,996,884	$25,821,429

Mobility Capital Projects:

"Capacity":	$18,002,759	$2,593,076	$8,950,363	$88,249,775	$5,055,515	$2,237,973	$40,929,669	$7,224,123	$15,698,904	$59,455	$0
Bikes:	$7,170,955	$8,996	$1,100,322	$51,703	$414	$0	$366,897	$0	$0	$0	$0
Sidewalks:	$2,799,707	$1,464,962	$480,688	$581,168	$266,518	$2,811	$14,905	$0	$0	$0	$0
Totals:	$27,973,421	$4,067,034	$10,531,373	$88,882,646	$5,322,447	$2,240,784	$41,311,471	$7,224,123	$15,698,904	$59,455	$0
Accumulative Yearly Average:	$27,973,421	$16,020,228	$14,190,609	$32,863,619	$27,355,384	$23,169,618	$25,761,311	$23,444,162	$22,583,578	$20,331,166	$18,482,878

2013-2018 Acutal total: $139,017,705

2013-2021 Average: $22,583,578
Annual $$/1 penny: $2,342,590
Equivalent Pennies: 9.64

Source: FDOT District 5
W.E. Oliver, P.E., LLC
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Bus Service Expansion Assumptions:

Horizon Year:	25	Operating Cost/Hr:	$89	Fleet Margin:	1.2
Basic Stop Cost:	$2,500	Total Hrs/Weekday Hrs:	1.06	Bus Capacity:	60
Enhanced Stop Cost:	$10,000	Park n Ride Lot Cost:	$750,000	Bus Capacity Utilization:	0.5
Luxury Stop Cost:	$16,000	Transfer Station Cost:	$500,000	Stop Spacing (mi):	0.333
Bus Cost:	$536,000	Mtce Barn Cost:	$4,000,000	Bus Equivalent Cars:	7

	Rural		Suburb		Core		Total	
	Exist	Horizon	Exist	Horizon	Exist	Horizon	Exist	Horizon
Non-Toll/Int MRN CL Miles	45.9		235.2	235.2	138.2	138.2		373.4
% Covered:	0%	0%	14%	12%	34%	62%		30%
			31.82	27.37	46.99	85.13		112.5
Overlap Factor:	0.000	1.000	1.091	1.100	1.087	1.200		
Pk Headway (mins):	60	60	30	20	20	15		
Cycles/Day:	0.00	0	38.80	58.2	60.2	80.2		
Pk Hr Speed (mph):	0.0	20	13.0	13	13.0	13		
Basic Stops:	70%	95%	70%	60%	70%	40%		
Enhanced Stops:	20%	5%	20%	30%	20%	40%		
Luxury Stops:	10%	0%	10%	10%	10%	20%		
Transfer Stations:	0	0	4	4	0	0		
P'n'R Lots:	0	0	4	4	0	0		
Mtce Barn:	0	0	0	0	0	0		
Route-Miles	0.0	0.0	34.7	30.1	51.10	102.2	86	132
Bus-Miles Travel/day:	0	0	1,347	1,752	3,075	8,196	4,421	9,948
Veh-Hrs/day:	0.0	0.0	103.6	134.8	236.5	630.5	340	765
Buses:	0	0	7	9	15	38	22	47
Bus Cost:	$0	$0	$3,752,000	$4,824,000	$8,040,000	$20,368,000		
Stop Cost:	$0	$0	$511,222	$501,372	$754,996	$2,096,365		
Transfer Station Cost:	$0	$0	$2,000,000	$2,000,000	$0	$0		
P'n'R Lot Cost:	$0	$0	$3,000,000	$3,000,000	$0	$0		
Mtce Barn Cost:	$0	$0	$0	$0	$0	$0		
Road Consumption Cost:	$0	$0	$18,199,111	$23,678,475	$41,187,821	$109,790,631		
Capital Cost:	$0	$0	$27,462,333	$34,003,846	$49,982,817	$132,254,996	$77,445,151	$166,258,843
Annual Ops Cost:	$0	$0	$2,462,828	$3,204,333	$5,623,145	$14,989,108	$8,085,974	$18,193,441
Person-Miles Capacity:	0	0	40,400	52,563	92,240	245,877	132,640	298,440

	Rural	Suburb	Core	N/A	Total
Plan Capital Cost:	$0	$6,541,513	$82,272,179	$0	$88,813,692
% non-Road Cap Cost to Co:	20%	20%	20%	20%	
Plan Capital Cost to Co:	$0	$5,691,793	$71,336,684	$0	$77,028,477
PMC Added:	0	741,505	9,365,962	0	10,107,467
$$/PMC Capital Cost:	-	$7.68	$7.62	-	$7.62
PV 25 yrs O&M Cost:	$0	$70,839,519	$257,653,164	$0	$328,492,682
Paratransit Multiplier:	1.20	<<Source: Lynx TDP 2018 Sec 8.3			

$11,785,215 Fed/State share of capital
0.3119 <<<Eq Pennies Fed/State

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Appendix D

Other Fee Parameters

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H.15 Selected Interest Rates for Nov 02, 2016

Series Description BOND BUYER GO 20-BOND MUNICIPAL BOND INDEX
Unit: Percent:_Per_Year
Multiplier: 1
Source: http://www.federalreserve.gov/releases/h15/ data/monthly.

Time Period	Interest Rate	Time Period	Interest Rate	Time Period	Interest Rate	Time Period	Interest Rate	Time Period	Interest Rate
2006-10	4.3	2007-10	4.39	2008-10	5.5	2009-10	4.2	2010-10	3.87
2006-11	4.14	2007-11	4.46	2008-11	5.23	2009-11	4.37	2010-11	4.4
2006-12	4.11	2007-12	4.42	2008-12	5.56	2009-12	4.21	2010-12	4.92
2007-01	4.23	2008-01	4.27	2009-01	5.07	2010-01	4.33	2011-01	5.28
2007-02	4.22	2008-02	4.64	2009-02	4.9	2010-02	4.36	2011-02	5.15
2007-03	4.15	2008-03	4.93	2009-03	4.99	2010-03	4.36	2011-03	4.92
2007-04	4.26	2008-04	4.7	2009-04	4.78	2010-04	4.41	2011-04	4.99
2007-05	4.31	2008-05	4.58	2009-05	4.56	2010-05	4.29	2011-05	4.59
2007-06	4.6	2008-06	4.69	2009-06	4.81	2010-06	4.36	2011-06	4.51
2007-07	4.56	2008-07	4.68	2009-07	4.72	2010-07	4.32	2011-07	4.52
2007-08	4.64	2008-08	4.69	2009-08	4.6	2010-08	4.03	2011-08	4.02
2007-09	4.51	2008-09	4.86	2009-09	4.24	2010-09	3.87	2011-09	4.01
12-Month Avg:	4.34		4.61		4.91		4.26		4.60

Prior Five-Year Average: 4.54 %

2011-10	4.13	2012-10	3.65	2013-10	4.56	2014-10	3.96	2015-10	3.67
2011-11	4.05	2012-11	3.46	2013-11	4.6	2014-11	3.96	2015-11	3.68
2011-12	3.95	2012-12	3.48	2013-12	4.73	2014-12	3.7	2015-12	3.57
2012-01	3.68	2013-01	3.6	2014-01	4.59	2015-01	3.4	2016-01	3.41
2012-02	3.66	2013-02	3.72	2014-02	4.44	2015-02	3.58	2016-02	3.3
2012-03	3.91	2013-03	3.96	2014-03	4.46	2015-03	3.59	2016-03	3.38
2012-04	3.95	2013-04	3.92	2014-04	4.35	2015-04	3.51	2016-04	3.3
2012-05	3.77	2013-05	3.72	2014-05	4.29	2015-05	3.76	2016-05	3.29
2012-06	3.94	2013-06	4.27	2014-06	4.35	2015-06	3.82	2016-06	3.01
2012-07	3.78	2013-07	4.56	2014-07	4.33	2015-07	3.79	2016-07	2.83
2012-08	3.74	2013-08	4.82	2014-08	4.23	2015-08	3.74	2016-08	2.85
2012-09	3.73	2013-09	4.79	2014-09	4.13	2015-09	3.78	2016-09	2.93
12-Month Avg:	3.86		4.00		4.42		3.72		3.27

Recent Five-Year Average: 3.85 %

Average weighted as 1*Prior five-Year Average + 2*Recent Five-Year Average: 4.08 %

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Equivalent Weekdays per Year for Revenue-Generating VMT

Source: Traffic Congestion and Reliability: Trends and Advanced Strategies for Congestion Mitigation
FHWA, September, 2005., Figure 2.2

	Relative Daily Traffic Volume			
Sun	1.35			
Mon	2.12			
Tues	2.23			
Wed	2.30			
Thurs	2.32			
Fri	2.30			
Sat	1.52			
7-day Total	14.14	7		
5 weekday Total:	11.27	5	2.254	weekday avg
			6.27	= 7-day total / weekday avg
			365	calendar days/year
	365 x 6.27 / 7 =		327	effective weekdays/yr

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ANNUAL VEHICLE DISTANCE TRAVELED IN MILES AND RELATED DATA - 2017(1)
BY HIGHWAY CATEGORY AND VEHICLE TYPE

Revised: January 2019

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 DUTY VEHICLES /2	SUBTOTALS: SINGLE-UNIT 2-AXLE 6-TIRE OR MORE AND COMBINATION TRUCKS	ALL MOTOR VEHICLES
	Motor-Vehicle Travel: (millions of vehicle-miles)									
2017	Interstate Rural	142,445	1,128	1,775	44,928	10,103	52,171	187,373	62,274	252,550
2016		139,460	1,095	1,740	44,086	9,905	50,430	183,546	60,335	246,716
2017	Other Arterial Rural	228,664	2,661	2,109	92,175	16,814	29,970	320,839	46,784	372,393
2016		226,036	2,633	2,116	91,655	16,371	28,794	317,691	45,164	367,605
2017	Other Rural	213,923	2,728	1,986	88,419	16,563	14,644	302,342	31,207	338,262
2016		212,457	2,856	1,946	90,026	15,563	12,375	302,483	27,939	335,224
2017	All Rural	585,032	6,517	5,870	225,522	43,480	96,785	810,554	140,265	963,206
2016		577,954	6,583	5,802	225,768	41,839	91,599	803,721	133,439	949,545
2017	Interstate Urban	400,339	2,596	2,628	99,803	18,617	43,228	500,142	61,844	567,210
2016		392,838	2,939	2,542	99,523	18,555	41,991	492,361	60,546	558,388
2017	Other Urban	1,235,430	11,036	8,730	331,253	54,006	41,478	1,566,682	95,483	1,681,932
2016		1,220,973	10,923	8,006	332,663	52,944	40,966	1,553,636	93,910	1,666,475
2017	All Urban	1,635,769	13,632	11,358	431,056	72,622	84,705	2,066,824	157,328	2,249,142
2016		1,613,810	13,862	10,548	432,186	71,499	82,958	2,045,997	154,456	2,224,863
2017	Total Rural and Urban 5/	2,220,801	20,149	17,227	656,578	116,102	181,490	2,877,378	297,593	3,212,347
2016		2,191,764	20,445	16,350	657,954	113,338	174,557	2,849,718	287,895	3,174,408
2017	Number of motor vehicles 6/									
2016	registered 2/	192,774,508	8,679,380	976,161	54,870,473	8,746,518	2,752,043	247,644,981	11,498,561	268,799,083
2017	Average miles traveled 6/									
2016	per vehicle	11,370	2,356	16,749	11,991	12,958	63,428	11,507	25,037	11,810
2017	Person-miles of travel 6/									
2016	(millions) 4/	3,699,794	23,725	346,610	1,075,234	113,338	174,557	4,775,028	287,895	5,433,258
2017	Fuel consumed 6/									
2016	(thousand gallons)	91,487,810	465,802	2,225,795	37,818,755	15,338,479	29,554,641	129,306,565	44,893,120	176,891,283
2017	Average fuel consumption 6/									
2016	per vehicle (gallons)	475	54	2,280	689	1,754	10,739	522	3,904	658
2017	Average miles traveled per 6/									
2016	gallon of fuel consumed	24.0	43.9	7.3	17.4	7.4	5.9	22.0	6.4	17.9

1/ The FHWA estimates national trends by using State reported Highway Performance and Monitoring System (HPMS) data, fuel consumption data (MF-21 and MF-27), vehicle registration data (MV-1, MV-9, and MV-10), other data such as the R. L. Polk vehicle data, and a host of modeling techniques.
2/ Light Duty Vehicles Short WB - passenger cars, light trucks, vans and sport utility vehicles with a wheelbase (WB) equal to or less than 121 inches. Light Duty Vehicles Long WB - large passenger cars, vans, pickup trucks, and sport/utility vehicles with wheelbases (WB) larger than 121 inches. All Light Duty Vehicles - passenger cars, light trucks, vans and sport utility vehicles regardless of wheelbase.
3/ Single-Unit - single frame trucks that have 2-Axles and at least 6 tires or a gross vehicle weight rating exceeding 10,000 lbs.
4/ Starting with 2009 VM-1, vehicle occupancy is estimated by the FHWA from the 2009 National Household Travel Survey (NHTS) and the annual RL Polk Vehicle registration data; For single unit truck and heavy trucks, 1 motor vehicle miles travelled = 1 person-miles traveled.
5/ VMT data are based on the latest HPMS data available; it may not match previous published results.
6/ 2017 vehicle data coming soon.

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Appendix E

Alternative Fee Programs for Discussion

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Appendix E
Alternate Fee Schedules

For discussion purposes, mobility fee schedules were developed to reflect replacing the current rate of road impact fee collections (approximately $3.1 million per year) and which round-out an estimated shortfall in 2040 Transportation Plan funding ($7.0 million per year). In addition, mobility fee rates that would replace loss or re-allocation of the *capacity-funding portions only* of the LGIST were prepared for consideration by the Board of County Commissioners.

Five alternative "condensed" fee schedules (with potential fees for five representative land uses only) were provided -- two for possible adoption and three for informational purposes. The rural/suburban/core fee district structure, the trip length data, the updated construction costs, and the current revenue program are incorporated into all of these condensed schedules. The five schedules are:

1. A fee schedule that is estimated to replace the $3.1 million per year generated by the current road impact fee. This fee schedule leaves a $6.4 million per year funding shortfall to accomplish the County's 2040 Transportation Plan.
2. A fee schedule with higher rates that generates additional revenues to make up the above shortfall, assuming the LGIST continues to be renewed and its current level of its commitment to mobility improvements continues.
3. To possibly inform the 2045 long-range transportation plan update in progress at MetroPlan Orlando at the time of this study, a fee schedule that funds a reduced rate of mobility system expansion in the rural district and greater rates of mobility system expansion in the suburban and core districts, and assume continuance of the LGIST.
4. A fee schedule that replaces the loss of LGIST transportation capital funding portion, assuming the LGIST expires at the end of 2024.
5. A similar fee schedule that replaces the loss of LGIST transportation capital portion, assuming the LGIST expires at the end of 2034.

These five condensed fee schedule alternatives are summarized in Table E-1, which also includes a summary of the current road impact fee rates for comparative purposes. Following the Table are five figures that provide additional insight into issues such as the quality of service provided, the cost per capita, and what proportion of the cost for infrastructure is borne by growth as opposed to development existing in Seminole County, and how Seminole County's road network compares with what could be characterized as "typical" for other similarly-sized Florida Counties. Aspects of each fee alternative are discussed in the paragraphs following Table E-1.

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Table 8-1: Alternative Mobility Fee Strategies for Consideration

	Current Road Impact Fee				Alternative 1			Alternative 2		
	North	East	South/ Central	West	Rural	Suburb	Core	Rural	Suburb	Core
Single-Family/du:	$705	$940	$1,185	$1,271	$4,235	$1,410	$932	$9,492	$3,161	$2,090
Multi-Family/du:	$471	$628	$792	$849	$2,754	$866	$532	$6,172	$1,941	$1,192
Office (100-200ksf):	$1,547	$1,716	$2,164	$2,320	$2,232	$958	$751	$5,003	$2,146	$1,684
Retail (>20,000 sf)/ksf:	$1,821	$2,429	$3,062	$3,282	$4,665	$1,947	$1,261	$10,454	$4,364	$2,827
Manufacturing/ksf:	$524	$699	$881	$944	$1,239	$533	$391	$2,777	$1,194	$877
% of potential "full fee" Charged:					10.9%			24.3%		
LRTP Performance:					Per LRTP			Per LRTP		
Sales Tax Expiration:					2044+			2044+		
Mobility Fee Goal:					Replace current fee			Meet LRTP goal		

	Alternative 3			Alternative 4			Alternative 5		
	Rural	Suburb	Core	Rural	Suburb	Core	Rural	Suburb	Core
Single-Family/du:	$16,082	$6,841	$4,663	$24,318	$8,368	$5,647	$16,940	$5,739	$3,836
Multi-Family/du:	$9,814	$4,194	$2,744	$15,781	$5,141	$3,245	$11,004	$3,526	$2,197
Office:	$7,285	$4,634	$3,819	$12,768	$5,686	$4,568	$8,910	$3,898	$3,098
Retail (>20,000 sf)/ksf:	$14,332	$9,819	$6,754	$26,696	$11,619	$7,827	$18,625	$7,948	$5,258
Manufacturing/ksf:	$4,144	$2,581	$1,962	$7,089	$3,161	$2,372	$4,946	$2,168	$1,611
% of potential "full fee" Charged:	43.3%			60.0%			42.6%		
LRTP Performance:	Improved			Per LRTP			Per LRTP		
Sales Tax Expiration:	2044+			2024			2034		
Mobility Fee Goal:	Meet improved goal			Meet LRTP goal			Meet LRTP goal		

Alternative 1: "Replace current road fees"

This alternative, summarized in Figure E-1, provides fee rates associated with a mobility fee program that is estimated to provide an annual revenue program of $3.1 million per year, similar to the currently implemented fee program. These rates assume that the LGIST will continue to be renewed through the 25-year planning horizon of this study, allowing the fee collected to be 10.9 percent of the maximum potential fee rate. This assumption is made because it is not known if the LGIST will lapse, if it would be renewed in its existing allocations, or if it would be renewed with different funding allocations. The key differences in fee rates compared to the current fee schedules are the development of the "Rural/Suburban/Core" fee districts and the incorporation of trip length into the fee rates. The land uses with the most significantly increased fee rates are those in the rural/east district, where some fees would increase by factors ranging from 2 to 4.5; however, fees in the Suburb and Core districts would remain comparable or even be reduced. *(Reader may note that the current road impact fee charges lower rates for what was in 1990 the less densely developed and "outlying" east and north districts and higher rates for the south/central and west districts, which could be viewed*

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Figure 8-1: Alternative 1 Mobility Fee

Alternative 1: Replace Current Road Fees (assumes Sales Tax continues indefinitely)

Goals and Needed Revenues

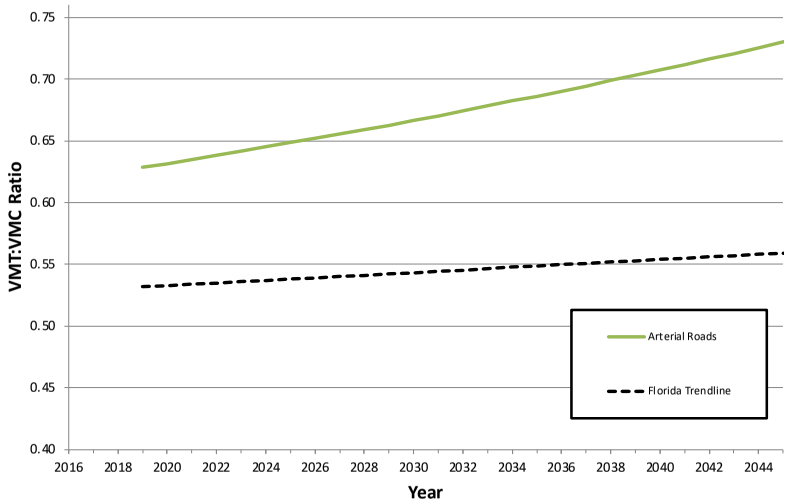
Mobility Fees

	Rural	Suburban	Core
Single-Family/du:	**$4,235**	**$1,410**	**$932**
Multi-Family/du:	$2,754	$866	$532
Office/ksf:	$2,232	$958	$751
Retail (>20,000 sf)/ksf:	$4,665	$1,947	$1,261
Industrial/ksf:	$1,239	$533	$391

Potential Revenue Sources

				Growth	Base	Total		$$/Capita/Yr
2nd LOGT:	#/% to Capital>	0	63.6%				0%	$0.00
County Gas Taxes:	# Pennies>>	0.086		$3,633	$190,312	$193,945	0%	$0.42
State/Federal Gas Tax:	# Pennies/Gal>>	10.989		$2,519,389	$22,390,087	$24,909,477	53%	$53.83
Infrastructure Sales Tax:	End/BCC Share to Cap>:	2045	32.5%	$744,320	$18,463,200	$19,207,520	41%	$41.51
Mobility Fees:	% of full fee:	10.9%		$3,100,000	$0	$3,100,000	7%	

Network Performance



Notes:

1. This analysis is based on estimates of non-Toll and non-Interstate (e.g. "surface" arterial and collector) travel and costs. It includes the capital portion of transit costs for a 277 percent growth in service, focused in the Core and Suburban areas.
2. This scenario approximates Seminole County's 2040 LRTP including its Tiers 1-3 funding, with some differences. The costs of transportation improvements are greater than those of the LRTP because they are based on actual recent experience, whereas the LRTP costs are based on FDOT "cost per mile" estimates which underestimate frequently encountered additional costs. The LRTP rate of capacity addition is represented by the CAR values of 1.69, 0.75, and 0.59 in the rural, suburban, and core areas, respectively.

3. Mobility fee rates are based on the proposed "Core/Suburbs/Rural" fee district structure, with fees adjusted to replace the current annual road impact fee collection rate of $3.1 million per year.

4. The LGIST is assumed to continue indefinitely, at it's current allocation percentage to expansion of the mobility system.

as "encouraging urban sprawl". This proposed mobility fee strategy recognizes and promotes a more dense development pattern and greater reliance on non-auto modes of travel by providing its lowest fees in the Core district.)

In this fee alternative, revenues fall $6.4 million per year short of 2040 Transportation Plan goals, due to increased costs. In this scenario, growth would pay for 13.4 percent of the capital costs, and the cost per capita would be approximately $95.75/year.

Alternative 2: Make up 2040 Transportation Plan Funding Shortfall

Since the Alternative 1 fee schedule falls $6.4 million annually short of the funding needed to implement the 2040 LRTP, this second fee alternative, illustrated in Figure E-2, makes up that difference – essentially increasing mobility fee revenues from $3.1 million to $9.5 million annually. The fee rates for residential development increase 2.2-fold compared to Alternative 1, but remain slightly lower to comparable to fees in neighboring jurisdictions. The fee rates are 24.3 percent of the maximum fee rates that could be assessed. Since revenues for mobility system expansion are increased, the projection of the VMT:VMC ratio by 2044 improves slightly, from 0.73 in Alternative 1 to 0.71 in Alternative 2. In this scenario, growth would pay for 23.7 percent of the capital costs.

Alternative 3: Modify 2040 Plan Performance, Renew Sales Tax through 2044

This study provided an opportunity to reconsider the long-term mobility strategies and quality of service goals for Seminole County. This fee schedule alternative is not recommended for adoption at this time because the County's adopted transportation plan does not provide for the quality of service improvements that would be associated with the increased funding level of this scenario. However, MetroPlan Orlando is initiating an update to its transportation plan, and if the County wishes to consider improvements to quality of service, this fee alternative provides some insights into the increased mobility fees that might fund such a decision and the MetroPlan Orlando planning process could explore specific improvements to deliver the improved quality of service.

In this example, illustrated in Figure E-3, the County may decide that adding capacity in the rural district at a rate of 1.69 times the anticipated growth in travel is excessive or that a better quality of service is desired in the suburban and core districts than is provided by the respective CAR's of 0.75 and 0.59. It may decide that a more aggressive bus transit program is desired in the Core district than is provided by the current financial program. If a financial strategy that provides for a better quality of service than is provided by the current 2040 Transportation Plan is desired then, before that revenue program is adopted, the on-going transportation planning process should investigate and develop more specific infrastructure elements of such a plan.

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Figure 8-2: Alternative 2 Mobility Fee

Alternative 2: Fill Shortfall in LRTP Funding

Goals and Needed Revenues

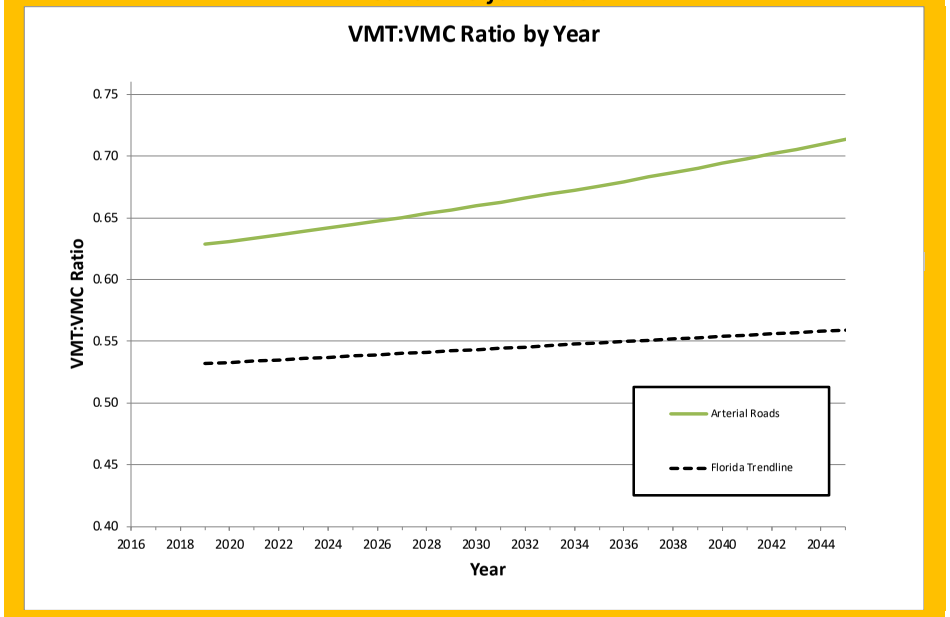
Mobility Fees

	Rural	Suburban	Core
Single-Family/du:	**$9,492**	**$3,161**	**$2,090**
Multi-Family/du:	$6,172	$1,941	$1,192
Office/ksf:	$5,003	$2,146	$1,684
Retail (>20,000 sf)/ksf:	$10,454	$4,364	$2,827
Industrial/ksf:	$2,777	$1,194	$877

Potential Revenue Sources

				Growth	Base	Total		$$/Capita/Yr
2nd LOGT:	#/% to Capital>	0	63.6%				0%	$0.00
County Gas Taxes:	# Pennies>>	0.086		$3,633	$190,312	$193,945	0%	$0.42
State/Federal Gas Tax:	# Pennies/Gal>>	10.989		$2,519,389	$22,390,087	$24,909,477	46%	$53.83
Infrastructure Sales Tax:	End/BCC Share to Cap>:	2045	32.5%	$744,320	$18,463,200	$19,207,520	36%	$41.51
Mobility Fees:	% of full fee:	24.3%		$9,501,379	$0	$9,501,379	18%	

Network Performance



Notes:

1. This analysis is based on estimates of non-Toll and non-Interstate (e.g. "surface" arterial and collector) travel and costs. It includes the capital portion of transit costs for a 277 percent growth in service, focused in the Core and Suburban areas.
2. This scenario approximates Seminole County's 2040 LRTP including its Tiers 1-3 funding, with some differences. The costs of transportation improvements are greater than those of the LRTP because they are based on actual recent experience, whereas the LRTP costs are based on FDOT "cost per mile" estimates which underestimate frequently encountered additional costs. The LRTP rate of capacity addition is represented by the CAR values of 1.69, 0.75, and 0.59 in the rural, suburban, and core areas, respectively.

3. Mobility fee rates are based on the proposed "Core/Suburbs/Rural" fee district structure, backsolved to result in balancing needed revenues.

4. The LGIST is assumed to continue indefinitely, at it's current allocation percentage to expansion of the mobility system.

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Figure 8-3: Alternative 3 Mobility Fee

Alternative 3: Adjust network performance goals, extend sales tax to 12/31/2044, increase mobility fee to balance needed revenue

Goals and Needed Revenues

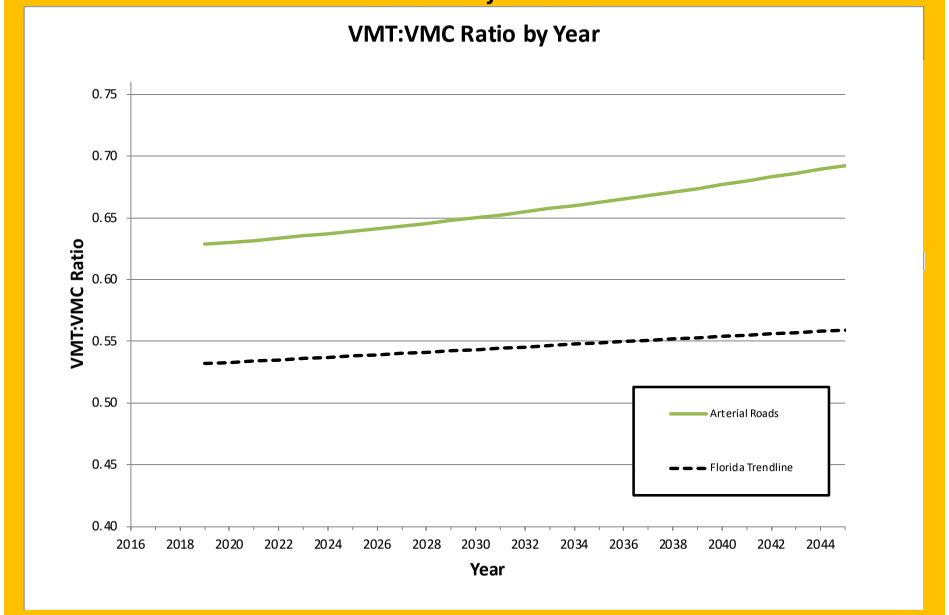
Potential Revenue Sources

				Growth	Base	Total		$$/Capita/Yr
2nd LOGT:	#/% to Capital>	0	63.6%				0%	$0.00
County Gas Taxes:	# Pennies>>	0.086		$3,633	$190,312	$193,945	0%	$0.42
State/Federal Gas Tax:	# Pennies/Gal>>	10.989		$2,519,389	$22,390,087	$24,909,477	40%	$53.83
Infrastructure Sales Tax:	End/BCC Share to Cap>:	2045	32.5%	$744,320	$18,463,200	$19,207,520	31%	$41.51
Mobility Fees:	% of full fee:	43.3%		$18,304,161	$0	$18,304,161	29%	

Mobility Fees

	Rural	Suburban	Core
Single-Family/du:	**$16,082**	**$6,841**	**$4,663**
Multi-Family/du:	$9,814	$4,194	$2,744
Office/ksf:	$7,285	$4,634	$3,819
Retail (>20,000 sf)/ksf:	$14,332	$9,819	$6,754
Industrial/ksf:	$4,144	$2,581	$1,962

Network Performance



Notes:

1. This analysis is based on estimates of non-Toll and non-Interstate (e.g. "surface" arterial and collector) travel and costs. It includes the capital portion of transit costs for a 277 percent growth in service, focused in the Core and Suburban areas.
2. This scenario alters Seminole County's 2040 County LRTP and its Tiers 1-3 revenue program. In addition to the costs of roadway being greater than those of the LRTP, the 2040 LRTP rate of capacity addtion has reduced in the rural, and increased in the suburban and core areas, resulting in better levels of service. Since quality of service delivered is better, and because more growth in travel is forecasted in the suburban and core areas, the total revenue needs are greater than in previous scenarios.

3. Mobility fee rates are based on the proposed "Core/Suburbs/Rural" fee district structure, backsolved to result in balancing needed revenues.

4. The LGIST is assumed to continue indefinitely, at it's current allocation percentage to expansion of the mobility system.

This example alternative fee schedule adjusts the quality of service goals in the rural, suburban, and core fee districts. As discussed in Section 3 of this report, the adopted 2040 Transportation Plan adds, on a county-wide average basis, 0.77 person-miles of capacity per person-mile of growth in travel. Over the long-term, this rate of funding indicates that the mobility system, on average, will be (1/0.77 – 1 =) 30 percent overloaded. Since this is an average, some locations will be less than 30 percent overloaded while other locations will be more than 30 percent overloaded. Considering that the current average level of system loading is estimated to be 0.64 county-wide, this represents a substantially more congested system than exists today – and a level of congestion for which there is no precedent in Florida. (Note, however, that Seminole County is not alone in this condition—most other Florida urban areas are in a similar situation.)

This alternative 3:

- lowers the capacity addition ratio of the rural district from 1.69 to 1.25, allowing congestion levels to increase but still maintains a good level of service,
- increases the capacity addition ratios for the suburban and core districts from 0.75 to 0.95 and from 0.59 to 0.75, respectively. These changes provide funding for additional road corridors to be developed (serving transit and bicycles as well as cars) and arterials to be widened. The long-term goal of roads in the suburban and core fee districts would be on average 105 percent full and 133% full (most roads will still be congested, but overall better quality of service will be provided than the current funding program provides),
- on a county-wide average basis (e.g. including rural, suburb, and core) results in a long-term condition of (1/0.893 – 1 =) 12 percent overloaded, and
- assumes the LGIST will continue to be renewed through 2044.

These higher capacity addition ratios result in the need for an increase in needed annual revenue rate from $53.8 to $62.6 million per year (an increase of $8.8 million per year in 2020), continuing through 2044. Mobility fee rates would be charged at 43.3 percent of the potential maximum fee. Growth would pay an estimated 34.5 percent of the capital costs, and since revenues for mobility system expansion are increased, the projection of the VMT:VMC ratio by 2044 improves from 0.73 in Alternative 1 to 0.69 in Alternative 3. Note, also, that by accepting greater congestion in the rural district, and pursuing less congestion in the suburban and core districts reduces the differential between the rural, suburban, and core fee rates.

Alternative 4: Lapse of LGIST in 2024

This alternative, illustrated in Figure E-4, was developed for informational purposes, to provide insight to the mobility fee rates which might be needed to replace capital revenues lost if the

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Figure 8-4: Alternative 4 Mobility Fee

Alternative 4: Sales Tax ends 12/31/2024, increase mobility fee to balance needed revenue (replaces capital portion of LGIST only)

Goals and Needed Revenues

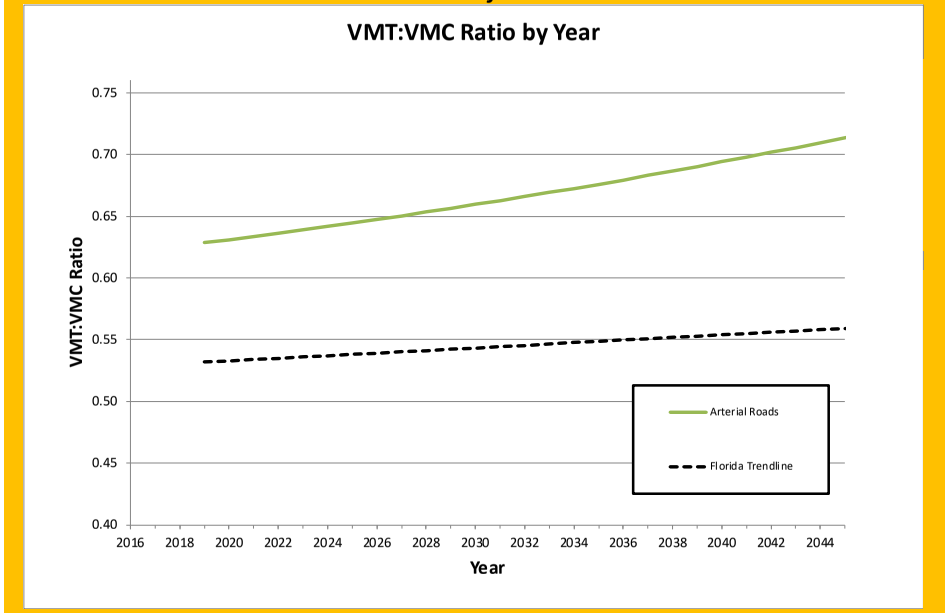
Potential Revenue Sources

				Growth	Base	Total		$$/Capita/Yr
2nd LOGT:	#/% to Capital>	0	63.6%				0%	$0.00
County Gas Taxes:	# Pennies>>	0.086		$3,633	$190,312	$193,945	0%	$0.42
State/Federal Gas Tax:	# Pennies/Gal>>	10.989		$2,519,389	$22,390,087	$24,909,477	46%	$53.83
Infrastructure Sales Tax:	End/BCC Share to Cap>:	2024	32.5%	$57,582	$3,818,555	$3,876,137	7%	$8.38
Mobility Fees:	% of full fee:	60.0%		$24,832,761	$0	$24,832,761	46%	
		Totals:		$27,413,365	$26,398,954	$53,812,320	100%	$62.62
		Share of Revenues:		50.9%	49.1%			
					Goal Surplus/Shortfall:	$0		
			Incentives Budget Check:	Need:	$0	Met		

Mobility Fees

	Rural	Suburban	Core
Single-Family/du:	**$24,318**	**$8,368**	**$5,647**
Multi-Family/du:	$15,781	$5,141	$3,245
Office/ksf:	$12,768	$5,686	$4,568
Retail (>20,000 sf)/ksf:	$26,696	$11,619	$7,827
Industrial/ksf:	$7,089	$3,161	$2,372

Network Performance



Notes:

1. This analysis is based on estimates of non-Toll and non-Interstate (e.g. "surface" arterial and collector) travel and costs. It includes the capital portion of transit costs for a 277 percent growth in service, focused in the Core and Suburban areas.
2. This scenario approximates Seminole County's 2040 LRTP including its Tiers 1-3 funding, with some differences. The costs of transportation improvements are greater than those of the LRTP because they are based on actual recent experience, whereas the LRTP costs are based on FDOT "cost per mile" estimates which underestimate frequently encountered additional costs. The LRTP rate of capacity addition is represented by the CAR values of 1.69, 0.75, and 0.59 in the rural, suburban, and core areas, respectively.

3. Mobility fee rates are based on the proposed "Core/Suburbs/Rural" fee district structure, backsolved to result in balancing needed revenues.

4. The sales tax revenue program is assumed to expire at the end of 2024. The actual fee collections in 2020, 2021, 2022, 2023, and 2024 will be slightly greater than the amount reported above, since the above number represents the sales tax revenues collected in 2020-2024, distributed/annualized from 2020 to 2044.

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LGIST, scheduled to expire in 2024, is not renewed, or if the capital portion of LGIST revenues are allocated to non-capital activities. The quality of service provisions of this alternative are those of the current adopted 2040 transportation plan and associated annual funding level of $53.8 million. In this alternative, fees are assessed at 60.0 percent of the maximum potential fee rate. While this fee alternative is a substantial increase from current fee levels, the rates in the suburban and core districts remain comparable to rates charged in Osceola County, but the rural district rate is higher. All rates are higher than Orange County is currently assessing. (Note that a fee study is in progress in Orange County.). In this alternative, the proportion of capital costs funded by new development would increase to 50.9 percent.

Alternative 5: Assumes LGIST expires in 2034

This alternative, illustrated in Figure E-5, is effectively an intermediate alternative between Alternative 2 and Alternative 4. It assumes the LGIST is renewed for only one ten-year extension, expiring in 2034, with the same 44 percent allocation of the County portion to mobility system expansion. To match adopted 2040 Transportation Plan revenue needs, fees are assessed at 42.6 percent of the maximum potential fee rate – almost four times the Alternative 1 fee rates. The fee rates in the core and suburban districts would remain lower (Osceola) or on a par with (Orange) fees charged in neighboring counties, but the rural fees would still be greater than even Osceola County's. Growth would pay an estimated 37.1 percent of the capital costs.

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Figure 8-5: Alternative 5 Mobility Fee

Alternative 5: Sales Tax ends 12/31/2034, increase mobility fee to balance needed revenue (replaces capital portion of LGIST only).

Goals and Needed Revenues

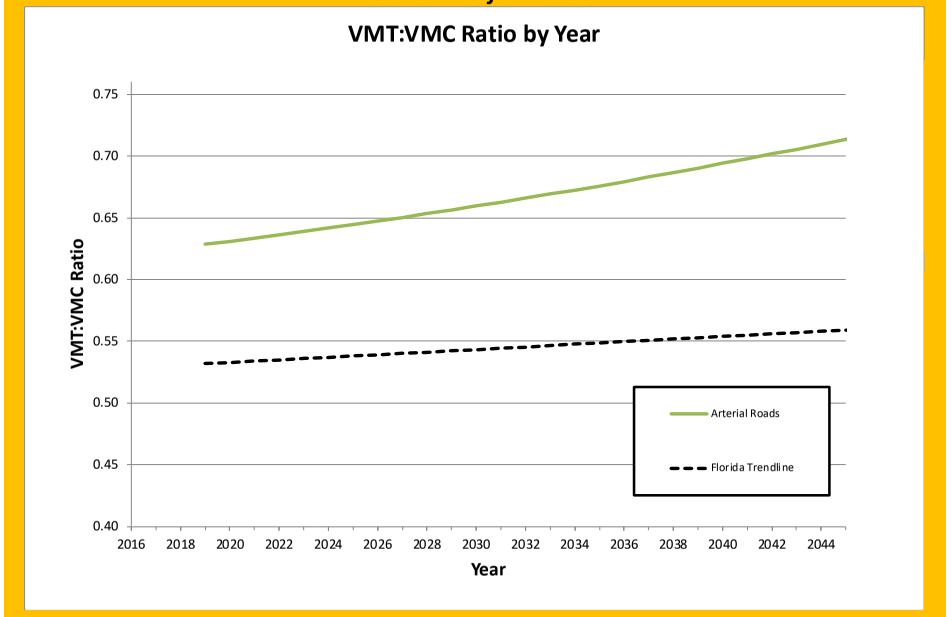
Potential Revenue Sources

				Growth	Base	Total		$$/Capita/Yr
2nd LOGT:	#/% to Capital>	0	63.6%				0%	$0.00
County Gas Taxes:	# Pennies>>	0.086		$3,633	$190,312	$193,945	0%	$0.42
State/Federal Gas Tax:	# Pennies/Gal>>	10.989		$2,519,389	$22,390,087	$24,909,477	46%	$53.83
Infrastructure Sales Tax:	End/BCC Share to Cap>:	2034	32.5%	$308,583	$11,264,673	$11,573,256	22%	$25.01
Mobility Fees:	% of full fee:	42.6%		$17,135,642	$0	$17,135,642	32%	

Mobility Fees

	Rural	Suburban	Core
Single-Family/du:	**$16,940**	**$5,739**	**$3,836**
Multi-Family/du:	$11,004	$3,526	$2,197
Office/ksf:	$8,910	$3,898	$3,098
Retail (>20,000 sf)/ksf:	$18,625	$7,948	$5,258
Industrial/ksf:	$4,946	$2,168	$1,611

Network Performance



Notes:

1. This analysis is based on estimates of non-Toll and non-Interstate (e.g. "surface" arterial and collector) travel and costs. It includes the capital portion of transit costs for a 277 percent growth in service, focused in the Core and Suburban areas.
2. This scenario approximates Seminole County's 2040 LRTP including its Tiers 1-3 funding, with some differences. The costs of transportation improvements are greater than those of the LRTP because they are based on actual recent experience, whereas the LRTP costs are based on FDOT "cost per mile" estimates which underestimate frequently encountered additional costs. The LRTP rate of capacity addition is represented by the CAR values of 1.69, 0.75, and 0.59 in the rural, suburban, and core areas, respectively.

3. Mobility fee rates are based on the proposed "Core/Suburbs/Rural" fee district structure, backsolved to result in balancing needed revenues.

4. The sales tax revenue program is set to expire at the end of 2034. The actual collections in 2020, 2021, 2022, 2023, and 2024 will actually be greater than the amount reported above, since the above number represents the sales tax revenues collected in 2020-2024, distributed/annualized from 2020 to 2044.

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Appendix F

Full Fee Schedules

Appendix F
2020 Mobility Fee Study
Rural District Road Fee Schedule - Expanded Use Schedule

Factor to convert VMT to PMT: 1.40
Interstate/Toll Deduction: 8.3%
Fleet MPG: 22
Effective days per year: 326.9

Sales Tax Equivalent Pennies: $0.1302
State/Fed Gas Tax Credit (pennies/gallon): $0.1099
County Gas Tax Credit (pennies/gallon): $0.0009

Across-the-Board Discount: 78.8%

ITE Land Use Code	Land Use	Unit	Trip Rate (veh trips)	% New Trips	Standard Trip Length	TL Factor Source	TL Factor	Chargeable Trip Length (mi)	Trip Length for revenue (mi)	Gross Assessable pmt/day	PMT After Toll / I-4 Reduction	Needed PMC	Weighted Cost/ PMC	Total Impact Cost	State/Fed Gas Tax Credit	County Gas Tax Credit	Sales Tax Credit	PV Sub-Total Countywide self-credits	Fee before A-T-B Reductions	Fee after A-T-B discount	Other Revenue Recognition	Net Impact Fee	Current (1995) Road Impact Fee Rates: North	East	South/ Central	West	Dominant reason for fee change
210	Single Family (<=1,500 s.f.)	D.U.	7.65	100%	6.62	SFDU	1.76	11.65	12.15	62.4	57.19	66.62	$602	$34,413	$1,278	$10	$1,515	$2,802	$31,610	$6,710	$39,326	$6,710	$705	$705	$1,185	$705	
210	Single Family (1,501 to 2,500 s.f.)	D.U.	9.44	100%	6.62	SFDU	1.76	11.65	12.15	77.0	70.60	82.25	$602	$42,485	$1,578	$12	$1,870	$3,460	$39,025	$8,284	$48,550	$8,284	$705	$705	$1,185	$705	
210	Single Family (>2,500 s.f.)	D.U.	12.65	100%	6.62	SFDU	1.76	11.65	12.15	103.2	94.61	110.22	$602	$56,930	$2,114	$16	$2,506	$4,636	$52,294	$11,101	$65,057	$11,101	$705	$705	$1,185	$705	
n/a	Accessory Dwelling Unit	D.U.	4.32	100%	5.18	MFDU	1.76	9.12	9.62	27.6	25.27	32.40	$642	$16,226	$571	$4	$677	$1,253	$14,973	$3,178	$18,628	$3,178	new	new	new	new	
240	Mobile Home	D.U.	4.17	100%	4.76	SFDU	1.76	8.38	8.88	24.5	22.42	29.79	$657	$14,737	$509	$4	$603	$1,117	$13,621	$2,891	$16,945	$2,891	$392	$392	$659	$392	Lower trip rate
310	Hotel	Room	8.36	71%	6.35	TRDU	1.76	11.18	11.68	46.4	42.58	50.51	$609	$25,942	$953	$7	$1,130	$2,090	$23,852	$5,063	$29,674	$5,063	$493	$493	$829	$493	
320	Motel	Room	3.35	72%	5.88	TRDU	1.76	10.35	10.85	17.4	15.96	19.72	$627	$10,002	$358	$3	$425	$786	$9,216	$1,956	$11,466	$1,956	$492	$492	$827	$492	Lower trip rate
420	Marina	Berth	2.41	100%	6.32	CE	1.08	6.83	7.33	11.5	10.56	14.76	$680	$7,180	$243	$2	$288	$532	$6,647	$1,411	$8,270	$1,411	$120	$120	$202	$120	Higher trip rate
430	Golf Course	Holes	30.38	90%	4.89	CE	1.08	5.28	5.78	101.1	92.69	136.03	$703	$65,138	$2,174	$17	$2,577	$4,767	$60,371	$12,815	$75,106	$12,815	$2,270	$2,270	$3,817	$2,270	*Assumes 8.5 acres per hole
492/493	Fitness Center	1,000 sf	39.34	62%	4.16	CE	1.08	4.49	4.99	76.6	70.25	106.36	$718	$50,437	$1,673	$13	$1,983	$3,669	$46,769	$9,928	$58,184	$9,928	$1,240	$1,240	$2,086	$1,240	Formerly "Racquet Club"
610	Hospital	1,000 sf	10.72	80%	6.17	SE	1.07	6.60	7.10	39.5	36.23	50.65	$680	$24,635	$835	$7	$990	$1,831	$22,804	$4,841	$28,370	$4,841	$1,110	$1,110	$1,867	$1,110	Lower trip rate
251/252	Independent Senior Living	D.U.	4.00	100%	5.16	MFDU	1.76	9.08	9.58	25.4	23.32	29.90	$642	$14,970	$527	$4	$625	$1,156	$13,814	$2,932	$17,186	$2,932	new	new	new	new	
620	Nursing Home	bed	3.06	89%	2.71	SE	1.07	2.90	3.40	5.5	5.08	8.04	$740	$3,758	$128	$1	$151	$280	$3,478	$738	$4,327	$738	$145	$145	$244	$145	Higher trip rate
560	Church (Non-Sanctuary Space Only)	1,000 sf	6.95	90%	3.53	SE	1.07	3.78	4.28	16.5	15.17	23.31	$726	$11,003	$368	$3	$436	$807	$10,196	$2,164	$12,685	$2,164	$448	$448	$753	$448	Trip length effect
520/522/530	Private School	student	2.02	85%	3.31	SE	1.07	3.54	4.04	4.2	3.90	5.99	$726	$2,827	$95	$1	$113	$209	$2,618	$556	$3,258	$556	$691	$691	$1,163	$691	*assumes 160 sf/student
565	Day Care (Child or Adult)	student	4.09	62%	1.97	CE	1.08	2.13	2.63	3.8	3.46	5.56	$747	$2,585	$92	$1	$109	$201	$2,384	$506	$2,966	$506	$519	$519	$872	$519	*assumes 120 sf/student
710	Office	1,000 sf	9.74	92%	5.19	SE	1.07	5.55	6.05	34.8	31.94	46.14	$695	$22,205	$746	$6	$884	$1,636	$20,569	$4,366	$25,590	$4,366	$1,139-$1,545	$1,139-$1,545	$1,916-$2,598	$1,139-$1,545	Trip rate and length, average reported
720	Medical Office	1,000 sf	34.80	86%	5.81	SE	1.07	6.22	6.72	130.2	119.43	169.74	$688	$82,115	$2,765	$22	$3,277	$6,063	$76,052	$16,144	$94,615	$16,144	$2,540	$2,540	$4,272	$2,540	Trip length effect
820	Retail < 20K Sq. Ft.	1,000 sf	100.62	38%	1.73	CE	1.08	1.87	2.37	50.4	46.25	75.24	$754	$34,853	$1,257	$10	$1,489	$2,756	$32,097	$6,813	$39,931	$6,813	$3,421	$3,421	$5,735	$3,421	Trip length effect
820	Retail (large >=20 ksf, Shop Ctr.)	1,000 sf	48.16	68%	2.78	CE	1.08	3.00	3.50	69.2	63.42	98.91	$733	$46,458	$1,585	$12	$1,879	$3,476	$42,982	$9,124	$53,473	$9,124	$1,821	$1,821	$3,062	$1,821	Trip length effect
Various	Convenience Retail	1,000 sf	670.00	27%	1.67	CE	1.08	1.80	2.30	223.7	205.14	333.74	$754	$154,585	$5,616	$44	$6,657	$12,317	$142,269	$30,200	$176,993	$30,200	$7,250	$7,250	$12,193	$7,250	Trip length effect
936/937	Coffee/Donut Shop	1,000 sf	792.21	15%	0.96	CE	1.08	1.04	1.54	86.2	79.08	130.43	$761	$60,147	$2,512	$20	$2,977	$5,508	$54,639	$11,599	$67,976	$11,599	new	new	new	new	
931/932	Restaurant - Sit Down	1,000 sf	98.66	76%	3.23	CE	1.08	3.49	3.99	183.1	167.90	261.85	$733	$122,993	$4,113	$32	$4,875	$9,020	$113,973	$24,194	$141,791	$24,194	$7,250	$7,250	$13,069	$7,250	Trip length effect
933/934	Restaurant - Fast Food	1,000 sf	462.29	50%	0.96	CE	1.08	1.04	1.54	167.8	153.83	253.71	$761	$116,996	$4,885	$38	$5,790	$10,714	$106,282	$22,561	$132,223	$22,561	$9,426	$9,426	$15,852	$9,426	Trip length effect
944	Gasoline Station	Fuel Pos.	172.01	50%	1.82	SE	1.07	1.95	2.45	117.2	107.51	174.90	$754	$81,013	$2,895	$23	$3,431	$6,348	$74,664	$15,849	$92,888	$15,849	$3,210	$3,210	$5,398	$3,210	*2 fueling sta/dispenser? Trip length
850	Supermarket	1,000 sf	106.78	53%	2.00	CE	1.08	2.16	2.66	85.6	78.47	125.89	$747	$58,579	$2,070	$16	$2,454	$4,540	$54,039	$11,471	$67,228	$11,471	$3,449	$3,449	$5,800	$3,449	Trip length effect
848	Garage / Auto Repair	1,000 sf	25.82	66%	3.24	SE	1.07	3.47	3.97	41.4	37.92	59.14	$733	$27,780	$930	$7	$1,102	$2,039	$25,741	$5,464	$32,024	$5,464	$1,873	$1,873	$3,150	$1,873	Trip length effect
912	Bank/Savings/Credit Union	1,000 sf	101.30	44%	2.02	SE	1.07	2.16	2.66	67.4	61.84	99.22	$747	$46,166	$1,631	$13	$1,934	$3,578	$42,588	$9,040	$52,983	$9,040	$4,234/$5,756	$4,234/$5,756	$7,121/$9,680	$4,234/$5,756	Higher trip rate
110/140	Manufacturing	1,000 sf	4.445	92%	6.06	IE	1.14	6.91	7.41	19.8	18.13	25.35	$680	$12,331	$417	$3	$494	$914	$11,417	$2,424	$14,204	$2,424	$524	$524	$881	$524	Lower trip rate
150/154/157	Passive Warehouse (Storage warehouse)	1,000 sf	1.74	92%	6.06	IE	1.14	6.91	7.41	7.7	7.10	9.92	$680	$4,827	$163	$1	$193	$358	$4,469	$949	$5,560	$949	$398	$398	$669	$398	Lower trip rate
155/156	Active Warehouse (Parcel hub/fulfilment center)	1,000 sf	7.97	92%	6.06	IE	1.14	6.91	7.41	35.5	32.52	45.46	$680	$22,110	$747	$6	$885	$1,638	$20,471	$4,346	$25,468	$4,346	$398	$398	$669	$398	new?/higher trip rate
151	Mini-Warehouses	1,000 sf	1.51	92%	4.06	CE	1.08	4.39	4.89	4.3	3.91	5.92	$718	$2,810	$93	$1	$111	$205	$2,605	$553	$3,240	$553	$182	$182	$306	$182	Lower trip rate

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Source: W.E. Oliver, P.E., LLC

Appendix F
2020 Mobility Fee Study
Suburb District Road Fee Schedule - Expanded Use Schedule

Factor to convert VMT to PMT:	1.40	Sales Tax Equivalent Pennies:	$0.1302	Across-the-Board Discount:	78.8%
Interstate/Toll Deduction:	30.2%	State/Fed Gas Tax Credit (pennies/gallon):	$0.1099		
Fleet MPG:	22	County Gas Tax Credit (pennies/gallon):	$0.0009	33.7461 1.4 47.24456	
Effective days per year:	326.9			45.1114 1.33679	

ITE Land Use Code	Land Use	Unit	Trip Rate (veh trips)	% New Trips	Standard Trip Length	TL Factor Source	TL Factor	Chargeable Trip Length (mi)	Trip Length for revenue (mi)	Gross Assessable pmt/day	PMT After Toll / I-4 Reduction	Needed PMC	Weighted Cost/ PMC	Total Impact Cost	State/Fed Gas Tax Credit	County Gas Tax Credit	Sales Tax Credit	PV Sub-Total Countywide self-credits	Fee before A-T-B Reductions	Fee after ATB discount	Other Revenue Recognition	Net Impact Fee	Current (1995) Road Impact Fee Rates: North	East	South/ Central	West	Dominant reason for fee change
210	Single Family (<=1,500 s.f.)	D.U.	7.65	100%	6.62	SFDU	1.08	7.15	7.65	38.3	26.71	20.75	$460	$12,290	$804	$6	$953	$1,764	$10,526	$2,234	$13,096	$2,234	$705	$705	$1,185	$705	
210	Single Family (1,501 to 2,500 s.f.)	D.U.	9.44	100%	6.62	SFDU	1.08	7.15	7.65	47.2	32.98	25.62	$460	$15,173	$993	$8	$1,177	$2,178	$12,995	$2,759	$16,167	$2,759	$705	$705	$1,185	$705	
210	Single Family (>2,500 s.f.)	D.U.	12.65	100%	6.62	SFDU	1.08	7.15	7.65	63.3	44.19	34.33	$460	$20,332	$1,331	$10	$1,577	$2,918	$17,414	$3,697	$21,664	$3,697	$705	$705	$1,185	$705	
n/a	Accessory Dwelling Unit	D.U.	4.32	100%	5.18	MFDU	1.08	5.59	6.09	16.9	11.81	9.29	$466	$5,503	$362	$3	$429	$794	$4,709	$1,000	$5,858	$1,000	new	new	new	new	
220	Multi-Family (SHIP Low Income)	D.U.	4.03	100%	5.18	MFDU	1.08	5.59	6.09	15.8	11.00	8.66	$466	$5,130	$337	$3	$400	$740	$4,390	$932	$5,461	$932	$471	$471	$792	$471	
220	Multi-Family (1-2 Floor)	D.U.	7.32	100%	5.18	MFDU	1.08	5.59	6.09	28.7	20.01	15.74	$466	$9,327	$614	$5	$727	$1,345	$7,981	$1,694	$9,930	$1,694	$471	$471	$792	$471	
221	Multi-Family (3+ Floor)[1]	D.U.	5.44	100%	5.18	MFDU	1.08	5.59	6.09	21.3	14.87	11.70	$466	$6,932	$456	$4	$540	$1,000	$5,932	$1,259	$7,379	$1,259	$394	$394	$662	$394	
240	Mobile Home	D.U.	4.17	100%	4.76	SFDU	1.08	5.14	5.64	15.0	10.47	8.27	$468	$4,904	$323	$3	$383	$709	$4,194	$890	$5,218	$890	$392	$392	$659	$392	Lower trip rate
310	Hotel	Room	8.36	71%	6.35	TRDU	1.08	6.86	7.36	28.5	19.89	15.52	$462	$9,191	$601	$5	$712	$1,317	$7,874	$1,671	$9,796	$1,671	$493	$493	$829	$493	
320	Motel	Room	3.35	72%	5.88	TRDU	1.08	6.35	6.85	10.7	7.45	5.84	$464	$3,459	$226	$2	$268	$496	$2,963	$629	$3,686	$629	$492	$492	$827	$492	Lower trip rate
420	Marina	Berth	2.41	100%	6.32	CE	1.00	6.32	6.82	10.7	7.44	5.83	$464	$3,454	$226	$2	$268	$496	$2,958	$628	$3,680	$628	$120	$120	$202	$120	Higher trip rate
430	Golf Course	Holes	30.38	90%	4.89	CE	1.00	4.89	5.39	93.6	65.33	51.35	$469	$30,663	$2,027	$16	$2,402	$4,445	$26,218	$5,565	$32,618	$5,565	$2,270	$2,270	$3,817	$2,270	*Assumes 8.5 acres per hole!
492/493	Fitness Center	1,000 sf	39.34	62%	4.16	CE	1.00	4.16	4.66	70.9	49.51	38.73	$471	$23,301	$1,561	$12	$1,851	$3,424	$19,877	$4,219	$24,729	$4,219	$1,240	$1,240	$2,086	$1,240	Formerly "Racquet Club"
610	Hospital	1,000 sf	10.72	80%	6.17	SE	0.97	5.98	6.48	35.8	25.00	19.66	$466	$11,654	$762	$6	$904	$1,672	$9,981	$2,119	$12,418	$2,119	$1,110	$1,110	$1,867	$1,110	Lower trip rate
251/252	Independent Senior Living	D.U.	4.00	100%	5.16	MFDU	1.08	5.57	6.07	15.6	10.89	8.57	$466	$5,077	$334	$3	$396	$733	$4,344	$922	$5,405	$922	new	new	new	new	
620	Nursing Home	bed	3.06	89%	2.71	SE	0.97	2.63	3.13	5.0	3.51	2.70	$474	$1,663	$118	$1	$139	$258	$1,405	$298	$1,748	$298	$145	$145	$244	$145	Higher trip rate
560	Church (Non-Sanctuary Space Only)	1,000 sf	6.95	90%	3.53	SE	0.97	3.42	3.92	15.0	10.46	8.11	$473	$4,950	$338	$3	$400	$740	$4,210	$894	$5,238	$894	$448	$448	$753	$448	Trip length effect
520/522/530	Private School	student	2.02	85%	3.31	SE	0.97	3.21	3.71	3.9	2.69	2.08	$473	$1,272	$87	$1	$104	$192	$1,080	$229	$1,344	$229	$691	$691	$1,163	$691	*assumes 160 sf/student
565	Day Care (Child or Adult)	student	4.09	62%	1.97	CE	1.00	1.97	2.47	3.5	2.44	1.86	$477	$1,164	$86	$1	$102	$189	$975	$207	$1,213	$207	$519	$519	$872	$519	*assumes 120 sf/student
710	Office	1,000 sf	9.74	92%	5.19	SE	0.97	5.03	5.53	31.6	22.04	17.41	$468	$10,319	$682	$5	$808	$1,496	$8,823	$1,873	$10,977	$1,873	$1,139-$1,545	$1,139-$1,545	$1,916-$2,598	$1,139-$1,545	Trip rate and length, average reported
720	Medical Office	1,000 sf	34.80	86%	5.81	SE	0.97	5.64	6.14	118.1	82.41	64.82	$466	$38,415	$2,525	$20	$2,993	$5,538	$32,877	$6,979	$40,901	$6,979	$2,540	$2,540	$4,272	$2,540	Trip length effect
820	Retail < 20K Sq. Ft.	1,000 sf	100.62	38%	1.73	CE	1.00	1.73	2.23	46.7	32.60	24.89	$477	$15,540	$1,183	$9	$1,402	$2,595	$12,945	$2,748	$16,105	$2,748	$3,421	$3,421	$5,735	$3,421	Trip length effect
820	Retail (large >=20 ksf, Shop Ctr.)	1,000 sf	48.16	68%	2.78	CE	1.00	2.78	3.28	64.0	44.70	34.46	$474	$21,199	$1,484	$12	$1,759	$3,255	$17,944	$3,809	$22,324	$3,809	$1,821	$1,821	$3,062	$1,821	Trip length effect
Various	Convenience Retail	1,000 sf	670.00	27%	1.67	CE	1.00	1.67	2.17	207.1	144.58	110.38	$477	$68,927	$5,291	$41	$6,271	$11,603	$57,325	$12,169	$71,316	$12,169	$7,250	$7,250	$12,193	$7,250	Trip length effect
936/937	Coffee/Donut Shop	1,000 sf	792.21	15%	0.96	CE	1.00	0.96	1.46	79.9	55.74	42.13	$479	$26,708	$2,386	$19	$2,828	$5,233	$21,476	$4,559	$26,717	$4,559	new	new	new	new	
931/932	Restaurant - Sit Down	1,000 sf	98.66	76%	3.23	CE	1.00	3.23	3.73	169.5	118.33	91.68	$473	$55,978	$3,846	$30	$4,559	$8,435	$47,543	$10,092	$59,147	$10,092	$7,250	$7,250	$13,069	$7,250	Trip length effect
933/934	Restaurant - Fast Food	1,000 sf	462.29	50%	0.96	CE	1.00	0.96	1.46	155.3	108.42	81.96	$479	$51,952	$4,641	$36	$5,501	$10,178	$41,773	$8,867	$51,969	$8,867	$9,426	$9,426	$15,852	$9,426	Trip length effect
944	Gasoline Station	Fuel Pos.	172.01	50%	1.82	SE	0.97	1.77	2.27	106.3	74.19	56.64	$477	$35,366	$2,680	$21	$3,176	$5,876	$29,490	$6,260	$36,688	$6,260	$3,210	$3,210	$5,398	$3,210	*2 fueling sta/dispenser? Trip length
850	Supermarket	1,000 sf	106.78	53%	2.00	CE	1.00	2.00	2.50	79.2	55.30	42.43	$476	$26,297	$1,946	$15	$2,306	$4,267	$22,029	$4,676	$27,406	$4,676	$3,449	$3,449	$5,800	$3,449	Trip length effect
848	Garage / Auto Repair	1,000 sf	25.82	66%	3.24	SE	0.97	3.14	3.64	37.5	26.17	20.27	$473	$12,379	$854	$7	$1,012	$1,872	$10,507	$2,230	$13,071	$2,230	$1,873	$1,873	$3,150	$1,873	Trip length effect
912	Bank/Savings/Credit Union	1,000 sf	101.30	44%	2.02	SE	0.97	1.96	2.46	61.1	42.67	32.58	$477	$20,343	$1,508	$12	$1,787	$3,306	$17,036	$3,616	$21,195	$3,616	$4,234/$5,756	$4,234/$5,756	$7,121/$9,680	$4,234/$5,756	Higher trip rate
110/140	Manufacturing	1,000 sf	4.445	92%	6.06	IE	1.02	6.18	6.68	17.7	12.35	9.67	$464	$5,732	$376	$3	$445	$824	$4,908	$1,042	$6,106	$1,042	$524	$524	$881	$524	Lower trip rate
150/154/157	Passive Warehouse (Storage warehouse)	1,000 sf	1.74	92%	6.06	IE	1.02	6.18	6.68	6.9	4.83	3.79	$464	$2,244	$147	$1	$174	$323	$1,921	$408	$2,390	$408	$398	$398	$669	$398	Lower trip rate
155/156	Active Warehouse (Parcel hub/fulfilment center)	1,000 sf	7.97	92%	6.06	IE	1.02	6.18	6.68	31.7	22.14	17.35	$464	$10,278	$674	$5	$799	$1,478	$8,801	$1,868	$10,949	$1,868	$398	$398	$669	$398	new?/higher trip rate
151	Mini-Warehouses	1,000 sf	1.51	92%	4.06	CE	1.00	4.06	4.56	4.0	2.76	2.16	$471	$1,298	$87	$1	$103	$191	$1,107	$235	$1,377	$235	$182	$182	$306	$182	Lower trip rate

Note: 1. This rate is applicable to *all* dwelling units in buildings of three or more floors, including units on floors 1 and 2.

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Source: W.E. Oliver, P.E., LLC

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Traffic Engineering
Transportation Planning

Appendix F
2020 Mobility Fee Study
Core District Road Fee Schedule - Expanded Use Schedule

Factor to convert VMT to PMT: 1.40
Interstate/Toll Deduction: 38.5%
Fleet MPG: 22
Effective days per year: 326.9

Sales Tax Equivalent Pennies: $0.1302
State/Fed Gas Tax Credit (pennies/gallon): $0.1099
County Gas Tax Credit (pennies/gallon): $0.0009

Across-the-Board Discount: 78.8%

ITE Land Use Code	Land Use	Unit	Trip Rate (veh trips)	% New Trips	Standard Trip Length	TL Factor Source	TL Factor	Chargeable Trip Length (mi)	Trip Length for revenue (mi)	Gross Assessable pmt/day	PMT After Toll / I-4 Reduction	Needed PMC	Weighted Cost/ PMC	Total Impact Cost	State/Fed Gas Tax Credit	County Gas Tax Credit	Sales Tax Credit	PV Sub-Total Countywide self-credits	Fee before A-T-B Reductions	Fee after ATB discount	Other Revenue Recognition	Net Impact Fee	Current (1995) Road Impact Fee Rates: North	East	South/ Central	West	Dominant reason for fee change
210	Single Family (<=1,500 s.f.)	D.U.	7.65	100%	6.62	SFDU	0.92	6.09	6.59	32.6	20.05	14.27	$423	$8,479	$693	$5	$821	$1,520	$6,959	$1,477	$8,658	$1,477	$705	$705	$1,185	$705	
210	Single Family (1,501 to 2,500 s.f.)	D.U.	9.44	100%	6.62	SFDU	0.92	6.09	6.59	40.2	24.75	17.62	$423	$10,468	$856	$7	$1,014	$1,876	$8,592	$1,824	$10,689	$1,824	$705	$705	$1,185	$705	
210	Single Family (>2,500 s.f.)	D.U.	12.65	100%	6.62	SFDU	0.92	6.09	6.59	53.9	33.17	23.61	$423	$14,027	$1,147	$9	$1,359	$2,514	$11,513	$2,444	$14,323	$2,444	$705	$705	$1,185	$705	
n/a	Accessory Dwelling Unit	D.U.	4.32	100%	5.18	MFDU	0.92	4.77	5.27	14.4	8.86	5.93	$404	$3,577	$313	$2	$371	$686	$2,891	$614	$3,597	$614	new	new	new	new	
220	Multi-Family (SHIP Low Income)	D.U.	4.03	100%	5.18	MFDU	0.92	4.77	5.27	13.4	8.26	5.53	$404	$3,334	$292	$2	$346	$639	$2,695	$572	$3,353	$572	$471	$471	$792	$471	
220	Multi-Family (1-2 Floor)	D.U.	7.32	100%	5.18	MFDU	0.92	4.77	5.27	24.4	15.02	10.05	$404	$6,063	$530	$4	$628	$1,163	$4,900	$1,040	$6,096	$1,040	$471	$471	$792	$471	
221	Multi-Family (3+ Floor)[1]	D.U.	5.44	100%	5.18	MFDU	0.92	4.77	5.27	18.1	11.16	7.47	$404	$4,506	$394	$3	$467	$864	$3,642	$773	$4,531	$773	$394	$394	$662	$394	
240	Mobile Home	D.U.	4.17	100%	4.76	SFDU	0.92	4.38	4.88	12.8	7.86	5.11	$395	$3,106	$280	$2	$332	$614	$2,492	$529	$3,101	$529	$392	$392	$659	$392	Lower trip rate
310	Hotel	Room	8.36	71%	6.35	TRDU	0.92	5.84	6.34	24.3	14.93	10.57	$421	$6,284	$518	$4	$614	$1,135	$5,148	$1,093	$6,405	$1,093	$493	$493	$829	$493	
320	Motel	Room	3.35	72%	5.88	TRDU	0.92	5.41	5.91	9.1	5.59	3.85	$412	$2,307	$195	$2	$231	$428	$1,879	$399	$2,337	$399	$492	$492	$827	$492	Lower trip rate
420	Marina	Berth	2.41	100%	6.32	CE	1.00	6.32	6.82	10.7	6.56	4.67	$423	$2,773	$226	$2	$268	$496	$2,278	$483	$2,833	$483	$120	$120	$202	$120	Higher trip rate
430	Golf Course	Holes	30.38	90%	4.89	CE	1.00	4.89	5.39	93.6	57.56	38.53	$404	$23,237	$2,027	$16	$2,402	$4,445	$18,792	$3,989	$23,379	$3,989	$2,270	$2,270	$3,817	$2,270	*Assumes 8.5 acres per hole!
492/493	Fitness Center	1,000 sf	39.34	62%	4.16	CE	1.00	4.16	4.66	70.9	43.63	28.36	$395	$17,236	$1,561	$12	$1,851	$3,424	$13,812	$2,932	$17,183	$2,932	$1,240	$1,240	$2,086	$1,240	Formerly "Racquet Club"
610	Hospital	1,000 sf	10.72	80%	6.17	SE	1.03	6.36	6.86	38.0	23.39	16.65	$423	$9,892	$806	$6	$955	$1,768	$8,125	$1,725	$10,108	$1,725	$1,110	$1,110	$1,867	$1,110	Lower trip rate
251/252	Independent Senior Living	D.U.	4.00	100%	5.16	MFDU	0.92	4.75	5.25	13.3	8.17	5.47	$404	$3,300	$289	$2	$342	$633	$2,667	$566	$3,318	$566	new	new	new	new	
620	Nursing Home	bed	3.06	89%	2.71	SE	1.03	2.79	3.29	5.3	3.28	2.03	$378	$1,239	$124	$1	$147	$271	$968	$206	$1,205	$206	$145	$145	$244	$145	Higher trip rate
560	Church (Non-Sanctuary Space Only)	1,000 sf	6.95	90%	3.53	SE	1.03	3.64	4.14	15.9	9.79	6.18	$386	$3,784	$356	$3	$422	$780	$3,003	$638	$3,737	$638	$448	$448	$753	$448	Trip length effect
520/522/530	Private School	student	2.02	85%	3.31	SE	1.03	3.41	3.91	4.1	2.52	1.57	$382	$961	$92	$1	$109	$202	$759	$161	$945	$161	$691	$691	$1,163	$691	*assumes 160 sf/student
565	Day Care (Child or Adult)	student	4.09	62%	1.97	CE	1.00	1.97	2.47	3.5	2.15	1.31	$369	$794	$86	$1	$102	$189	$605	$128	$752	$128	$519	$519	$872	$519	*assumes 120 sf/student
710	Office	1,000 sf	9.74	92%	5.19	SE	1.03	5.35	5.85	33.5	20.62	14.20	$412	$8,503	$720	$6	$854	$1,580	$6,923	$1,470	$8,613	$1,470	$1,139-$1,545	$1,139-$1,545	$1,916-$2,598	$1,139-$1,545	Trip rate and length, average reported
720	Medical Office	1,000 sf	34.80	86%	5.81	SE	1.03	5.98	6.48	125.4	77.10	54.59	$421	$32,455	$2,669	$21	$3,163	$5,853	$26,602	$5,647	$33,096	$5,647	$2,540	$2,540	$4,272	$2,540	Trip length effect
820	Retail < 20K Sq. Ft.	1,000 sf	100.62	38%	1.73	CE	1.00	1.73	2.23	46.7	28.72	17.47	$369	$10,600	$1,183	$9	$1,402	$2,595	$8,005	$1,699	$9,959	$1,699	$3,421	$3,421	$5,735	$3,421	Trip length effect
820	Retail (large >=20 ksf, Shop Ctr.)	1,000 sf	48.16	68%	2.78	CE	1.00	2.78	3.28	64.0	39.38	24.40	$378	$14,877	$1,484	$12	$1,759	$3,255	$11,622	$2,467	$14,459	$2,467	$1,821	$1,821	$3,062	$1,821	Trip length effect
Various	Convenience Retail	1,000 sf	670.00	27%	1.67	CE	1.00	1.67	2.17	207.1	127.39	77.50	$369	$47,014	$5,291	$41	$6,271	$11,603	$35,411	$7,517	$44,054	$7,517	$7,250	$7,250	$12,193	$7,250	Trip length effect
936/937	Coffee/Donut Shop	1,000 sf	792.21	15%	0.96	CE	1.00	0.96	1.46	79.9	49.11	29.33	$360	$17,696	$2,386	$19	$2,828	$5,233	$12,464	$2,646	$15,506	$2,646	new	new	new	new	
931/932	Restaurant - Sit Down	1,000 sf	98.66	76%	3.23	CE	1.00	3.23	3.73	169.5	104.26	65.19	$382	$39,840	$3,846	$30	$4,559	$8,435	$31,405	$6,666	$39,070	$6,666	$7,250	$7,250	$13,069	$7,250	Trip length effect
933/934	Restaurant - Fast Food	1,000 sf	462.29	50%	0.96	CE	1.00	0.96	1.46	155.3	95.53	57.04	$360	$34,422	$4,641	$36	$5,501	$10,178	$24,244	$5,146	$30,161	$5,146	$9,426	$9,426	$15,852	$9,426	Trip length effect
944	Gasoline Station	Fuel Pos.	172.01	50%	1.82	SE	1.03	1.87	2.37	112.9	69.41	42.23	$369	$25,615	$2,809	$22	$3,329	$6,160	$19,455	$4,130	$24,204	$4,130	$3,210	$3,210	$5,398	$3,210	*2 fueling sta/dispenser? Trip length
850	Supermarket	1,000 sf	106.78	53%	2.00	CE	1.00	2.00	2.50	79.2	48.73	29.92	$373	$18,195	$1,946	$15	$2,306	$4,267	$13,927	$2,956	$17,327	$2,956	$3,449	$3,449	$5,800	$3,449	Trip length effect
848	Garage / Auto Repair	1,000 sf	25.82	66%	3.24	SE	1.03	3.34	3.84	39.8	24.48	15.31	$382	$9,355	$899	$7	$1,066	$1,972	$7,383	$1,567	$9,185	$1,567	$1,873	$1,873	$3,150	$1,873	Trip length effect
912	Bank/Savings/Credit Union	1,000 sf	101.30	44%	2.02	SE	1.03	2.08	2.58	64.9	39.92	24.51	$373	$14,907	$1,582	$12	$1,875	$3,469	$11,438	$2,428	$14,230	$2,428	$4,234/$5,756	$4,234/$5,756	$7,121/$9,680	$4,234/$5,756	Higher trip rate
110/140	Manufacturing	1,000 sf	4.445	92%	6.06	IE	0.98	5.94	6.44	17.0	10.46	7.40	$421	$4,401	$362	$3	$429	$794	$3,607	$766	$4,487	$766	$524	$524	$881	$524	Lower trip rate
150/154/157	Passive Warehouse (Storage warehouse)	1,000 sf	1.74	92%	6.06	IE	0.98	5.94	6.44	6.7	4.09	2.90	$421	$1,723	$142	$1	$168	$311	$1,412	$300	$1,757	$300	$398	$398	$669	$398	Lower trip rate
155/156	Active Warehouse (Parcel hub/fulfilment center)	1,000 sf	7.97	92%	6.06	IE	0.98	5.94	6.44	30.5	18.75	13.27	$421	$7,891	$649	$5	$770	$1,424	$6,467	$1,373	$8,046	$1,373	$398	$398	$669	$398	new?/higher trip rate
151	Mini-Warehouses	1,000 sf	1.51	92%	4.06	CE	1.00	4.06	4.56	4.0	2.43	1.58	$395	$960	$87	$1	$103	$191	$769	$163	$957	$163	$182	$182	$306	$182	Lower trip rate

Note: 1. This rate is applicable to *all* dwelling units in buildings of three or more floors, including units on floors 1 and 2.

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Appendix G

Condensed Fee Schedule for Publication

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4/21/2020

Appendix G

Seminole County, Florida
Condensed Mobility Fee Schedule
Adopted:

ITE Land Use Code	Land Use	Unit	Fee District		
			Rural	Suburb	Core
210	Single Family (<=1,500 s.f.)	D.U.	$6,710	$2,234	$1,477
210	Single Family (1,501 to 2,500 s.f.)	D.U.	$8,284	$2,759	$1,824
210	Single Family (>2,500 s.f.)	D.U.	$11,101	$3,697	$2,444
n/a	Accessory Dwelling Unit	D.U.	$3,178	$1,000	$614
220	Multi-Family (1-2 Floor)	D.U.	n/a	$1,694	$1,040
221	Multi-Family (3+ Floor)(1)	D.U.	n/a	$1,259	$773
240	Mobile Home	D.U.	$2,891	$890	$529
310	Hotel	Room	$5,063	$1,671	$1,093
320	Motel	Room	$1,956	$629	$399
420	Marina	Berth	$1,411	$628	$483
430	Golf Course	Holes	$12,815	$5,565	$3,989
492/493	Fitness Center	1,000 sf	$9,928	$4,219	$2,932
610	Hospital	1,000 sf	$4,841	$2,119	$1,725
251/252	Independent Senior Living	D.U.	$2,932	$922	$566
620	Nursing Home	bed	$738	$298	$206
560	Church (Non-Sanctuary Space Only)	1,000 sf	$2,164	$894	$638
520/522/530	Private School	student	$556	$229	$161
565	Day Care (Child or Adult)	student	$506	$207	$128
710	Office	1,000 sf	$4,366	$1,873	$1,470
720	Medical Office	1,000 sf	$16,144	$6,979	$5,647
820	Retail < 20K Sq. Ft.	1,000 sf	$6,813	$2,748	$1,699
820	Retail (large >=20 ksf, Shop Ctr.)	1,000 sf	$9,124	$3,809	$2,467
Various	Convenience Retail	1,000 sf	$30,200	$12,169	$7,517
936/937	Coffee/Donut Shop	1,000 sf	$11,599	$4,559	$2,646
931/932	Restaurant - Sit Down	1,000 sf	$24,194	$10,092	$6,666
933/934	Restaurant - Fast Food	1,000 sf	$22,561	$8,867	$5,146
944	Gasoline Station	Fuel Pos.	$15,849	$6,260	$4,130
850	Supermarket	1,000 sf	$11,471	$4,676	$2,956
848	Garage / Auto Repair	1,000 sf	$5,464	$2,230	$1,567
912	Bank/Savings/Credit Union	1,000 sf	$9,040	$3,616	$2,428
110/140	Manufacturing	1,000 sf	$2,424	$1,042	$766
150/154/157	Passive Warehouse (Storage warehouse)	1,000 sf	$949	$408	$300
155/156	Active Warehouse (Parcel hub/fulfilment center)	1,000 sf	$4,346	$1,868	$1,373
151	Mini-Warehouses	1,000 sf	$553	$235	$163

W.E. OLIVER, P.E., LLC
TRAFFIC ENGINEERING
TRANSPORTATION PLANNING