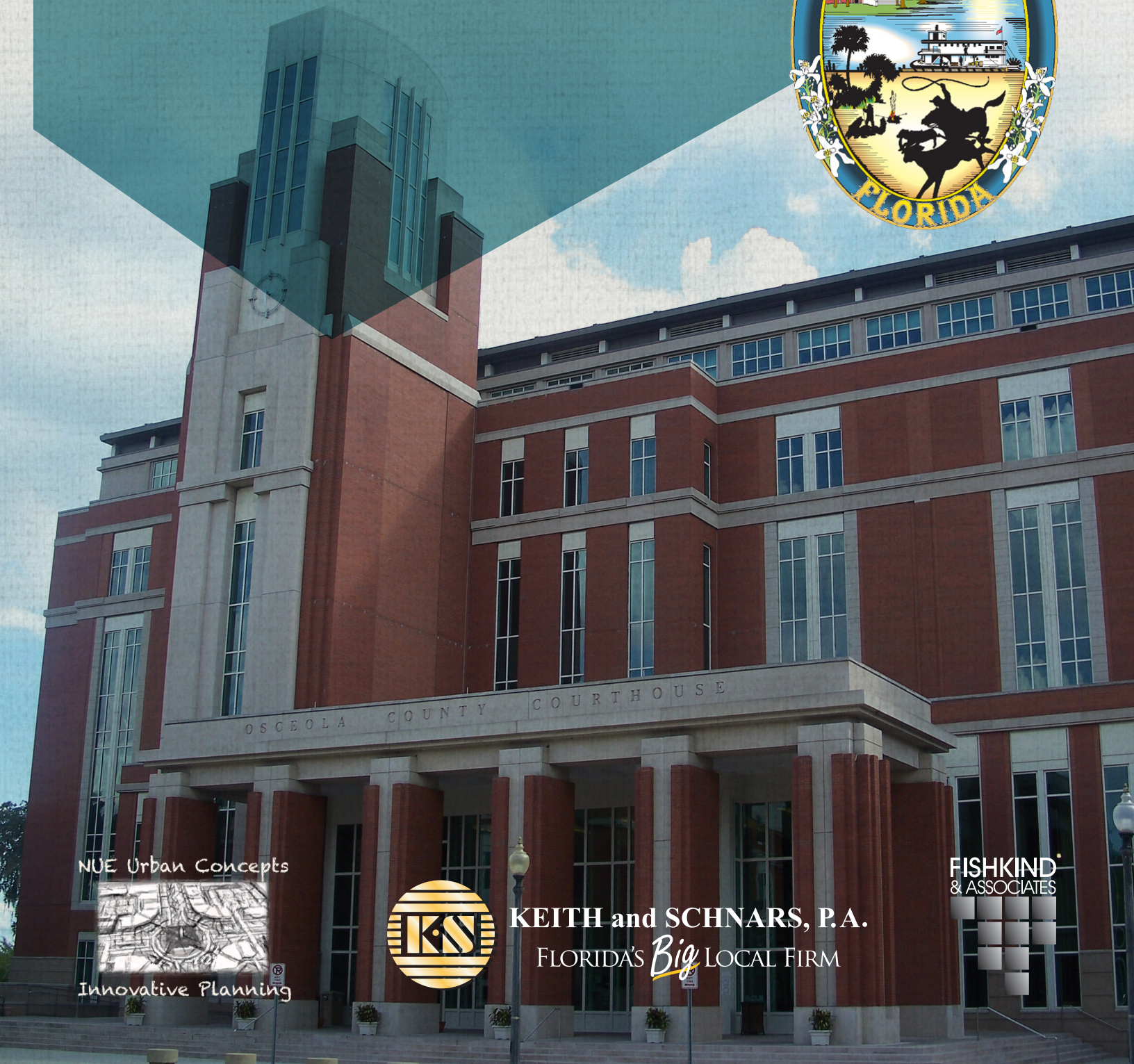
OSCEOLA COUNTY
MOBILITY FEE
Technical Memorandum

March 6, 2015

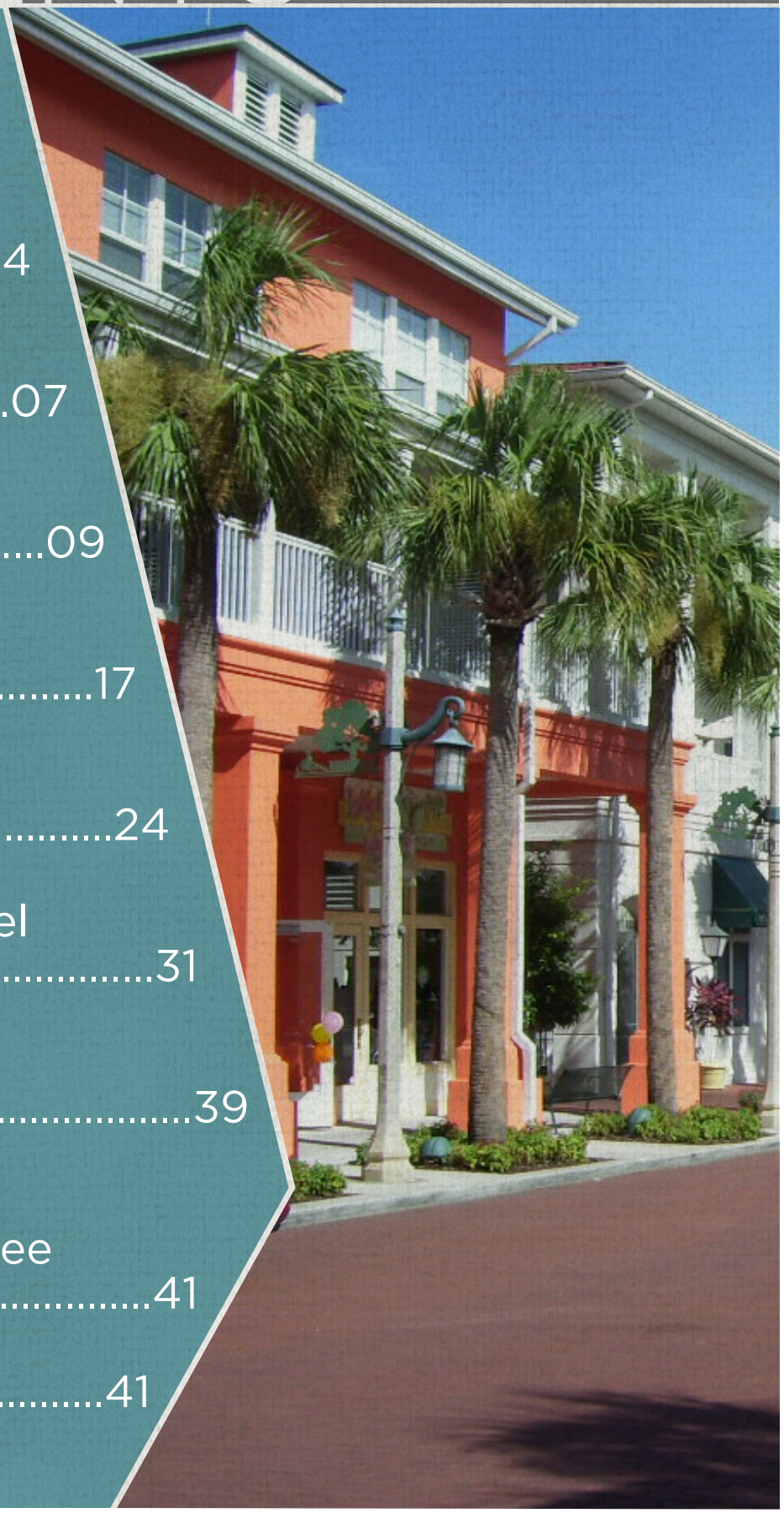


NUE Urban Concepts
Innovative Planning

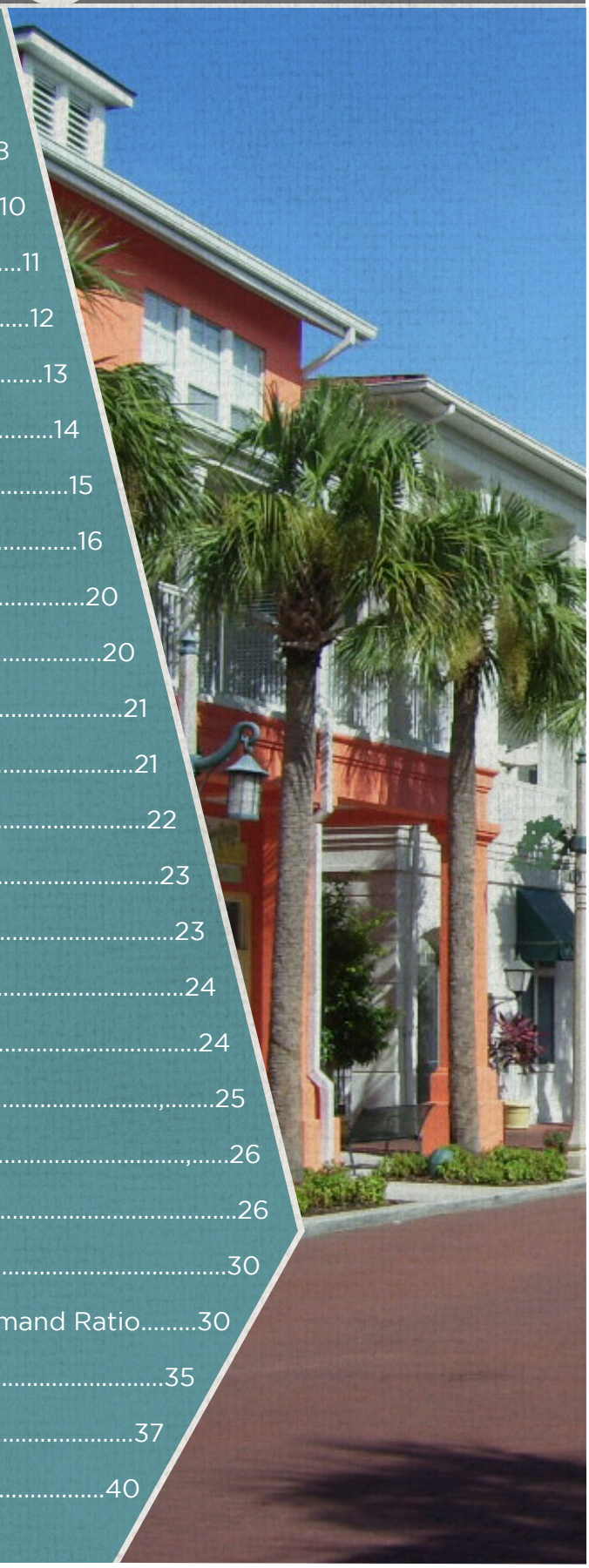
KEITH and SCHNARS, P.A.
FLORIDA'S Big LOCAL FIRM

FISHKIND & ASSOCIATES

CONTENTS



CONTENTS



CONTENTS

ACKNOWLEDGEMENTS

In June of 2014, Osceola County engaged **Keith and Schnars, P.A. (K&S)** to develop a mobility fee. The subsequent analysis resulted in the preparation of the Osceola County Mobility Fee Technical Memorandum.

We would like to thank everyone for their excellent work and commitment to this project.

Osceola County Commission:
Brandon Arrington, Chairman, Commissioner District 3
Viviana Janer, Vice Chairman, Commissioner District 2
Michael E. Harford, Commissioner District 1
Cheryl Grieb, Commissioner District 4
Fred Hawkins, Jr. Commissioner District 5

City Staff:
Mary Moskowitz, Project Manager
Kerry Godwin
Andrew Mai
George Nickerson
Sarah Taitt
David May
Frank Raymond
Amanda Clavijo
Sharon Chauharjasingh
Michael Kurek
Joe Johnston
Ken Brown
Dave Tomek
Susan Caswell
Mary Moskowitz
Erin Sterk
Donna Renberg
Mahmoud Najda
Shane Friedman
Tina Coe
Miriam Santiago

The Mobility Fee Project Team:
Keith and Schnars, P.A.
Debbie Love, AICP, Project Manager
John Krane, P.E.
Veronica Altuve, P.E.
Jose Rodriquez, P.E.
Mellanie Chafe

NUE Urban Concepts
Jonathan Paul, AICP, Deputy Project Manager

Fishkind and Associates
Stan Geberer
Steve Shriever

EXECUTIVE SUMMARY

The Florida Legislature has made significant amendments to transportation concurrency statutes over the last several years. The amendments have provided Osceola County the opportunity to streamline how development mitigates its impact to the transportation system. The County has recently amended its Comprehensive Plan to adopt a number of Goals, Objectives and Policies to promote mobility through multiple modes of transportation. The 3rd Goal of the Transportation Element states the following:

Goal 3: Establishment of a Multimodal Transportation System
"To establish safe and convenient multimodal transportation system, supporting livable communities and economic development, where access and travel choices are increased through new and enhanced public transit, bicycle, pedestrian, and roadway systems."

The adoption of a streamlined and equitable Mobility Fee that would allow development that generates new travel demand to mitigate its impact to the transportation system through a one-time Mobility Fee payment would be one of multiple funding strategies to be implemented to achieve Objective 3.1 of the Transportation Element:

Objective 3.1: Integrated Transportation Network
"The County shall promote alternative modes of transportation to provide a safe, comfortable, attractive, efficient, and energy-efficient multimodal transportation network and shall encourage the use and expansion of alternative modes of transportation for commuting, as well as for recreational purposes. This coordinated web of streets and travel modes will address resident and visitor travel demands and ensure adequate movement of people and goods as a means to attract and sustain economic development. The County shall adopt a funding strategy and implementing regulations to achieve of this network before November 30, 2014".

Due to the County's emphasis upon multimodal transportation strategies, the mobility fee analysis recognizes other mode share capacities, including sidewalks, bike lanes and transit ridership; thus, the calculated Mobility Fee for the majority of land uses is **less than** the previously adopted Osceola County Road Impact Fee. The Mobility Fee would be further reduced if the residents of Osceola County vote to adopt a transportation sales tax. The calculated Mobility Fee for land uses within Mixed-Use Developments and Transit Oriented Developments near future SunRail stations is even lower due to the internal capture of trips and potential transit ridership on SunRail. Within Mixed-Use Developments, the Mobility Fee for land uses is **25% lower** and within Transit Oriented Areas, the Mobility Fees are **50% lower**.

The Mobility Fee schedule on the following page illustrates the calculated Mobility Fee for the land uses identified in the 1st column. The 2nd column is the calculated Mobility Fee rate for land uses that are not Mixed-Use Developments or Transit Oriented Developments. The 3rd column is the Mobility Fee rate for land uses located within Mixed-Use Developments. The 4th column is the rate for land uses located within Transit Oriented Developments near SunRail. The Mobility Fee for Transit Oriented Development could also apply to development located along Multimodal Corridors if light rail or bus rapid transit were to be implemented along the Corridor.

The calculated Mobility Fee meets the dual rational nexus test. The Fee is a combination of a consumption based and an improvements based fee, whereby development is assessed based upon their projected impact, which is the 1st requirement of the dual rational nexus test. As shown on **Map F**, two Mobility Fee Districts are proposed, one west and one east of the Florida Turnpike. The cities of St. Cloud and Kissimmee are not included. To meet the 2nd requirement of the dual rational nexus test, expenditures will be limited to areas appropriate for improvement within each district in which the fees are collected.

The technical analysis in this Report will document the methodologies utilized to calculate the Mobility Fee Schedule as shown below.

MOBILITY FEE SCHEDULE CATEGORY/LAND USE TYPE	MOBILITY FEE	MIXED-USE	TRANSIT ORIENTED
Residential Per Dwelling Unit			
Single Family	$4,585	$3,439	$2,293
Rural Single Family	$7,247	N/A	N/A
Multi-Family	$3,203	$2,402	$1,602
Townhome/Urban Flat/Condo	$2,798	$2,099	$1,399
Mobile Home	$2,403	N/A	N/A
Active Adult	$1,715	$1,286	$857
Assisted Living/Care	$1,137	$853	$568
Recreation/Entertainment per specific unit of measure			
Marina per Berth	$1,774	$1,330	N/A
Golf Course per Hole	$5,354	$4,016	N/A
Amusement Park per Acre	$9,576	N/A	N/A
Multipurpose Recreational Facility per Acre	$7,616	$5,712	$3,808
Movie Theater per Seat	$899	$674	$449
Racquet/Tennis Club per Court	$5,224	$3,918	$2,612
Health/Fitness/Athletic Club per 1,000 FT2	$5,687	$4,266	$2,844
Recreational Community Center per 1,000 FT2	$5,068	$3,801	$2,534
Institutional per 1,000 FT2			
Place of Assembly	$1,891	$1,418	$945
Day Care Center	$3,416	$2,562	$1,708
Office per 1,000 FT2			
Less than 20,000 FT2	$1,366	$1,025	$683
20,000 FT2 to 100,000 FT2	$2,886	$2,165	$1,443
Greater than 100,000 FT2	$4,623	$3,467	$2,312
Medical Buildings per 1,000 FT2			
Medical/Dental Offices	$5,008	$3,756	$2,504
Hospitals	$5,498	$4,123	$2,749
Nursing Home	$1,341	$1,006	$671

MOBILITY FEE SCHEDULE CATEGORY/LAND USE TYPE	MOBILITY FEE	MIXED-USE	TRANSIT ORIENTED
Industrial Buildings per 1,000 FT2			
Warehousing/Manufacturing/Industrial	$2,024	$1,518	$1,012
Mini-Warehousing	$916	$687	$458
General Commercial Retail per 1,000 FT2			
Neighborhood Retail (<20,000 FT2)	$3,227	$2,420	$1,614
Community Retail (20,000 FT2 to 100,000 FT2)	$6,823	$5,117	$3,411
Regional Retail (Greater than 100,000 FT2)	$11,795	$8,847	$5,898
Variety/Dollar Store	$4,663	$3,497	$2,331
Factory Outlet Center	$8,713	$6,535	$4,357
Grocery Store	$8,788	$6,591	$4,394
Pharmacy with Drive-Thru	$6,807	$5,106	$3,404
Restaurant with Drive-Thru	$7,091	$5,319	$3,546
Car Sales	$9,868	$7,401	$4,934
Auto Parts Store	$6,762	$5,072	$3,381
Tire & Auto Repair	$3,865	$2,899	$1,932
Non-Residential per specific unit of measure			
Hotel per Room	$3,332	$2,499	$1,666
Resort Hotel with Conference Center per Room	$5,664	$4,248	$2,832
Bank/Savings with Drive-Thru per Drive-Thru Lane	$5,461	$4,096	$2,730
Convenience Market & Gas per Fuel Position	$8,627	$6,471	$4,314
Quick Lube Vehicle Service per Bay	$1,569	$1,176	$784
Car Wash per Stall	$2,647	$1,985	$1,324

INTRODUCTION

The State of Florida passed the Growth Management Act of 1985 that required all local governments in Florida to adopt Comprehensive Plans to guide future development. The Act mandated that adequate public facilities must be provided "concurrent" with the impacts of new development. State mandated "concurrency" was adopted to ensure the health, safety and general welfare of the public. The introduction of transportation concurrency focused on accommodating the impact of new development primarily by adding roadway capacity via new and wider roadways had the unintended consequence of driving development away from urban areas where capacity was unavailable or cost prohibitive.

Florida experienced phenomenal growth during the early and mid 2000's that strained local governments' ability to provide the necessary infrastructure. Many communities across the State started to deny developments or require substantial transportation improvements to meet concurrency. In response, the Florida Legislature enacted several laws that required proportionate share that allowed new development to mitigate its share of roadway capacity improvements and prohibited local governments from charging new development for over capacity "backlogged" roadways. During the 2011 session, the Legislature repealed state mandated transportation concurrency and enacted further restrictions on local governments to implement transportation concurrency and calculate proportionate share.

House Bill 319, passed by the Florida Legislature in 2013, established Mobility Plans and associated Mobility Fees as a principle means by which local governments may allow development consistent with an adopted Comprehensive Plan to equitably mitigate its transportation impact and to fund multimodal improvements. The intent of the Mobility Fee is to enact a streamlined, simplified mitigation mechanism process and allow greater flexibility in funding multimodal transportation improvements.

The County has recently amended its Comprehensive Plan to strengthen the coordination of land use that supports mobility with a multimodal transportation system.

Transportation Element Policy 1.1.2 of the Comprehensive Plan states:
"Consistent with Policies in the Future Land Use Element, the transportation system shall be planned and implemented to reduce reliance on automobile travel, as well as to recognize the build-out of the County to a new vision that encourages an increased Osceola County share of Central Florida's economic activities and a balanced 1:1 jobs to housing ratio".

Goal 3 of the Transportation Element is:
"To establish a safe and convenient multimodal transportation system, supporting livable communities and economic development, where access and travel choices are increased through new and enhanced public transit, bicycle, pedestrian, and roadway systems."

Objective 3.1 of the Transportation Element states:
"The County shall promote alternative modes of transportation to provide a safe, comfortable, attractive, efficient, and energy-efficient multimodal transportation network and shall encourage the use and expansion of alternative modes of transportation for commuting, as well as for recreational purposes. This coordinated web of streets and travel modes will address resident and visitor travel demands and ensure adequate movement of people and goods as a means to attract and sustain economic development. The County shall adopt a funding strategy and implementing regulations to achieve of this network before November 30, 2014."

Policy 5.1.6 of the Transportation Element identifies Mobility Fees as a funding alternative:
"The County shall work to implement an additional funding mechanism to support needed transportation infrastructure and maintenance either through a Charter County Sales Tax, Transportation Impact Fees, Mobility Fees, or any other funding mechanisms available to the County. The funding mechanism need not be exclusive to those as listed and may be implemented as a combination of all those available as necessary to support the future need for transportation infrastructure and maintenance."

Through the adoption of Mobility Indicators, the County has established the foundation for the types of Mobility projects that will be partially funded by Mobility Fees. Consistent with the policies adopted in the Comprehensive Plan, multimodal improvements include sidewalks, trails, bike lanes and roadways. In addition, the vehicles and transit stops for future transit service along Multimodal Corridors have been included. The following are the policies that have been adopted into the Comprehensive Plan to establish the type of projects that will be funded to accommodate the travel demand from new development:

Policy 3.1.3: Complete streets:
"Osceola County will plan for, design, construct, operate and maintain an integrated, connected network that provides mobility options for not only motorists but also pedestrians, bicyclists, transit vehicles and riders, children, the elderly, and people with disabilities."

Policy 5.1.1: Streets and avenues:
"Streets and avenues not included in the Capital Improvements Program are to be funded and constructed to the standards contained in the Land Development Code through direct developer contribution, special assessment/value capture, or through developer partnerships during the course of development."

Policy 5.1.2: Boulevards and multimodal corridors:
"Boulevards and multimodal corridors are to be funded and constructed through the County's Capital Improvements Program. Direct developer contribution, special assessment/value capture, or developer partnerships may also be utilized to fund construction of boulevards and multimodal corridors where specified in the Transportation Map Series."

Policy 3.2.2: Future Transit Corridors:
"The County shall ensure that future roadways and expansion of existing major roadways be designed as future transit corridors to accommodate automobiles, bicycles, pedestrians, and transit, specifically by incorporating public transit facilities and sidewalks into planned and existing roadway projects."

Objective 3.3: Bicycle/Pedestrian Facilities:
"Where there are opportunities, Osceola County shall ensure that existing and new residential and non-residential developments are connected by roadways, bikeways, and pedestrian systems that encourage travel between land uses and access to transit without requiring use of the major thoroughfare system."

Policy 4.2.1: Network effectiveness:
"For the Urban Expansion Areas and new Planning Areas, the County shall maximize walkability and the effectiveness of the transportation system by incorporating a highly connected, gridded street network."

Policy 4.2.2: Network density:
"The County shall invest or shall ensure the placement of additional roadway connections in the Urban Infill Area to ease dependence on arterial roadways and create more walkable pedestrian environments."

Policy: 4.6.4: Operational reviews for new development:
"Development proposals will identify the mobility effects associated with each project. Identified mobility effects of development will be addressed through a coordinated web of walkable streets and travel alternatives which will absorb travel demand and ensure adequate movement of people and goods as a means to attract and sustain economic development."

The adoption of a Mobility Fee would provide Osceola County with an additional funding source for providing mobility through a multimodal transportation system. Implementation of a Mobility Fee schedule will allow an applicant for new development or redevelopment to simply look up the uses that are proposed and calculate the required mitigation. The growth management changes by the Florida Legislature over the last few years provide Osceola County with increased flexibility in implementing development mitigation strategies consistent with the Mobility Indicators adopted in the Comprehensive Plan.

GROWTH IN OSCEOLA COUNTY

The basis for a Mobility Fee is that there is a need for future multimodal transportation improvements to accommodate future growth. The Orlando Urban Area Transportation Study (OUATS) Regional Travel Demand Model developed as part of the Orlando MetroPlan 2040 Long Range Transportation Plan (LRTP) was utilized to evaluate growth in vehicle miles of travel (VMT) within Osceola County. The base year for the model is 2009 with a horizon year of 2040 consistent with the adopted Osceola County Comprehensive Plan.

As shown in Table 1, the results of the VMT analysis resulted in an increase of 8,297,651 VMT between the base year of 2009 and the future year of 2040 within Osceola County and total projected VMT of 15,726,918. The VMT from Interstate 4, the Florida Turnpike and the Toll Roads was excluded in the analysis as these facilities principally accommodate metropolitan and regional travel demand. The annual rate of growth for Osceola County was 3.6 percent, indicating a fairly significant increase in future travel demand within the County.

To account for person trips made by walking, biking, riding transit and vehicle occupancy in a multimodal travel environment, VMT were converted into Person Miles of Travel (PMT). The data for PMT was derived from the U.S. Department of Transportation 2009 National Household Travel Study (NHTS) (**Appendix A**). The OUATS Model and a Florida specific study of the 2009 NHTS conducted for the Florida Department of Transportation were also evaluated for comparative purposes. The analysis resulted in a PMT factor of 1.3, which was applied to the growth in VMT to evaluate future multimodal travel demand within unincorporated Osceola County. The results, as shown in **Table 1**, indicate an increase in PMT of 10,786,946 between 2009 and 2040 within Osceola County.

Table 1. Base Year & Future Year Model Derived Travel Demand

VEHICLE & PERSON MILES OF TRAVEL	CITY OF KISSIMMEE	CITY OF ST. CLOUD	UN-INCORPORATED COUNTY	COUNTY-WIDE MODEL VMT
2009 Base Year Model Vehicle Miles of Travel (VMT)	849,558	178,503	6,401,206	7,429,267
2009 Base Year Model Person Miles of Travel (PMT)	1,104,425	232,054	8,321,568	9,658,047
2040 Future Year Model Vehicle Miles of Travel (VMT)	1,375,917	352,898	13,998,103	15,726,918
2040 Base Year Model Person Miles of Travel (PMT)	1,788,692	458,767	18,197,534	20,444,993
Increase in Vehicle Miles of Travel (2009-2040)	526,359	174,395	7,596,897	8,297,651
Increase in Person Miles of Travel (2009-2040)	684,267	226,714	9,875,966	10,786,946
Annual Rate of Growth in VMT & PMT	2.00%	3.15%	3.83%	3.60%

Source: Vehicle Miles of Travel based on Orlando Urban Area Transportation Study (OUATS) as part of the MetroPlan 2040 Regional Long Range Transportation Plan. Vehicle Miles of Travel excludes travel on Interstate 4, the Florida Turnpike, SR 417 and SR 429. Person Miles of Travel accounts for bicycle, pedestrian, transit and vehicular travel. The Person Miles of Travel (PMT) is derived by multiplying the VMT by a PMT factor of 1.3. The PMT factor is based on 2009 National Household Travel Survey (Appendix A) and verified with local and state data from the Orlando Metropolitan Area.

An evaluation of the projected population and employment within Osceola County was also conducted to assess growth within the County. Utilizing data from the 2040 MetroPlan Orlando 2040 Long Range Transportation Plan update, the population in Osceola County is projected to increase by 320,387 between 2009 and 2040 with over 600,000 people projected to live in the County by 2040. The employment in Osceola County is projected to grow from 88,357 in 2009 to 269,821 in 2040, an increase of 181,464 employees. The County's share of the Metropolitan Areas (Orange, Osceola and Seminole Counties) population is projected to grow from 15% to 21% and employment is projected to grow from 8% to 15%. The data in Table 2 indicate a significant increase in both population and employment within Osceola County.

Table 2. Population & Employment Growth

	2009	2015	2020	2025	2030	2040
Osceola County Population	288,638	350,542	412,474	474,286	507,971	609,025
Metropolitan Area Population	1,831,174	1,984,383	2,183,417	2,379,542	2,539,659	2,836,953
Osceola County % of Metropolitan Population	**16%**	**18%**	**19%**	**20%**	**20%**	**21%**
Osceola County Employment	88,357	96,460	104,563	112,660	151,963	269,821
Metropolitan Area Employment	1,127,500	1,232,329	1,323,421	1,412,598	1,535,967	1,798,113
Osceola County % of Metropolitan Population	**8%**	**8%**	**8%**	**8%**	**10%**	**15%**

The evaluation of future Person Miles of Travel and population and employment growth indicates that there will be significant demand for multimodal transportation improvements by 2040. The forward-looking Osceola County Comprehensive Plan recognized the significant growth that is projected to occur within the County between 2009 and 2040. To link land use and transportation, the County adopted innovative policies that encourage mixed-use development that promotes mobility through walking, biking, transit ridership and shorter vehicular trips.

MOBILITY FEE METHODOLOGY

The following section documents the methodologies and results of the technical analysis utilized to calculate the Mobility Fee Schedule as shown in **Table 26**.

Person Miles of Capacity Rate

The Osceola County Mobility Fee, consistent with Florida Statutes, is based on a Plan adopted as part of the Transportation Element of the Osceola County Comprehensive Plan. The County has identified future multimodal transportation improvements designed in accordance with Complete Street principals as required in the Comprehensive Plan. The County through its adopted Comprehensive Plan has integrated land use and transportation through establishment of policies that promote a land use pattern that supports mobility and the identification of multimodal transportation improvements necessary to provide mobility (see **Map A**). These multimodal transportation improvements form the basis for calculating the Person Miles of Capacity (PMC) Rate. The PMC Rate will be multiplied by the PMT for individual land uses to derive a Mobility Fee.

The following are the various formulas that have been used to calculate a PMC Rate. These formulas will be described in greater detail in the following sections of this report.

Step 1	**MMFC =**	**Capacities for Vehicles, Bike Lanes, Pedestrian Facilities and Transit Capital calculated for Avenues, Boulevards and Multimodal Corridors**
Step 2	**FLM =**	**CLM * FLA per facility**
Step 3	**%FLM =**	**FLM/SUM of FLM for Avenues, Boulevards and Multimodal Corridors**
Step 4	**FCA =**	**FLA * MMFC per facility**
Step 5	**FPMC =**	**FCA * FLM per facility**
Step 6	**PLPMC =**	**FPMC/FCA per facility**
Step 7	**TCPLM =**	**Cost for Avenues, Boulevards and Multimodal Corridors**
Step 8	**CPMC =**	**TCPLM * PLPMC per facility**
Step 9	**WPMCR =**	**CPMC * % LMN per facility**
Step 10	**PMCR =**	**SUM of WPMCR per facility**

Where:

MMFC =	Multimodal Facility Capacity
FLM =	Future Lane Miles
CLM =	Center Lane Miles
FLA =	Facility Lanes Added
FLM =	Future Lane Miles
%FLM =	% Future Lane Miles
FCA =	Facility Capacity Added
FPMC =	Future Person Miles Of Capacity
PLPMC =	Per Lane Person Miles of Capacity
TCLM =	Total Cost per Lane Mile
CPMC =	Cost per Person Mile of Capacity
WPMCR =	Weighted Person Miles of Capacity Rate
PMCR =	Person Miles of Capacity Rate

MULTIMODAL CAPACITY

The Osceola County Capital Improvements Element and the MetroPlan 2040 Long Range Transportation Program (LRTP) were evaluated to determine the types of multimodal improvements planned within the County over the 25-year planning horizon. The Osceola County Transportation Element has adopted Mobility Indicators to evaluate, measure, and monitor the functional effectiveness of the transportation network annually. The improvements identified in the Transportation Element form the basis of the type of multimodal capital projects used to determine the multimodal capacity necessary to accommodate future travel demand. The multimodal capital improvements necessary to serve multimodal travel demand include sidewalks, bike lanes, trails, intersections, transit improvements and roadways.

As illustrated on **Map A**, the 2040 planned future roadway network from the Transportation Element of the Comprehensive Plan consist of limited access facilities, reconstructed roads, new roadways and existing roadways. The 2040 Roadway Classification System further defined reconstructed and new roadways as Multimodal Corridors, Boulevards and Avenues (see **Map B**). The Multimodal Corridors are illustrated in further detail on Map C. The planned future transit system is proposed to consist of high-speed rail, commuter rail, premium transit and local transit (see **Map D**). The bicycle and pedestrian facility projects consist of sidewalk, multi-use paths, trails and bicycle lanes (see **Map E**). These projects form the basis for the types of projects utilized to calculate a multimodal capacity to accommodate future travel demand.

The types of future projects utilized to calculate capacities include 2, 4 and 6 lane roads. The only roadways that were proposed to be widened to 8 and 10 lanes were toll roads and Interstate 4; these are included in the LRTP. The Florida Department of Transportation (FDOT) Generalized Tables were utilized to calculate roadway capacity.

Total Capacity was determined by increasing the daily capacity by 5% to account for right-turn lanes. The total capacity for two lane facilities increased by 5% to account for left turn lane / median. Total Capacity was increased by 15% to account for vehicle occupancy rates based on person trip and vehicle trips data from the 2009 Household Travel Survey (**Appendix A**) and verified with local and state data from the Orlando Metropolitan Area.

The capacities in **Table 3** consist of state and non-state road capacities for Class I, Class II and Highway facilities.

The Remainder of This Page Intentionally Left Blank

Table 3. Daily Vehicle Capacities

LANE TYPE & NUMBER	DAILY CAPACITY	TOTAL CAPACITY	CAPACITY/ LANE
Class I Arterials			
2-Lane Divided Class I (State)	17,770	22,441	11,221
2-Lane Divided Class I (Non-State)	15,930	20,197	10,099
4-Lane Divided Class I (State)	39,800	48,059	12,015
4-Lane Divided Class I (Non-State)	35,820	43,253	10,813
6-Lane Divided Class I (State)	59,900	72,329	12,055
6-Lane Divided Class I (Non-State)	53,910	65,096	10,849
Class II Arterials			
2-Lane Divided Class II (State)	15,600	19,779	9,889
2-Lane Divided Class II (Non-State)	14,040	16,953	8,477
4-Lane Divided Class II (State-State)	33,800	40,814	10,203
4-Lane Divided Class II (Non-State)	30,420	36,732	9,183
6-Lane Divided Class II (State-State)	50,900	61,462	10,244
6-Lane Divided Class II (Non-State)	45,810	55,316	9,219
Highways			
2-Lane Divided Highway	33,300	40,210	20,105
4-Lane Divided Highway	72,600	83,490	20,873
6-Lane Divided Highway	108,800	125,120	20,853

Source: Florida Department of Transportation, 2013 Quality/Level of Service Handbook, Generalized Annual Average Daily Volumes for Florida's Urbanized Areas, Appendix B. Capacities for Class I based on LOS D, Class II and Highway based on LOS E consistent with the Generalized Tables in Appendix B. Daily Capacity derived directly from Generalized Tables. Total Capacity was determined by increasing the daily capacity by 5% to account for right-turn lanes. The total capacity for two lane facilities increased by 5% to account for left turn lane/median. Total Capacity was increased by 15% to account for vehicle occupancy rates based on person trip and vehicle trips data from 2009 Household Travel Survey (Appendix A) and verified with local and state data from the Orlando Metropolitan Area.

To establish a multimodal capacity to account for pedestrian, bicycle and transit travel, it is necessary to establish a capacity for bicycle, pedestrian and transit facilities. The process for establishing capacities for bicycle and pedestrian facilities is based upon the methodologies used in several multimodal LOS reports and the Transportation Research Board 2010 Highway Capacity Manual. The capacity for transit vehicles is based upon methodologies from the Transportation Research Board Transit Capacity and Quality of Service Manual, 3rd Edition. The capacity for bicycle and pedestrian facilities was based on a LOS standard of B. The methodology for calculating capacity for Local Transit is based upon the Transportation Research Board Transit Capacity and Quality of Service Manual, 3rd Edition. The capacity for Local Transit Vehicle was derived based upon the functional carrying capacity for one vehicle (60 passengers - 40 seated and 20 standing) projected to run at 20 minute headways during peak periods for a span of service of 8 hours and 30 minute headways during off-peak hours for a span of service of 8 hours. The cost to operate and maintain transit service would be funded by sources other than the Mobility Fee. **Table 4** illustrates the calculated multimodal capacities:

Table 4. Multimodal Capacities

FACILITY TYPE	UNIT OF MEASURE	DAILY CAPACITY PER LANE MILE
Sidewalk	5' wide	2,000
Transit	per vehicle	2,400
Bicycle Lane	4' to 5' wide	2,750
Multi-Use Path	8' - 10' wide	4,000
Trail	10' - 12' wide	6,000

Source: The capacity for a sidewalk, bicycle lane, trail, and multi-use path is based on capacity procedures established in Transportation Research Record 1636 Paper No. 98-0066, the 2006 Shared-Use Path Level of Service Calculator-A User's Guide developed for the Federal Highway Administration, and the 2010 Highway Capacity Manual. The capacity for bicycle and pedestrian facilities was based on a LOS standard of B. The methodology for calculating capacity for Local Transit is based upon the Transportation Research Board Transit Capacity and Quality of Service Manual, 3rd Edition. The capacity for Local Transit Vehicle was derived based upon the functional carrying capacity for one vehicle (60 passengers - 40 seated and 20 standing) projected to run at 20 minute headways during peak periods for a span of service of 8 hours and 30 minute headways during off-peak hours for a span of service of 8 hours. The cost to operate and maintain transit service would be funded by sources other than the Mobility Fee.

The Transportation Element categorizes new roadways and limited widened roadways as Avenues, Boulevards and Multimodal Corridors (Map B). Consistent with cross-sections included in the Land Development Code, a per lane mile multimodal capacity was calculated for Avenues, Boulevards and Multimodal Corridors. The average capacity of 13,933 for Avenues and 17,787 for Boulevards is based on the roadway capacity for Class I and Class II facilities, sidewalks, multi-use paths and bike lanes. The average capacity of 22,583 for Multimodal Corridors is based on the roadway capacity for Class I and Highway facilities, trails, bike lanes and transit vehicles. The multimodal capacity for Avenues is based on the average of capacities for Class II two lane facilities per **Table 3** and the capacity for sidewalks and bike lanes from **Table 4**. The multimodal capacity for Boulevards is based on the average of capacities for Class I two lane and four lane facilities per **Table 3** and the capacity for multi-use paths and bike lanes from **Table 4**. The multimodal capacity for Multimodal Corridors are based on the average of Class I facilities four lane and six lane facilities from **Table 3** and the capacity for transit, bike lanes and trails from **Table 4**.

Table 5 illustrates the calculated facility capacity for Avenues, Boulevards and Multimodal Corridors.

Table 5. Multimodal Facility Capacity

FACILITY TYPE	MULTIMODAL CAPACITY
Per Lane Mile	
Avenue	13,933
Boulevard	17,787
Multimodal Corridor	22,583

Source: The multimodal capacity for Avenues is based on the average of capacities for Class II two lane facilities per Table 3 and the capacity for sidewalks and bike lanes from Table 4. The multimodal capacity for Boulevards is based on the average of capacities for Class I two and four lane facilities per Table 3 and the capacity for multi-use paths and bike lanes from Table 4. The multimodal capacity for Multimodal Corridors are based on the average of Class I for four and six lane facilities from Table 3 and the capacity for transit, bike lanes and trails from Table 4.

To determine the future lane miles of Person Miles of Capacity (PMC) needed to accommodate the projected increase in Person Miles of Travel (PMT), the planned lane miles for Avenues, Boulevards and Multimodal Corridors per the Comprehensive Plan was calculated. The adopted Comprehensive Plan indicates 45% of the planned improvements consist of Avenues, and 23% consists of Boulevards and 32% Multimodal Corridors (**Map B**). Person Miles of Capacity is derived by multiplying Center

Lane Miles by the Facility Capacity Added. Per Lane Person Miles of Capacity is derived by dividing Future Person Miles of Capacity by Future Lane Miles. Facility Capacity is based on **Tables 3 and 4**. The Multimodal Capacity elements per Facility Type are identified in **Table 5**.
Multimodal Corridor Facility Capacity for widened lanes is based on the increase in capacity from 2 to 4 and 4 to 6 lanes, plus Multimodal Capacity from **Table 4**.

The share of the PMT increase to be accommodated by Avenues was calculated at 3,761,920, 2,273,499 for Boulevards and 3,838,777 for Multimodal Corridors. The PMT accommodated by each facility was divided by the per lane mile PMC to calculate the need for 270 lane miles of Avenues, 140 lanes miles of Boulevards and 192 miles of Multimodal Corridors (**Table 6**). A total of 602 lane miles of capacity is needed to accommodate the projected increase in PMT between 2015 and 2040.

Table 6. Future Person Miles Of Capacity

FACILITY TYPE	FACILITY LANES ADDED	CENTER LANE MILES	FUTURE LANE MILES	% OF FUTURE LANE MILES	FACILITY CAPACITY ADDED	FUTURE PERSON MILES OF CAPACITY	PER LANE PERSON MILES OF CAPACITY
Avenue	New 2-Lane	135	270	45%	27,866	3,761,920	13,933
Avenue Average		**135**	**270**	**45%**	**27,866**	**3,761,920**	**13,933**
Boulevard	New 2-Lane	24	44	7%	35,574	853,765	19,404
Boulevard	New 4-Lane	24	96	16%	59,156	1,419,734	14,789
Boulevard Average		**48**	**140**	**23%**	**47,365**	**2,273,499**	**16,239**
Multimodal Corridor	New 4-Lane	24	96	16%	67,956	1,630,934	16,989
Multimodal Corridor	Widen 2 to 4 Lanes	24	48	8%	46,636	1,119,270	23,318
Multimodal Corridor	Widen 4 to 6 Lanes	24	48	8%	45,357	1,088,573	22,679
Multimodal Corridor Average	**72**		**192**	**32%**	**53,316**	**3,838,777**	**19,994**
Total		**255**	**602**	**100%**	**42,849**	**9,874,196**	**16,722**

Source: Center Lane Miles based on the Osceola County Roadway Classifications UGB-2040 Map from the Transportation Element of the adopted Comprehensive Plan (Map B). For Boulevards, the Centerlane Miles were split 50/50 between 2 lane and 4 lane roads. For Multimodal Corridors, the Centerlane Miles were evenly split in 1/3 increments between new 4 lane roads, and roads widening from 2 to 4 lanes and 4 to 6 lanes. Future Lane Miles determined by multiplying the center lane miles by the number of facility lanes. Percent of Future Lane Miles determined by dividing the Future Lane Miles for facility lanes added by the total Future Lane Miles. Facility Capacity Added for two lane Avenues and Boulevards based on Table 5. Facility Capacity added for 4 lane roads based on Tables 3 and 4. Multimodal Corridor Facility Capacity for widened lanes based on the increase in capacity from 2 to 4 and 4 to 6 lanes from Table 3 plus the Multimodal Capacity from Table 4. Future Person Miles of Capacity is derived by multiplying Center Lane Miles by the Facility Capacity Added. Per Lane Person Miles of Capacity derived by dividing Future Person Miles of Capacity by Future Lane Miles.

Cost Per Person Mile of Capacity

To determine the total cost of the PMC needed to accommodate the increase in PMT, it was necessary to calculate a per lane mile cost (**Table 7**). Construction Costs are based on per mile cost from FDOT District 5 and Osceola County.

Table 7. Multimodal Facility Cost

FACILITY TYPE	ROADWAY CONSTRUCTION COST	PE, ROW & CEI	TOTAL COST	TOTAL COST PER LANE MILE
FDOT New 2 Lane	$3,972,380	$1,986,190	$5,958,569	$2,979,285
Osceola New Lanes	$3,670,000	$1,835,000	$5,505,000	$2,752,500
Average cost for Avenue	**$3,821,190**	**$1,910,595**	**$5,731,785**	**$2,865,892**
FDOT New 2 Lane	$4,638,755	$2,319,378	$6,958,133	$3,479,066
FDOT New 4 Lane	$6,560,152	$3,280,076	$9,840,228	$2,460,057
Osceola New Lanes	$3,895,000	$1,947,500	$5,856,000	$2,928,000
Average cost for Boulevard	**$5,031,302**	**$2,515,651**	**$7,551,454**	**$2,955,708**
FDOT New 4 Lane	$6,580,152	$3,290,076	$10,870,228	$2,717,557
FDOT Widen 2 to 4 Lane	$5,450,273	$2,725,137	$9,175,410	$4,587,705
FDOT Widen 4 to 6 Lane	$5,159,587	$2,579,794	$8,739,381	$4,369,690
Osceola Add Lanes	$4,265,000	$2,132,500	$7,724,000	$3,862,000
Average cost for Multimodal Corridor	**$5,363,753**	**$2,681,877**	**$9,127,255**	**$3,884,238**

Source: Construction Cost is based on per mile cost from FDOT District 5 and Osceola County. The construction cost per mile for all facility types include the cost for right turn lanes at $300,000 ($150,000 per turn lane) and two acres of stormwater ponds at $400,000 ($200,000 per acre). The construction cost for Boulevards and Multimodal Corridors include $250,000 for a traffic signal. The construction cost for Boulevards and Multimodal Corridors include $225,000 for a traffic signal. The construction cost for Multimodal Corridors included $400,000 ($200,000 per pedestrian facility) for wider pedestrian facilities on each side of the road and $60,000 ($15,000 per transit stop) for two transit stops on each side of the road spaced at 1/4 mile intervals. The cost for transit vehicles at $1,000,000 ($500,000 per vehicle) was added to the total per mile cost for Multimodal Corridors. The cost for design/ engineering (PE) was estimated at 10% of construction cost, right-of-way (ROW) at 30% of construction cost and construction, engineering and inspection (CEI) at 10% of construction cost. Roadway Construction Cost, PE, ROW & CEI and Total Cost are all provided per mile. The Total Cost per Lane Mile is derived by dividing the total cost per mile by the number of new lanes.

The construction cost per mile for all facility types include the cost for right turn lanes at $300,000 ($150,000 per turn lane) and two acres of stormwater ponds at $400,000 ($200,000 per acre). The construction cost for Boulevards and Multimodal Corridors include $225,000 for a traffic signal. The construction cost for Multimodal Corridors included $400,000 ($200,000 per pedestrian facility) for wider pedestrian facilities on each side of the road and $60,000 ($15,000 per transit stop) for two transit stops on each side of the road spaced at mile intervals. The cost for transit vehicles at $1,000,000 ($500,000 per vehicle) was added to the total per mile cost for Multimodal Corridors. Transit operation and maintenance are assumed to be funded by revenue sources other than Mobility Fees. The cost for design/engineering (P.E.) was estimated at 10% of construction cost, right-of-way (ROW) at 30% of construction cost and construction, engineering and inspection (CEI) at 10% of construction cost. Roadway Construction Cost, P.E., ROW & CEI and Total Cost are all provided per mile.

The Total Cost per Lane Mile is derived by dividing the total cost per mile by the number of new lanes. As shown in **Table 8** below, the Cost per Person Mile of Capacity was calculated. This was derived by dividing the Total Cost per Lane Mile (**Table 7**) by the Per Lane Person Mile of Capacity (**Table 6**).

Table 8. Cost Per Person Mile Of Capacity

FACILITY TYPE	TOTAL COST PER LANE MILE	PER LANE PERSON MILE OF CAPACITY	COST PER PERSON MILE OF CAPACITY
Avenue	$2,865,892	13,933	$205.69
Boulevard	$2,955,708	15,680	$188.50
Multimodal Corridor	$3,884,238	19,994	$194.27

Source: Total Cost Per Lane Mile from Table 7. Per Lane Person Mile of Capacity from Table 6. Cost per Person Mile of Capacity derived by dividing Total Cost Per Lane Mile by Per Lane Person Mile of Capacity.

The Remainder of This Page Intentionally Left Blank

Person Mile of Capacity Rate

The weighted Person Mile of Capacity (PMC) Rate is derived by multiplying Cost per Person Mile of Capacity (**Table 8**) by the Percent of Future Lane Miles (**Table 6**). The Person Mile of Capacity Rate derived by summing the Weighted Person Mile of Capacity Rate.
The calculated rate per PMC is shown in **Table 9** below:

Table 9. Person Miles Of Capacity (Pmc) Rate

FACILITY TYPE	COST PER PERSON MILE OF CAPACITY	% OF FUTURE LANE MILES	WEIGHTED PERSON MILE OF CAPACITY RATE
Avenue	$205.69	45%	$92.25
Boulevard	$188.50	23%	$43.84
Multimodal Corridor	$194.27	32%	$61.96
PMC RATE		**100%**	**$198.05**

Source: Cost per Person Mile of Capacity from Table 8. Percent of Future Lane Miles from Table 6. Weighted Person Mile of Capacity Rate derived by multiplying Cost per Person Mile of Capacity by the Percent of Future Lane Miles. Person Mile of Capacity Rate derived by summing the Weighted Person Mile of Capacity Rate.

The Remainder of This Page Intentionally Left Blank

TRANSPORTATION REVENUE CREDITS

One of the general principles of any fee assessed by local government on new development is that the fee has to be proportional to the impact generated by the development. To ensure new development is not paying more than its impact and is also not paying for existing deficiencies, transportation revenue credits are provided. Transportation revenue credits will be given for dedicated revenues that will be generated by new development and used to pay for avenues, boulevards and multimodal corridors in the County. These credits will result in a reduction in the Person Mile of Capacity (PMC) rate to ensure that new development does not pay twice for the same capacity, once through mobility fees and again through general taxes that are used to remedy the capacity deficiency for existing development. In addition to Federal and State funding for major roads in Osceola County, the County utilizes a variety of local funding sources to fund transportation improvements. In the calculation of this mobility fee, credit is given for the portion of Federal, State and local fuel taxes that are being used to fund capacity-expanding improvements to the major roadway system in Osceola County. This update also includes a credit for capacity related funding from the infrastructure sales tax and ad valorem revenues allocated for transportation capacity and scheduled principal repayment for long-term road related debt that added roadway capacity.

This section summarizes the sources of revenue available that will be converted into transportation revenue credits due for new growth to ensure that the new growth is only paying its share of the cost of new capacity. The analysis conducted provides projections for the revenues and transportation revenue credits that will potentially fund the improvements within the County's Transportation and Capital Improvements Element. The determination of cost feasibility and revenue credits requires planning agencies to develop reasonable and reliable revenue estimates as well as transportation project cost estimates.

These revenue projections have been prepared as part of the Mobility Fee. Osceola County and the following agencies coordinated efforts and provided data for the revenue projections in this analysis:

- MetroPlan Orlando
- Florida Department of Transportation
- Florida's Turnpike Enterprise

The Mobility Fee relies on the Comprehensive Plan for the transportation needs and multiple documents sources for anticipated revenues funding these improvements. The revenue study provides a description and analysis of the financial resources available on the federal, state and local level. This section presents the financial resources that are presently being utilized by FDOT and Osceola County.

The public transportation system in Florida has several funding sources for development and maintenance. The major sources of transportation funds are fuel taxes levied at federal, state and local levels. Federal funds are collected and distributed to federal highway, rail and transit programs from which Florida receives funding for eligible programs. State funds are collected from state tax levies and distributed to state funding programs, with the State Transportation Fund receiving the bulk of these funds. These programs fund statewide projects, as well as distribute funds to counties and municipalities. On the local level, funds are collected from local tax levies, as well as state tax levies.

The federal government imposes taxes on gasoline, diesel fuel, special fuels, compressed natural gas, gasohol, tires, truck and trailer sales and heavy vehicle use. These revenues are distributed to each state through a system of formula grants and discretionary allocations. State highway fuel sales taxes are shared between the State of Florida Department of Transportation (FDOT) and Florida's county governments.

Local Governments have the ability to raise revenues through levying local taxes. Osceola County has used a combination of sales taxes, gas taxes and impact fees to pay for transportation projects. The taxes most frequently utilized are the Local Option Gas Tax (LOGT), the Constitutional Gas Tax, and the Local Government Infrastructure Sales Surtax. The state collects and distributes the Constitutional Gas Tax, county and municipal gas taxes and fuel use taxes on behalf of Local Governments.

Osceola County has an Infrastructure Surtax that is used to fund capital improvements. In the past, a major revenue source for transportation-related projects has been transportation impact fees; however, the recent downturn in the economy has significantly reduced the flow of revenues from transportation impact fees. Osceola County has discontinued its transportation impact fee in favor of an ad valorem tax allocation, a potential transportation surtax and a potential mobility fee. Osceola County also has a Dedicated Ad Valorem Trust Fund allocation for funding within its Urban Growth Transportation System. The County has also utilized bonding to pay for existing roadway deficiencies for which new development will receive a transportation revenue credit.

This section provides an analysis of available funds for the Osceola County Mobility Fee from current sources. These funds are projected to be available to fund avenues, boulevards and multimodal corridors and will reduce the total Mobility Fee required to fund the entire transportation plan. FDOT provided funding projections for state and federal funds. Osceola County provided projections for future funding levels from their current funding sources, which have then been projected out to 2040.

Summaries of the projections have been identified beginning with the year 2015 (FY 2014/2015) and ending at year 2040 (FY 2039/2040). The intent of this section is to identify only those sources not currently dedicated or obligated to other uses. In some cases, portions of the revenues have already been committed to fund operations and maintenance. Where appropriate, commitments have been identified and subtracted from the total revenues to identify those revenues available for improvements in the Comprehensive Plan that will provide a credit in the Mobility Fee calculation.

The formula for calculating transportation revenue credit looks at the total funding available from a given revenue source, the total years the funding is available and the present value of funding based on the current discount rate of 4.24% (which is the average annual interest rate for 2014 on state and local bonds from the Federal Reserve, specifically the Federal Reserve's monthly H.15-1 release, which contains interest rates for selected U.S. Treasury and private money market and capital market instruments). To derive a credit per Person Mile of Capacity added, the present value of the funding is divided by the total PMC being provided per **Table 6**. The credit per PMC formula used is provided below. The credit formula for debt service payments varies from this formula and is described in further detail under the debt service payment section.

Federal and State Revenue Credit

FDOT developed revenue forecasts of state and federal transportation funds for LRTP through the year 2040. These forecasts are based on a statewide estimate of revenues that fund the state transportation program. This study provides a credit based directly on the average annual Federal and State tax funding for capacity expanding road projects per Person Miles of Capacity (PMC).

The Five Year (FY 2014/2015 to 2019/2020) Transportation Improvement Plan and the LRTP (FY2020/2021 to FY 2039/2040) forecast $316,548,000 in Federal and State Funding being available to fund avenues, boulevards and multimodal corridors in Osceola County. Separate Federal and State funds are available for improvements to Interstate 4. Separate funding from tolls paid to and allocated by the various Expressway Authorities are available for improvements to toll roads such as the Florida Turnpike and are not included in the available funding.

Over the 25 year Mobility Fee Plan Horizon, $12.7 million dollars will be available annually. This equates to a present value of approximately $192.9 million. Over the 25-year horizon, roughly 10 million PMC are projected to be added to the transportation system. To determine the projected credit of $19.53, as illustrated in Table 10, the Present Value is divided by the future PMC.

PMC Credit Formula = (F/TY) = AAF, PV (4.24%, 25, -AAF), PV/PMC = CPMC
PMC Credit Steps = Step 1: (F/TY) = AAF, Step 2: PV (AAF) = PV, Step 3: (PV/PMC) = CPMC

Where:

F = Total Funding
TY = Total Years of Funding Availability
AAF = Average Annual Funding
PV = Present Value (4.24% at 25 Years)
PMC = Person Miles of Capacity
CPMC = Credit per Person Mile of Capacity

The Remainder of This Page Intentionally Left Blank

Table 10. Federal & State Revenue Credit

Federal & State Capacity Funding FY 2015-2040	$316,548,000
Total Years in Mobility Fee	25
Average Annual Funding	$12,661,920
Present Value of State & Federal Capacity Funding	$192,881,829
Increase in Person Miles of Capacity (PMC)	9,874,196
Federal & State Revenue Credit per PMC	$19.53

Source: The Five Year (FY 2014/2015 to 2019/2020) Transportation Improvement Plan and the MetroPlan Orlando 2040 Long Range Transportation Plan (FY 2020/2021 to 2039/2040) forecast $316,548,000 in combined Federal and State Funding allocated to avenues, boulevards and multimodal corridors. The identified funding excludes operations and maintenance, Interstate and Toll Facilities. Average Annual Funding is derived by dividing funding by total years in Mobility Fee. Present Value based on discount rate of 4.24% over 25 years. The discount rate is the average monthly interest rate over the course of 2014 on state and local bonds from the Federal Reserve. Future Person Miles of Capacity derived from Table 6. The credit per PMC is determined by dividing the present value by the Future PMC.

Fuel Tax Credit

Osceola County receives revenues from the sixth-cent and ninth-cent local option fuel taxes, the Constitutional, County and Municipal Fuel Taxes. The County receives a portion of an existing local government infrastructure sales surtax that could be used for mobility capacity expansion as well. Historically, Osceola County uses all of its gas tax revenue for operations and maintenance, with the exception of 25% of the Constitutional Gas Tax for capacity building transportation projects. As such, $34.4 million of the total fuel tax revenue is available for avenues, boulevards and multimodal corridors.

Table 11 shows that the total capital use portion of the Constitutional gas tax will generate a mobility fee credit of $2.12 per PMC.

Table 11. Fuel Tax Credit

Constitutional Fuel Tax Revenue FY 2015-2040	$34,351,167
Total Years in Mobility Fee	25
Average Annual Funding	$1,374,047
Present Value of State & Federal Capacity Funding	$20,931,157
Increase in Person Miles of Capacity (PMC)	9,874,196
Fuel Tax Credit per PMC	$2.12

Source: Historic Revenues and Current Year Budget for gas tax are based upon data from Osceola County Office of Management and Budget. Constitutional Gas Tax revenue was projected out to 2040 using historic growth rates. The County has historically allocated 25% of Constitutional Gas Tax revenue to fund capacity. Annual Funding derived by dividing funding by total years in Mobility Fee. Present Value based on discount rate of 4.24% over 25 years. The discount rate is the average monthly interest rate over the course of 2014 on state and local bonds from the Federal Reserve. Future Person Miles of Capacity derived from Table 6. The credit per PMC is determined by dividing the present value by the Future PMC.

Dedicated Ad Valorem Credit

Osceola County initiated a funding program that allocates a portion of the ad valorem revenues for capacity expansion transportation projects within its Urban Growth Transportation System. This funding source is an annual policy adopted through the budget process. The projection of funding utilized in this analysis is based upon the assumption of the Board of County Commission past practices. The current allocation is ad valorem generated from 18.2 percent of the growth increment of the base value plus 33 percent of the growth in the new growth increment.

At this level, the Dedicated Ad Valorem (DAT) is projected to total $210.4 million by 2040. For Fiscal Years (FY) 2013-2022, 100% of the DAT goes to Operations and Maintenance (O&M). From FY 2023 to FY40 an average of 52.3% of the DAT goes to O&M, the rest can be credited to avenues, boulevards and multimodal corridors. Based on these calculations, new development could be expected to generate about $12.99 in capacity-expanding road funding from DAT sources for every daily person-mile of capacity, as shown in **Table 12**.

Table 12. Dedicated Ad Valorem (DAT) Credit

Dedicated Ad Valorem Funding FY 2015-2040	$210,430,582
Total Years in Mobility Fee	25
Average Annual Funding	$8,417,223
Present Value of State & Federal Capacity Funding	$128,221,424
Increase in Person Miles of Capacity (PMC)	9,874,196
Dedicated Ad Valorem Funding per PMC	$12.99

Source: Based upon data from Osceola County Transportation Planning. For Fiscal Years (FY) 2013-2022 100% of the Dedicated Ad Valorem goes to Operations and Maintenance (O&M). From FY 2023 to FY 2040 an average of 52.3% of the DAT goes to O&M, the rest can be credited to projects for avenues, boulevards and multimodal corridors. Annual Funding derived by dividing funding by total years in Mobility Fee. Present Value based on discount rate of 4.24% over 25 years. The discount rate is the average monthly interest rate over the course of 2014 on state and local bonds from the Federal Reserve. Future Person Miles of Capacity derived from Table 6. The credit per PMC is determined by dividing the present value by the Future PMC.

Local Government Infrastructure Sales Surtax Credit

Osceola County has approved a local government infrastructure sales surtax, pursuant to Section 212.055(2), Florida Statutes, to fund some of the capital facility needs of the County. This funding mechanism expires in 2025. The County has historically allocated 20% of the Local Government Infrastructure Sales Surtax to fund capacity. Total funding available through 2025 is projected to be $62.3 million. Approximately $5.7 million is available annually to fund avenues, boulevards and multimodal corridors. Based on these calculations, new development could be expected to generate about $4.96 in capacity-expanding road funding from the local infrastructure sales tax for every daily person mile of capacity (**Table 13**).

Table 13. Local Government Infrastructure Sales Surtax Credit

Local Government Infrastructure Sales Surtax FY 2015-2025	$62,294,736
Total Years in Mobility Fee	11
Average Annual Funding	$5,663,157.82
Present Value of State & Federal Capacity Funding	$48,975,948
Increase in Person Miles of Capacity (PMC)	9,874,196
Local Option Infrastructure Sales Tax Credit per PMC	$4.96

Source: Historic Revenues and Current Year Budget for Local Government Infrastructure Sales Surtax are based upon data from Osceola County Office of Management and Budget. Local Government Infrastructure Sales Surtax was projected out to 2025 using historic growth rates. The County has historically allocated 20% of Local Government Infrastructure Sales Surtax to avenues, boulevards and multimodal corridors. The Local Government Infrastructure Sales Surtax expires in 2025. Annual Funding derived by dividing funding by total years in Mobility Fee. Present Value based on discount rate of 4.24% over 11 years. The discount rate is the average monthly interest rate over the course of 2014 on state and local bonds from the Federal Reserve. Future Person Miles of Capacity derived from Table 6. The credit per PMC is determined by dividing the present value by the Future PMC.

Debt-Service Credit

The County's Capital Improvement Plan includes capacity-expanding projects funded through the issuance of long-term debt. The existing debts will be retired between 2022 and 2040 with revenues from: 1) fuel tax revenue, 2) sales tax revenue, and 3) other impact fees and other revenue sources. A credit for outstanding debt will reduce the PMC rate to account for future debt service payments from new development. These payments will go towards partly retiring outstanding debt on existing facilities. Providing the debt service credit ensures that the County accounts for the contribution of new development toward remedying existing deficiencies.

Given that new development will pay mobility fees to provide the existing level of service for itself, the fact that new development may also be paying for the facilities that provide that level of service for existing development could amount to paying for more than its proportionate share. A credit for outstanding debt reduces the mobility fee by accounting for future debt service payments that will be made with funds generated by new development. The debt service credit is based upon the percentage of the total outstanding principal bond proceeds that are used for avenues, boulevards and multimodal corridors. Consequently, the PMC rate used to calculate the mobility fees will be reduced to account for future payments that will retire outstanding debt on existing facilities.

A simplified methodology was utilized that differs from the other credits, to ensure that new development is not required to pay for existing facilities, through funds used for debt retirement. The methodology used to calculate the credit is to divide the outstanding debt by the existing vehicle miles of travel on the County's Roadway System, minus travel on Interstate 4 and Toll Facilities, as shown in **Table 17**. This places new development on the same level as existing development in terms of funding its share of capital costs funded through debt. As shown in **Table 14**, the debt credit is $12.58 per PMC.

Table 14. Debt Service Credit

Sales Tax Revenue Bonds, Series 2009	$16,462,852
Infrastructure Sales Revenue Bonds, Series 2007	$40,487,284
Capital Improvements Revenue Bond, Series 2009	$67,260,333
Total Outstanding Road Debt on Major Road System	$124,210,469
Increase in Person Miles of Capacity (PMC)	9,874,196
Debt Service Credit per PMC	$12.58

Source: Based upon data from Osceola County Comptroller's Office. The outstanding bond debt is being paid and pledged by various revenue sources. Osceola County identified the funding from each bond series that was used to fund avenues, boulevards and multimodal corridors and does not include funding for operations and maintenance. Future Person Miles of Capacity derived from Table 6. The credit per PMC is determined by dividing the total debt by the Future PMC.

Total Credits

The total credits related to Federal and State fuel taxes, the local option fuel taxes, the Constitutional fuel tax, the dedicated ad valorem revenue, infrastructure sales tax revenue, debt service and the local government transportation surcharge funding for avenues, boulevards and multimodal corridors are summarized in Table 15. Based on this calculation, new development could be expected to generate the current equivalent of $52.18 in funding over the next 25 years per PMC.

Table 15. Total Credit Per Person Mile Of Capacity

Federal & State Revenue Credit	$19.53
Constitutional Fuel Tax Credit	$2.12
Dedicated Ad Valorem Credit	$12.99
Local Infrastructure Sales Tax Credit	$4.96
Debt Service Credit	$12.58
Total PMC Credit	**$52.18**

Source: Total funding per Person Mile of Capacity based on the sum of funding from Tables 10 thru 14.

Discretionary Transportation Sales Surtax Credit

Osceola County anticipates holding a referendum for a local-option transportation sales surtax to fund some of the capital facility needs of the County. County Staff determined that 60 percent of the proceeds could be available for avenues, boulevards and multimodal corridors. Total revenues, based upon a 1-Cent tax, are projected to be $667.9 million over 25 years. Based on these calculations, if approved, new development could be expected to generate about $41.22 in funding from the local government transportation sales surtax for every PMC (**Table 16**). See Appendix E for the resulting Mobility Fee Schedule if this sales tax is adopted.

Table 16. Discretionary Transportation Sales Surtax

Transportation Sales Surtax Funding FY 2015-2040	$667,906,040
Total Years in Mobility Fee	25
Average Annual Funding	$26,716,242
Present Value of State & Federal Capacity Funding	$406,974,419
Future Person Miles of Capacity (PMC)	9,874,196
Transportation Infrastructure Surtax Credit per PMC	$41.22

Source: Osceola County evaluated the Discretionary Transportation Sales Surtax list of projects and determined that 60% of projected revenues are allocated to fund avenues, boulevards and multimodal corridors. Annual Funding derived by dividing funding by total years in Mobility Fee. Present Value based on discount rate of 4.24% over 25 years. The discount rate is the average monthly interest rate over the course of 2014 on state and local bonds from the Federal Reserve. Future Person Miles of Capacity derived from Table 6. The credit per PMC is determined by dividing the present value by the Future PMC

EXISTING TRAVEL CHARACTERISTICS

Daily Vehicle Miles of Travel (VMT)

One of the steps in development of a Mobility Fee is the evaluation of the travel characteristics on the major roadway system within Osceola County. The Osceola County Roadway Level of Service (LOS) Report identifies the roadways within the roadway system. The LOS Report includes the length of the roads, the functional classification, daily traffic, the number of lanes, posted speed limits and the capacity for each road (**Appendix C**). The traffic count data that represents the most recent data available was collected in 2013. The calculation of VMT is accomplished through multiplying the length of a roadway segment by the daily traffic on the roadway. **Table 17** illustrates that there are a little less than 8 million daily VMT on the major roadway system in the County.

Table 17. Existing Travel On Major Roadway System

FACILITY TYPE	CITY OF KISSIMMEE		CITY OF ST. CLOUD		UN-INCORPORATED COUNTY		OSCEOLA COUNTY	
	Miles	VMT	Miles	VMT	Miles	VMT	Miles	VMT
Collector	6	46,786	19	90,947	174	748,472	199	886,205
Principal Arterial	8	364,811	6	185,242	141	2,433,880	155	2,983,933
Minor Arterial	9	146,880	10	163,206	64	1,269,765	82	1,579,851
Limited Access	0	0	0	0	7	771,198	7	771,198
Toll Road	6	280,140	0	0	58	1,472,802	64	1,752,942
Total	**28**	**838,617**	**34**	**439,395**	**443**	**6,696,117**	**506**	**7,974,129**

Source: Existing VMT on the major roadway system in Osceola County is based upon the Level of Service Report in Appendix C. The existing travel on the roadway network will be utilized to adjust the average trip lengths within Osceola County.

Limited Access Facilities Adjustment Factor

Travel on the interstate highway system is excluded from Mobility Fee calculations as the interstate system is principally funded and maintained by the Federal Government in coordination with State Departments of Transportation. Thus, to ensure development that generates new trips is not charged for travel on the interstate system, the VMT on Interstate 4 and the Toll Roads is excluded from the major thoroughfare system within the County. **Table 18** illustrates the adjustment factor calculated to exclude travel on Interstate 4 and on Toll Roads.

Table 18. Limited Access Facilities Adjustment Factor

ROADWAY CATEGORY	MILES	DAILY VEHICLE MILES OF TRAVEL (VMT)
Major Road System	506	7,974,129
Limited Access Facilities (Interstate & Toll)	71	2,524,140
Net Travel on Major Road System	435	5,449,989
Limited Access Facilities Adjustment Factor		**68.35%**

Source: Existing travel on the major roadway system in Osceola County is based upon the Level of Service Report in Appendix C. Travel on Limited Access Facilities is excluded in evaluation of travel on the roadway network due to the roadways being funded and maintained by either federal funds of tolls paid by end users. The existing travel on the roadway network will be utilized to adjust the average trip lengths within Osceola County.

Local Adjustment Factor

In the context of a Mobility Fee, it is important to determine the average length of a trip on the major thoroughfare system. The point of departure in developing local trip lengths is to utilize national data. The U.S Department of Transportation's 2009 National Household Travel Survey (NHTS) identifies average trip lengths for specific trip purposes. However, these trip lengths are unlikely to be representative of travel on the major thoroughfare system, since the NHTS data includes travel on local roads and limited access facilities. An adjustment factor for local trip lengths is necessary to ensure development that generates new trips is not charged for trips on local roads, Interstate 4 or on Toll Roads.

The first step in developing the adjustment factor for local travel demand is to estimate the total daily vehicle-miles of travel (VMT) based on existing developed land uses development within Osceola County. Existing land use data was principally compiled using information from the Osceola County Property Appraiser. To estimate total countywide VMT, travel characteristics were determined for existing land uses. Travel characteristics are based on average daily trip generation rates, percent of primary trips and national average trip lengths. As shown in **Table 19**, existing unincorporated County land uses, using national trip generation and trip length data, would be expected to generate approximately 7.4 million daily VMT.

Table 19. Existing Land Use Vehicle Miles of Travel

LAND USE TYPE	ITE CODE	UNIT	EXISTING UNITS	TRIP RATE	PRIMARY TRIPS	DAILY TRIPS	LENGTH (MILES)	DAILY VMT
Single-Family	210	Dwelling	101,018	4.76	100%	480,846	8.60	4,135,273
Multi-Family	220	Dwelling	10,983	3.33	100%	36,573	8.60	314,531
Townhome/ Condo	230	Dwelling	8,383	2.91	100%	24,395	8.60	209,793
Hotel/Motel	310	Rooms	21,425	4.09	90%	78,865	9.70	764,995
Commercial/ Retail	820	1,000 sq ft	9,804	21.35	70%	146,524	6.50	952,408
Office	710	1,000 sq ft	7,528	5.52	90%	37,400	11.80	441,315
Place of Worship	560	1,000 sq ft	1,038	4.56	90%	4,261	6.30	26,843
Industrial	110-150	1,000 sq ft	5,131	1.91	90%	8,820	11.80	104,071
Recreation	411-417	Acres	3,194	1.14	90%	3,263	10.70	34,911
Amusement Parks	480	Acres	479	37.88	100%	18,138	10.70	194,077
Education	520-536	Students	56,298	0.89	50%	24,982	6.30	157,388
Golf Courses	430	Holes	280	17.87	100%	5,008	10.70	53,588
Total Daily VMT								7,389,193

Source: Existing land use data obtained from the Osceola County Property Appraiser. Student enrollment data obtained from http://www.privateschoolreview.com/county_private_schools/stateid/FL/county/12097. The number of holes for golf courses were estimated based upon acreage requirements determined during a February 2001 survey by the Golf Course Superintendent Association of America. Primary trip lengths from US Household Travel Survey; daily trips is a product of 1/2 ITE Daily trip generation rate and primary trips; daily VMT is product of daily trips and trip length.

The VMT based on existing land use data and national travel demand characteristics over-estimates VMT actually observed on the major roadway system. This is not surprising given that the major thoroughfare system excludes local roads, Interstate 4 and Toll Roads. Consequently, it is necessary to develop an adjustment factor to account for this variation. The local trip length adjustment factor is the ratio of actual to projected VMT on the major thoroughfare system. As shown in **Table 20**, the average daily demand for each land use should be multiplied by a local adjustment factor of 0.738.

Table 20. Local Adjustment Factor

Daily Vehicle Miles of Travel (VMT) on Major Roadways	7,974,129
Limited Access Facilities Adjustment Factor	0.6835
Adjusted Daily Vehicle Miles of Travel (VMT)	5,449,989
Existing Land Use Vehicle Miles of Travel (VMT)	7,389,193
Local Adjustment Factor	**0.738**

Source: Daily VMT from Table 17. Limited Access Facilities Adjustment Factor based on Table 18. Adjusted Daily derived by multiplying Daily VMT by the Limited Access Facilities Adjustment Factor. Existing Land Use VMT based on land use data from Table 19. Local Adjustment Factor derived by dividing Adjusted VMT by Existing Land Use VMT.

Average Trip Length

The U.S. Department of Transportation's 2009 National Household Travel Survey identifies average trips lengths for specific trip purposes, including home-to-work trips, doctor/dentist, school/church and shopping trips (**Appendix D**). In addition, an average residential trip length was calculated using the average of all trip purposes. The longer the overall average trip length for a land use, the higher the vehicle miles of travel will be. The national average trip lengths by trip purpose have been adjusted by the local factor calculated above to derive local trip lengths, as shown in **Table 21**.

Table 21. Average Trip Length By Trip Purpose

TRIP PURPOSE	2009 NATIONAL AVERAGE TRIP LENGTH (MILES)	LOCAL ADJUSTMENT FACTOR	LOCAL AVERAGE TRIP LENGTH (MILES)
To/From Work	11.8	0.738	8.71
Shopping	6.5	0.738	4.80
Family/Personal	7	0.738	5.17
School/Church	6.3	0.738	4.65
Doctor/Dentist	9.9	0.738	7.31
Social Recreational	10.7	0.738	7.90
Other Purposes	9.7	0.738	7.16
Visit Friends/Family	7	0.738	5.17
Residential	8.6	0.738	6.35

Source: National average trip lengths from US Department of Transportation, National Household Travel Survey, 2009 (Appendix A); Local Adjustment Factor from Table 20. Local Average Trip Length (miles) derived by multiplying Average Trip Length by the Local Adjustment Factor.

Trip Length Reduction Factor

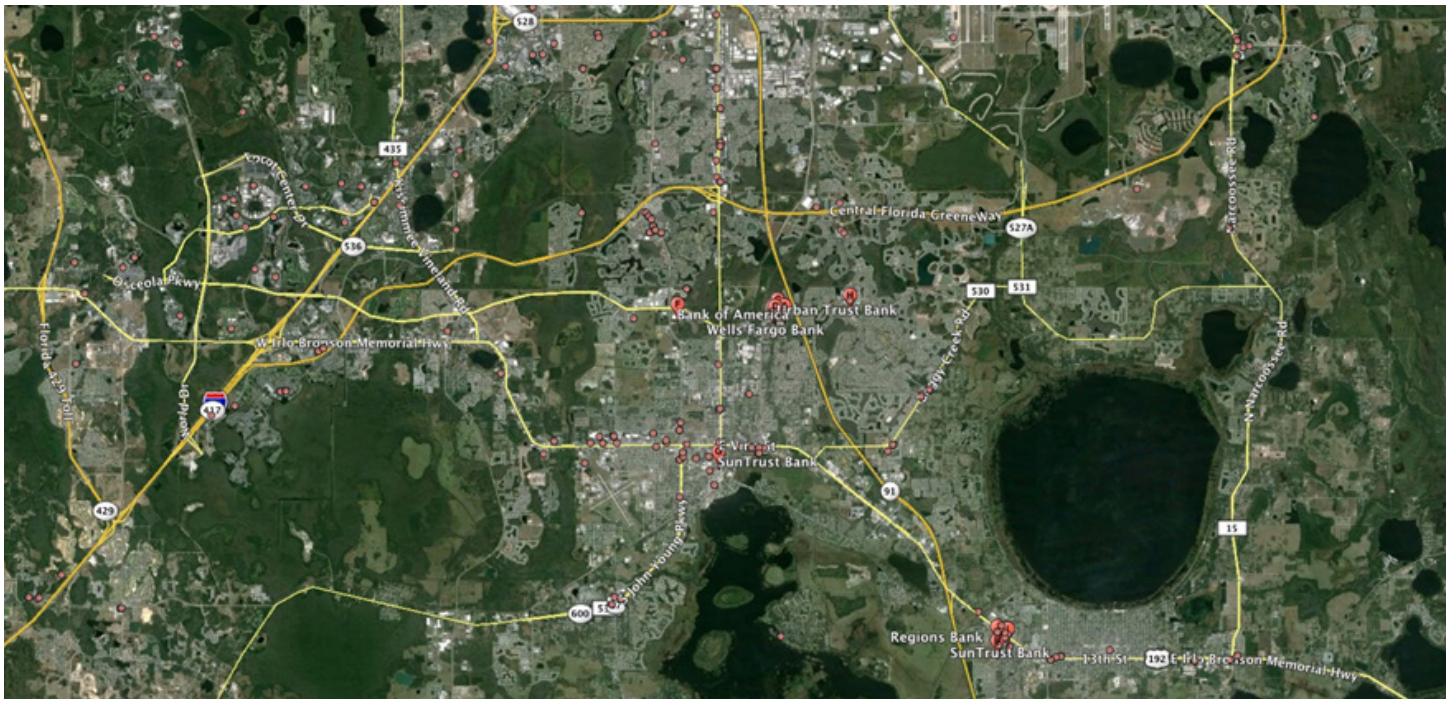
The Average Trip Length for various land uses is based upon national data and adjusted to account for travel within Osceola County on the major roadway network and to discount travel on the Interstate and Toll Road System and local roadways. The national data is provided for broad trip purposes. A further trip length adjustment factor is applied to account for the difference in land uses amongst the trip purposes. Trip Length Adjustments should not be confused with the more commonly know Pass-By Trip reduction. Pass-by trip reductions are a reduction in the gross number of trips to a land uses and account for existing travel on the roadway system that is diverted from its principal origin and destination. Trip Length Adjustments are reductions in the length of a trip, not the gross number of trips.

A number of sources were evaluated to develop the trip length adjustment factors as well as professional experience in evaluating trip characteristics of various land uses. The U.S. Department of Transportation, Federal Highway Administration "National Personal Transportation Survey" was one source utilized to develop factors that reduced the average travel length of overall trips for uses classified as convenience, neighborhood, community, regional and metropolitan. The Osceola County Property Appraisers parcel database was also evaluated. In addition, a visual Geographic Information System (GIS) analysis of the existing land use development pattern within Osceola County was conducted utilizing Google Earth to evaluate the frequency of various land uses within Osceola County. The analysis is particularly useful with convenience uses such as banks, gas stations and fast food establishments.

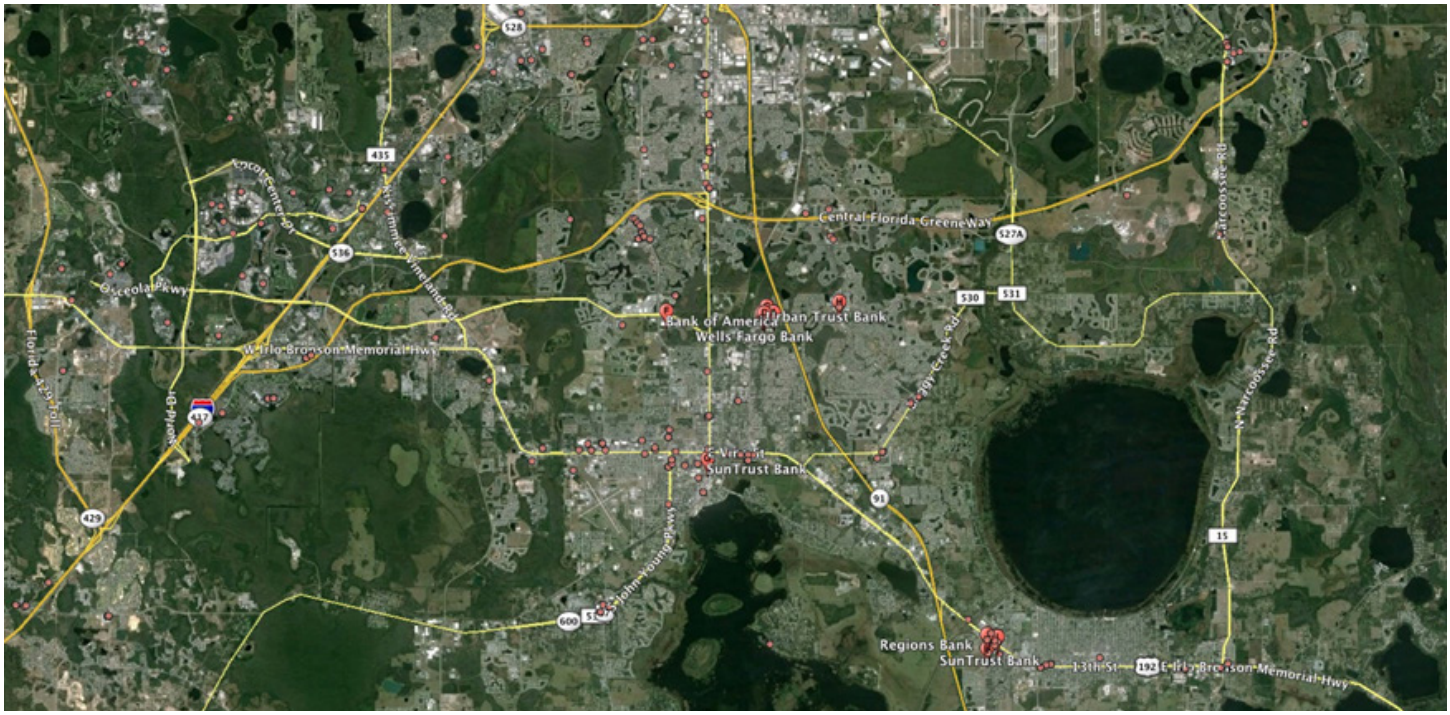
Convenience uses such as banks, fast food and gas stations generate a significant amount of traffic. However, the trip length to and from these types of convenience uses in reality is quite short. A large portion of trips to and from many land uses comes from adjacent roadways. For example, an individual driving from their place of work to their house may first stop at a grocery store, and then may divert their trip a mile or so to a gas station or bank and then head home. In addition, the prevalence of a particular land use pattern and alternatives available factors into the overall trip length. Some larger scale regional retail uses such as

a home improvement center or a discount superstore are uses that typically are destinations, are limited in total number of stores and have a longer average trip length and draw trips from the larger community. The following are two graphics examples obtained from Google Earth that illustrate the prevalence of certain land uses. The 1st illustrates the number of banks within the urbanized area of Osceola County; the 2nd is the number of gas stations.

Banks



Gas Stations



In a recent publication in the Journal for Transportation and Land Use titled Modeling the land-use correlates of vehicle-trip lengths for assessing the transportation impacts of land developments (Volume 6, Number 2 (2013), researches from the University of Florida found a direct correlation between land use patterns and trip length. The abstract for the publication provides the following summary:

> *"This study developed models that relate trip lengths to the land-use characteristics at the trip ends (both production and attraction ends). Separate models were developed by trip purpose. The results indicate several statistically significant and intuitively reasonable effects of land-use patterns. High residential densities and a good mix of complementary land uses are associated with shorter trips. Larger establishments attract longer trips, and the lengths of home-based other trips decrease with an increase in the number of convenient commercial land use parcels in the neighborhood. The connectivity provided by the roadway network and the urban form of the area (measured in terms of number of intersections and cul-de-sacs) affect trip lengths. In addition to the local land-use characteristics, trip lengths also vary significantly by the location of the neighborhood within the region. All these results hold even after controlling for several trip and traveler characteristics."*

The Victoria Transportation Policy Institute recently conducted an extensive analysis of the 2009 National Household Travel Survey (NHTS) data and produced a report titled Short and Sweet: Analysis of shorter trips using National Personal Travel Survey Data (September 10th, 2014). The analysis found that shorter trips and non-motorized trips have historically been underreported. The following are a few of the findings of the analysis:

> *"Conventional travel surveys tend to undercount shorter trips and non-motorized trips due to the way travel statistics are defined and collected.*
>
> *A significant portion of total personal travel consists of shorter trips. According to the NHTS about 10% of reported trips are a half-mile or less, about 19% are a mile or less, and 41% are three miles or less. Since shorter trips tend to be undercounted, the actual share of short trips is probably higher than these figures indicate.*
>
> *According to the NHTS about 12% of total trips are by non-motorized modes, about twice the values reported by most travel surveys. More than half of trips of a mile or less, and nearly a third of trips of three miles or less, are by walking or bicycling.*
>
> *Because walking, cycling and public transit are relative slow modes they represent much larger shares of trips and travel time than travel distance.*
>
> *Of all trip purposes, commuting has the lowest active transport mode share. Mode share for non-commute trips is typically three or four times higher than commute mode share."*

The adopted Comprehensive Plan Future Land Use Map and policies were also evaluated in the analysis. The County's Future Land Use Map has designated significant portions of the undeveloped areas within the Urban Growth Boundary as Mixed-Use. In addition, the Map has designated developed areas as opportunities for infill and redevelopment and has designated these areas as Urban In-Fill. The adopted policies require a mixture of uses within these areas interconnected by a multi-modal network. These are the type of policies that will result in a reduction in travel length.

Table 22 illustrates the trip reduction factors that will be used to adjust the travel length.

Table 22. Trip Length Adjustment Factors

LOCATION	PERCENT
Convenience adjustment	80%
Neighborhood adjustment	60%
Community adjustment	40%
Regional adjustment	20%
Metropolitan adjustment	10%

Source: Trip length adjustment factors based on National Personal Transportation Survey and a GIS evaluation of existing land development pattern within Osceola County and an evaluation of the future lane use pattern per the adopted Comprehensive Plan.

Roadway Capacity

Case law and State Statutes prohibit local governments from imposing upon new development any responsibility for funding an existing transportation deficiency. To evaluate the capacity of the major thoroughfare system to ensure that new development is not being charged for existing deficiencies, a system wide analysis has been conducted. The analysis is achieved by dividing the system-wide capacity (VMC) by the system-wide demand (VMT) based on actual traffic counts. As shown in Table 23, the major road system currently provides units of capacity (VMC) for every unit of travel demand (VMT). This represents the current system-wide level of service, defined at the system-wide level. A VMC/VMT ratio less than 1.00 indicates that there are system deficiencies.

Based on the analysis illustrated in **Table 23**, the system wide VMC/VMT ratio is 2.40. Thus, there are not backlogged facilities on a system wide basis for which new development is being assessed.

Table 23. Existing Major Thoroughfare Capacity-To-Demand Ratio

FUNCTIONAL CLASSIFICATION	EXISTING VEHICLE MILES OF TRAVEL (VMT)	EXISTING VEHICLE MILES OF CAPACITY (VMC)	VMC/VMT RATIO
Collector	5,110,496	886,205	5.77
Principal Arterial	6,322,034	2,983,933	2.12
Minor Arterial	2,451,364	1,579,851	1.55
Limited Access Facilities	954,686	771,198	1.24
Toll Road	4,269,186	1,752,942	2.44
Total	19,107,766	7,974,129	2.40

Source: Data based on Major Roadway Level of Service Report based on traffic counts from Florida Department of Transportation (FDOT) and Osceola County per Appendix D. Roadway Capacity is based on FDOT 2012 Generalized Tables (Appendix B).

PERSON MILES OF TRAVEL PER LAND USE

There are three essential components in determining the Person Miles of Travel per land use. The first component is new trips that will utilize the multimodal transportation system. New development and, in some instances redevelopment, generate new vehicle and person trips.

The County through its adopted Comprehensive Plan has elected to provide mobility for these new trips through the planning and provision of a multimodal transportation system.

A Mobility Fee is one means for development that generates new trips to equitably pay for the mobility demands placed on the multimodal transportation system. These trips are based on factors identified in the *Institute of Transportation Engineers (ITE) Trip Generation Manual 9th, Edition and the ITE Trip Generation Handbook, 3rd Edition*. These factors include trip generation rates per land use, internal capture, pass-by trips and mode share.

The second component is the length of trips. The lengths of trips are determined based upon data from the 2009 National Household Travel Study (NHTS). The trip lengths are derived from the travel patterns of residents across the U.S. These are average trip lengths by type of trip, such as travel from home to work or shopping. The travel lengths are then adjusted by travel rates on the major thoroughfare network shown in **Map B**. Further adjustments take into account local development patterns and the presence of convenience, neighborhood, community, regional and metropolitan land uses.

The third and final component is the conversion of vehicle miles of travel (VMT) per land use determined through new trips and travel length to PMT. The PMT is derived by multiplying the VMT by a PMT factor of 1.3, The PMT factor is based on 2009 National Household Travel Survey (Appendix A) and verified with local and states data from the Orlando Metropolitan Area, which is used to convert VMT per land use to PMT per land use. An overview of each of the factors used in the PMT rate per land use is described below:

PMT per Land Use = (ADT x % NEW x LENGTH) x PMTF / 2
PMT per Land Use (Mixed-Use) = (ADT x % IC x % NEW x LENGTH) x PMTF / 2
PMT per Land Use (Transit Oriented) = (ADT x % IC x % TR x % NEW x LENGTH) x PMTF / 2

Where:

PMT = Person Miles of Travel
ADT = Trip ends during average weekday
IC = Internal Capture Rate
TR = Transit Reduction Rate
% New = Percent of trips that are primary trips, as opposed to pass-by or diverted-link trips
LENGTH = Average length of a trip on the major roadway system, with adjustment factor applied to calibrate national travel demand factors to local conditions.
ORIGIN ADJ = Divides by two to avoid double-counting trips for origin and destination

MOBILITY FEE = (PMC RATE - CPMC) * PMT LAND USE

Average Daily Traffic (ADT) – (aka Trip Generation)

Trip generation rates are based on information published in the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 9th edition. The ITE Manual provides the most recent, uniform and widely utilized source for trip generation rates. In addition, the national trip generation rates compiled by ITE are likely to be applicable to the mix of land uses and trip characteristics found in Osceola County. The ITE Manual is used in communities across the United States and is the accepted source for trip generation utilized by the Florida Department of Transportation.

Internal Capture

The percentage of **internal capture** reflects the reduced impact on the overall transportation system by compact, mixed-use, interconnected developments developed based on New Urbanism principals due to a reduction in the number of trips on external roadways. While the ITE's Trip Generation Handbook, 3rd edition has made some improvements on evaluating mixed-use development; it is still lagging behind a number of recent studies that have shown higher rates. The Transportation Research Board National Cooperative Highway Research Program (NCHRP) Report 684 "Enhancing Internal Trip Capture Estimation for Mixed-Use Development" is increasingly being recognized nationally as a more accurate and representative superior analysis methodology for internal capture than ITE. Even the 3rd Edition of the ITE Handbook has begun to incorporate significant portions of the NCHRP 684 Report. The Report references studies that illustrate internal capture rates between 20% and 30% and for larger scale mixed-use developments that are compact and walkable featuring rates as high as 50%. This data is consistent with studies conducted in Florida for larger scale mixed-use developments that showed an average internal capture rate of 36%.

CHARACTERISTICS OF MULTI-USE SITES SURVEYED BY FDOT, MARCH 1995

MULTI-USE SITE	SIZE (ACRES)	OFFICE (SQ. FT)	COMMERCIAL (SQ. FT.)	HOTEL (ROOMS)	RESIDENTIAL (UNITS)	INTERNAL CAPTURE RATE	PASS-BY RATE
CROCKER CENTER	26	209,000	87,000	256	0	41%	26%
MIZNER PARK	30	88,000	163,000	0	136	40%	29%
GALLERIA AREA	165	137,000	1,150,000	229	722	38%	40%
COUNTRY ISLES	61	59,000	193,000	0	368	33%	28%
VILLAGE COMMONS	72	293,000	231,000	0	317	28%	14%
BOCA DEL MAR	253	303,000	198,000	0	1,144	33%	29%
AVERAGE	**101**	**181,500**	**337,000**	**81**	**448**	**36%**	**28%**

SOURCE: ITE TRIP GENERATION HANDBOOK, 2ND EDITION (PAGES: 129, 130, 132)

The transportation impact for developments that are designed in accordance with Mixed-Use Development and Transit Oriented Policies and provide a mixture of residential, commercial, office and civic uses within a single master development plan have been reduced by 25% to account for the internal capture of vehicular trips within the development and for the increase in pedestrian and bicycle trips that occur when there is a mixture of uses within an interconnected development. The 25% Internal Capture rate is consistent with a number of studies submitted to Osceola County for mixed-use developments. While the Internal Capture Rates vary slightly between the developments that submitted studies, on average **25%** was the calculated Internal Capture Rate and the County has been accepting and approving the traffic analysis; higher Internal Capture Rates maybe proposed by the Developers of Mixed-Use Developments. The Mobility Fee Administrative Manual will provide additional detail regarding conducting more extensive transportation impact analysis to demonstrate a higher Internal Capture rate.

Mixed-Use Developments means developments meeting the development standards established in the future land use element of the county's comprehensive plan for the Celebration (CEL) or Harmony (HAR) policies, or meeting the development standards established mixed use development standards in the county's land development code or other development process approved by the County Manager as established in the Mixed-Use (MX) policies of the future land use element of the county's comprehensive plan, or meeting the designation for village infill development classification as established in the future land use element of the county's comprehensive plan.

Transit Reduction

The percentage of **transit reduction** reflects the reduced impact on the overall transportation system by uses in close proximity to frequent transit service such as currently provided by SunRail. As Transit Oriented Developments (TODs) have started to become more common along rail lines across the U.S., there is an increasing interest in studying the trip reduction benefits of these types of developments. The Transit Cooperative Research Program Report (TCRP) 128 "Effects of TOD on Housing, Parking and Travel" is one of the most extensive evaluations conducted to date on the reduced trip generation impact and demand for parking for TODs. Robert Cervero, PhD University of California at Berkeley and GB Arrington at Parson Brinkerhoff (PB) PlaceMaking, the authors of TCRP Report 128, are the nationally recognized experts in understanding the transportation benefits of TODs. The results of the analysis indicate the following:

> *"Over a typical weekday period, the 17 surveyed TOD-housing projects averaged 44% fewer vehicle trips than that estimated by the ITE manual (3.754 versus 6.715). The weighted average differentials were even larger during peak periods – 49% lower rates during the A.M. peak and 48% lower rates during the P.M. peak (TCRP Report 128 page 8)."*

The analysis includes the cumulative impact of both internal capture and mode share and indicates a reduction of almost 50% in transportation impact over free standing non mixed-use developments. Given that a 25% Internal Capture reduction in trips has already been established for mixed-use developments such as TODs, an additional **25%** Transit Reduction Factor has been applied to account for the full trip reduction impact for TODs. The Osceola County Comprehensive Plan and Land Development Code have specific requirements for the design, location, walkability and compactness of TODs; as additional research is conducted across the U.S., higher Transit Reduction Rates maybe proposed by the Developers of TODs. The Mobility Fee Administrative Manual will provide additional detail regarding conducting more extensive transportation impact analysis to demonstrate a higher Transit Reduction factor.

Transit Oriented Developments means properties within an approved Station Area Plan boundary as established in the Future Land Use Element of the Comprehensive Plan.

The County has proactively planned a future multimodal transportation network that seeks to serve all modes of travel and reduce Vehicle and Person Miles of Travel through adoption of a gridded transportation network and mixed-use development.

New Trips (aka Pass-By)

The percentage of **new trips** is based on a combination of the various pass-by analyses provided in ITE's Trip Generation and various studies that demonstrated higher pass-by rates for convenience land uses such as fast food and convenience gas stations. While the ITE's Trip Generation does not recognize pass-by rates for uses other than retail, pass-by rates were utilized on a number of non-retail uses such as offices, hospitals, social and civic uses in recognition that not all trips to these types of uses are new trips. A pass-by trip is a trip that is already on the roadway and stops at a land use between an origin point (commonly a dwelling) and a destination (place of employment, park).

For example, a person drives from home to work in the morning and stops for a quick breakfast at a fast food restaurant along the way. If the fast food restaurant were accessed from the same roadway that the person is going to work on, then this trip would be treated as a **pass-by trip**. A pass-by trip is different than the trip length adjustment factor, in that a trip only counts as a pass-by trip if an individual travels on the same roadway; whereas the convenience trip length adjustment factor in travel applies to the trip length between uses and the need to access another roadway.

Person Miles of Travel (PMT) Factor

To account for person trips made by walking, biking, riding transit and vehicle occupancy in a multimodal travel environment, VMT were converted into Person Miles of Travel (PMT). The data for PMT was derived from the U.S. Department of Transportation 2009 National Household Travel Study (NHTS) (**Appendix A**). The OUATS Model and a Florida specific study of the 2009 NHTS conducted for the Florida Department of Transportation were also evaluated for comparative purposes. The analysis resulted in a **PMT** factor of **1.3**, which was applied to the growth in VMT to evaluate future multimodal travel demand within unincorporated Osceola County. The PMT factor of 1.3 is utilized to adjust the VMT for individual land uses. The application of the PMT factor to the VMT is performed to account for travel by multiple modes of travel on the multimodal transportation system.

Origin Adjustment Factor

Trip generation rates represent trip ends, or driveway crossings at the site of a land use. Thus, a single origin trip from home to work counts as one trip end for the residence and one trip end for the work place, for a total of two trip ends. To avoid over-counting, the PMT for all uses has been divided by two. This places the burden of travel equally between the origin and destination of the trip and eliminates double charging for any particular trip.

Travel Demand Schedule

The result of combining trip generation rates, percent of new trips, average trip length, trip reduction factor is a travel demand schedule that establishes the VMT during the average weekday generated by various land uses types per unit of development for Osceola County. The average trip lengths are based upon the values provided in **Table 21** and trip reduction factors per the values in Table 21.

The travel demand schedule for each land use is presented in **Table 24**, below. **Neighborhood Retail** means retail, restaurant without drive-through, banking without drive-through and personal and business services that are less than 20,000 square feet in size and are not otherwise specifically identified in the mobility fee schedule.

Rural Single Family means single family residential uses outside the urban growth boundary. The trip lengths for rural residential uses reflect their greater use of the roadway system given their location outside existing and planned urban areas.

Table 24. Travel Demand Schedule Per Land Use

CATEGORY/LAND USE TYPE	TRIP GEN RATE	% NEW TRIPS	TRIP LENGTH	LOCAL TRIP LENGTH FACTOR	ADJUSTED TRIP LENGTH
Residential Per Dwelling Unit					
Single Family	9.52	1.00	6.35	0.80	5.08
Rural Single Family	8.09	1.00	10.50	0.90	9.45
Multi-Family	6.65	1.00	6.35	0.80	5.08
Townhome/Urban Flat/Condo	5.81	1.00	6.35	0.80	5.08
Mobile Home	4.99	1.00	6.35	0.80	5.08
Active Adult	3.56	1.00	6.35	0.80	5.08
Assisted Living/Care	2.36	1.00	6.35	0.80	5.08
Recreation/Entertainment per Specific Unit of Measure					
Marina per Berth	2.96	1.00	7.90	0.80	6.32
Golf Course per Hole	35.74	0.50	7.90	0.40	3.16
Amusement Park per Acre	75.76	0.75	7.90	0.90	7.11
Multipurpose Recreational Facility per Acre	90.38	0.75	7.90	0.60	4.74
Movie Theater per Seat	2.00	0.75	7.90	0.80	6.32
Racquet/Tennis Club per Court	34.87	0.50	7.90	0.40	3.16
Health/Fitness/Athletic Club per 1,000 FT2	37.97	0.50	7.90	0.40	3.16
Recreational Community Center per 1,000 FT2	33.83	0.50	7.90	0.40	3.16
Institutional per 1,000 FT2					
Place of Assembly	9.11	0.90	6.08	0.40	2.43
Day Care Center	74.06	0.40	6.08	0.20	1.22
Office per 1,000 FT2					
Less than 20,000 FT2	11.03	0.75	8.71	0.20	1.74
20,000 FT2 to 100,000 FT2	11.65	0.75	8.71	0.40	3.48
Greater than 100,000 FT2	12.44	0.75	8.71	0.60	5.23
Medical Buildings per 1,000 FT2					
Medical/Dental Offices	36.13	0.50	7.31	0.40	2.92
Hospitals	13.22	0.75	7.31	0.80	5.85
Nursing Home	7.60	0.90	5.17	0.40	2.07

Table 24. Travel Demand Schedule Per Land Use Cont.

	TRIP GEN RATE	% NEW TRIPS	TRIP LENGTH	LOCAL TRIP LENGTH FACTOR	ADJUSTED TRIP LENGTH
Industrial Buildings per 1,000 FT2					
Warehousing/Manufacturing/ Industrial	3.40	0.90	8.71	0.80	6.97
Mini-Warehousing	2.50	0.90	7.16	0.60	4.30
General Commercial Retail per 1,000 FT2					
Neighborhood Retail (<20,000 FT2)	44.32	0.40	4.80	0.40	1.92
Community Retail (20,000 FT2 to 100,000 FT2)	49.97	0.50	4.80	0.60	2.88
Regional Retail (Greater than 100,000 FT2)	54.00	0.60	4.80	0.80	3.84
Variety/Dollar Store	64.03	0.40	4.80	0.40	1.92
Factory Outlet Center	26.59	0.80	4.80	0.90	4.32
Grocery Store	96.55	0.50	4.80	0.40	1.92
Pharmacy with Drive-Thru	93.49	0.40	4.80	0.40	1.92
Restaurant with Drive-Thru	311.64	0.25	4.80	0.20	0.96
Car Sales	32.30	0.75	7.16	0.60	4.30
Auto Parts Store	61.91	0.60	4.80	0.40	1.92
Tire & Auto Repair	23.72	0.60	7.16	0.40	2.86
Non-Residential per Specific Unit of Measure					
Hotel per Room	8.18	0.75	7.16	0.80	5.73
Resort Hotel with Conference Center per Room	12.36	0.75	7.16	0.90	6.44
Bank/Savings with Drive-Thru per Drive-Thru Lane	139.25	0.40	5.17	0.20	1.03
Convenience Market & Gas per Fuel Position	352.00	0.25	5.17	0.20	1.03
Quick Lube Vehicle Service per Bay	40.00	0.40	5.17	0.20	1.03
Car Wash per Stall	108.00	0.25	5.17	0.20	1.03

Person Miles of Travel per Land Use

The PMT factor is applied to the VMT per land use to derive a PMT per land use. The PMT for land uses in Mixed-Use Developments reflect a 25% reduction in trip generation rates due to the application of internal capture. The PMT for land uses in Transit Oriented Areas reflect a 25% reduction in trip generation rates due to the application of internal capture and then a subsequent 25% transit reduction factor, for a total reduction of 50%. The Person Miles of Travel per Land Use illustrated in **Table 25**.

Table 25. Person Miles of Travel Per Land Use

	PERSON MILES TRAVEL (PMT) MOBILITY FEE	PMT MIXED-USE	PMT TRANSIT ORIENTED
Residential Per Dwelling Unit			
Single Family	31.44	23.58	15.72
Rural Single Family	49.68	37.26	24.84
Multi-Family	21.96	16.47	10.98
Townhome/Urban Flat/Condo	19.18	14.39	9.59
Mobile Home	16.48	12.36	8.24
Active Adult	11.76	8.82	5.88
Assisted Living/Care	7.79	5.84	3.90
Recreation/Entertainment per specific unit of measure			
Marina per Berth	12.16	9.12	6.08
Golf Course per Hole	36.70	27.53	18.35
Amusement Park per Acre	65.65	49.24	32.82
Multipurpose Recreational Facility per Acre	52.21	39.16	26.11
Movie Theater per Seat	6.16	4.62	3.08
Racquet/Tennis Club per Court	35.81	26.86	17.91
Health/Fitness/Athletic Club per 1,000 FT2	38.99	29.24	19.50
Recreational Community Center per 1,000 FT2	34.74	26.06	17.37
Institutional per 1,000 FT2			
Place of Assembly	12.96	9.72	6.48
Day Care Center	23.41	17.56	11.71
Office per 1,000 FT2			
Less than 20,000 FT2	9.37	7.03	4.68
20,000 FT2 to 100,000 FT2	19.79	14.84	9.89
Greater than 100,000 FT2	31.69	23.77	15.85
Medical Buildings per 1,000 FT2			
Medical/Dental Offices	34.33	25.75	17.17
Hospitals	37.69	28.27	18.84
Nursing Home	9.19	6.90	4.60

Table 25. Person Miles of Travel Per Land Use Cont.

	PERSON MILES TRAVEL (PMT) MOBILITY FEE	PMT MIXED-USE	PMT TRANSIT ORIENTED
Industrial Buildings per 1,000 FT2			
Warehousing/Manufacturing/Industrial	13.88	10.41	6.94
Mini-Warehousing	6.28	4.71	3.14
General Commercial Retail per 1,000 FT2			
Neighborhood Retail (< 20,000 FT2)	22.12	16.59	11.06
Community Retail (20,000 FT2 to 100,000 FT2)	46.77	35.08	23.39
Regional Retail (Greater than 100,000 FT2)	80.86	60.65	40.43
Variety / Dollar Store	31.96	23.97	15.98
Factory Outlet Center	59.73	44.80	29.87
Grocery Store	60.25	45.19	30.12
Pharmacy with Drive-Thru	46.67	35.00	23.33
Restaurant with Drive-Thru	48.62	36.46	24.31
Car Sales	67.65	50.73	33.82
Auto Parts Store	46.36	34.77	23.18
Tire & Auto Repair	26.49	19.87	13.25
Non-Residential per specific unit of measure			
Hotel per Room	22.84	17.13	11.42
Resort Hotel with Conference Center per Room	38.83	29.12	19.41
Bank/Savings with Drive-Thru per Drive-Thru Lane	37.44	28.08	18.72
Convenience Market & Gas per Fuel Position	59.14	44.36	29.57
Quick Lube Vehicle Service per Bay	10.75	8.07	5.38
Car Wash per Stall	18.15	13.61	9.07

MOBILITY FEE SCHEDULE

The Mobility Fee for land uses is based on the PMC Rate established in **Table 9** multiplied by the PMT rate per land use from **Table 25**. The formula below is utilized to determine the Mobility Fee per land use:

Mobility Fee *per land use* = (PMC *rate* - PMC *credit*) * PMT per land use)

Using the Mobility Fee formula and the inputs calculated in this report, the maximum potential Mobility Fees per unit of development for various land uses are shown in **Table 25**. The Mobility Fee for land uses in Mixed-Use Developments is 25% lower than for land uses outside Mixed-Use Development. The reduced fee for land uses in Mixed-Use Developments is due to a reduced PMT rate per land use from the application of internal capture. The Mobility Fee for land uses in Transit Oriented Developments is 50% lower than the full Mobility Fee due to a reduced PMT rate per land use from the application of internal capture and the transit reduction factor.

The Remainder of This Page Intentionally Left Blank

Table 26. Mobility Fee Schedule

	MOBILITY FEE	MIXED-USE	TRANSIT ORIENTED
Residential Per Dwelling Unit			
Single Family	$4,585	$3,439	$2,293
Rural Single Family	$7,247	N/A	N/A
Multi-Family	$3,203	$2,402	$1,602
Townhome/Urban Flat/Condo	$2,798	$2,099	$1,399
Mobile Home	$2,403	N/A	N/A
Active Adult	$1,715	$1,286	$857
Assisted Living/Care	$1,137	$853	$568
Recreation/Entertainment per specific unit of measure			
Marina per Berth	$1,774	$1,330	N/A
Golf Course per Hole	$5,354	$4,016	N/A
Amusement Park per Acre	$9,576	N/A	N/A
Multipurpose Recreational Facility per Acre	$7,616	$5,712	$3,808
Movie Theater per Seat	$899	$674	$449
Racquet/Tennis Club per Court	$5,224	$3,918	$2,612
Health/Fitness/Athletic Club per 1,000 FT2	$5,687	$4,266	$2,844
Recreational Community Center per 1,000 FT2	$5,068	$3,801	$2,534
Institutional per 1,000 FT2			
Place of Assembly	$1,891	$1,418	$945
Day Care Center	$3,416	$2,562	$1,708
Office per 1,000 FT2			
Less than 20,000 FT2	$1,366	$1,025	$683
20,000 FT2 to 100,000 FT2	$2,886	$2,165	$1,443
Greater than 100,000 FT2	$4,623	$3,467	$2,312
Medical Buildings per 1,000 FT2			
Medical/Dental Offices	$5,008	$3,756	$2,504
Hospitals	$5,498	$4,123	$2,749
Nursing Home	$1,341	$1,006	$671

Table 26. Mobility Fee Schedule Cont.

	MOBILITY FEE	MIXED-USE	TRANSIT ORIENTED
Industrial Buildings per 1,000 FT2			
Warehousing/Manufacturing/Industrial	$2,024	$1,518	$1,012
Mini-Warehousing	$916	$687	$458
General Commercial Retail per 1,000 FT2			
Neighborhood Retail (< 20,000 FT2)	$3,227	$2,420	$1,614
Community Retail (20,000 FT2 to 100,000 FT2)	$6,823	$5,117	$3,411
Regional Retail (Greater than 100,000 FT2)	$11,795	$8,847	$5,898
Variety/Dollar Store	$4,663	$3,497	$2,331
Factory Outlet Center	$8,713	$6,535	$4,357
Grocery Store	$8,788	$6,591	$4,394
Pharmacy with Drive-Thru	$6,807	$5,106	$3,404
Restaurant with Drive-Thru	$7,091	$5,319	$3,546
Car Sales	$9,868	$7,401	$4,934
Auto Parts Store	$6,762	$5,072	$3,381
Tire & Auto Repair	$3,865	$2,899	$1,932
Non-Residential per specific unit of measure			
Hotel per Room	$3,332	$2,499	$1,666
Resort Hotel with Conference Center per Room	$5,664	$4,248	$2,832
Bank/Savings with Drive-Thru per Drive-Thru Lane	$5,461	$4,096	$2,730
Convenience Market & Gas per Fuel Position	$8,627	$6,471	$4,314
Quick Lube Vehicle Service per Bay	$1,569	$1,176	$784
Car Wash per Stall	$2,647	$1,985	$1,324

MOBILITY FEE SERVICE AREAS AND DISTRICTS

There are two kinds of geographic areas in mobility fee systems: service areas and mobility fee districts. A service area, also sometimes called an assessment district, is an area that is served by a defined group of capital facilities and is subject to a uniform mobility fee schedule. A mobility fee district is an area within which mobility fees collected are earmarked for expenditure.

The mobility fee service area would currently only be charged in the unincorporated area of Osceola County. The City of Kissimmee and City of St. Cloud have currently opted not to be part of the County's Mobility Fee. The Mobility Fee is structured to incorporate the municipalities at a future date if they elect to join in with the County via an Interlocal Agreement. The data used in the calculations of the Mobility Fee would need to be updated. The County would use a single mobility fee schedule that applies uniformly throughout the unincorporated area. The mobility fee covers development within and outside the adopted Urban Growth Boundary. Agricultural uses and residential units principally associated with the agricultural land uses are permitted outside the Urban Growth Boundary. All other land uses would require an amendment to the Comprehensive Plan Land Use Map. The mobility fee does not cover non-residential land uses or residential uses other than those associated with agricultural uses outside the Urban Growth Boundary. The Mobility Fee would need to be amended to recognize additional land uses outside the Urban Growth Boundary other than what is approved in the currently adopted Comprehensive Plan.

The County's mobility fee service area is divided into two mobility fee districts as illustrated on **Map F**. One Mobility Fee benefit district would be located west of the Florida Turnpike and the other would be located east of the Turnpike. The Turnpike is a clearly defined physical feature that impacts travel patterns within the County and clearly defines District boundaries. There are only 11 crossings over the 56 miles of Turnpike that run through Osceola County, which is an impediment to east–west travel. A third district was considered at Interstate 4. However, given there are eight (8) overpasses along the 7.3 miles of Interstate 4 through Osceola County, the Interstate is not a barrier to east-west travel. The cities of St. Cloud and Kissimmee have declined to participate in the mobility fee program and as shown, are excluded from the districts.

The Turnpike provides a clearly defined boundary for the expenditure of funds. Mobility fees collected in each district are restricted to be spent on multi-modal improvements within the same district. Using the Turnpike ensures that funds paid by development on either side of the Turnpike are spent on projects to accommodate travel in that mobility fee district. The physical barrier of the Turnpike ensures the second prong of the dual rational nexus test is met by clearly defining where funds are collected and where they are expended.

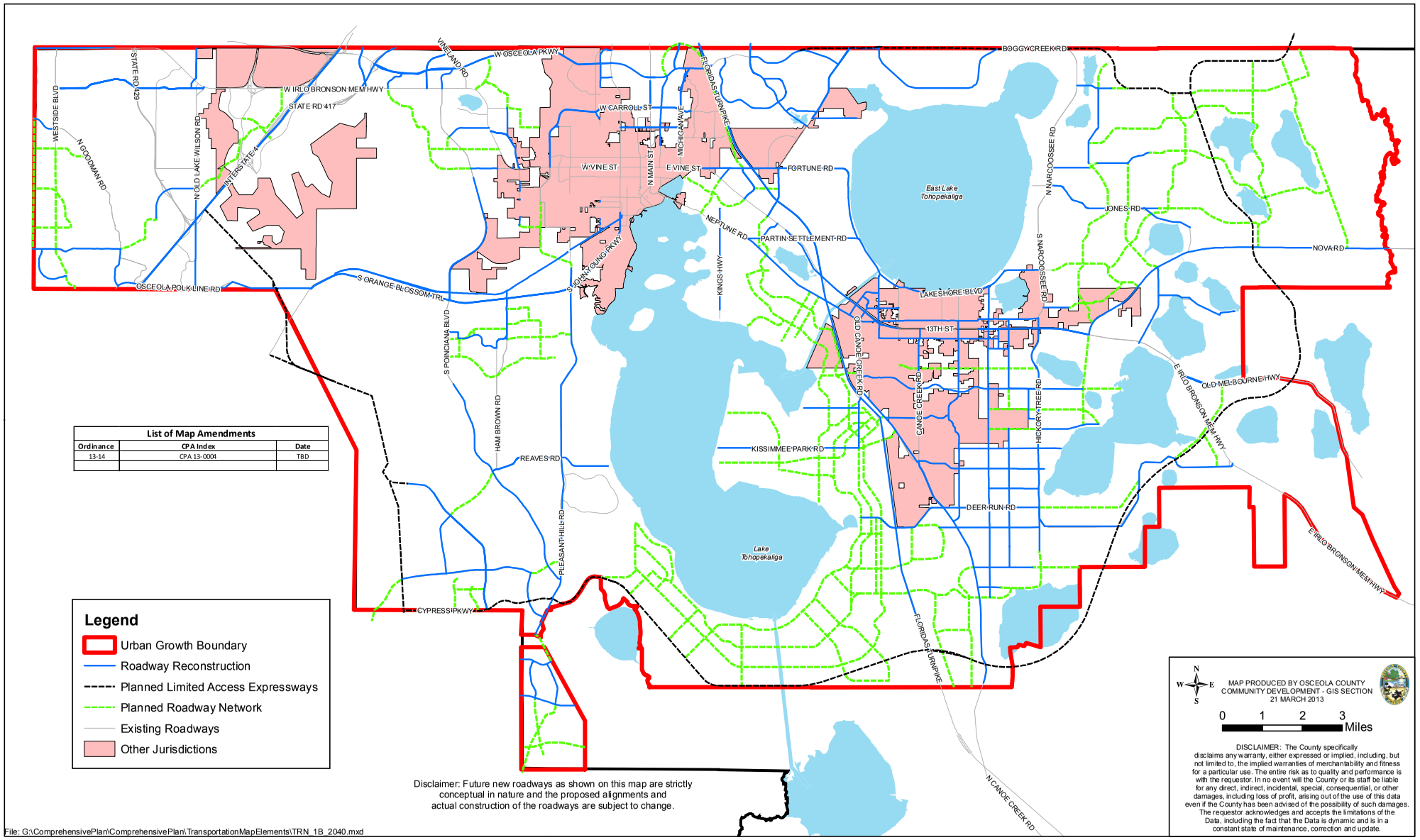
CONCLUSION

The Osceola County Mobility Fee is partially based upon the Mobility Indicators articulated in the adopted Comprehensive Plan. Mobility Fees are intended to be a streamlined, equitable replacement of transportation concurrency, proportionate share and roadway impact fees. The Mobility Fee is based on the projected travel demand within Osceola County between 2015 and 2040 and the multimodal improvements in the adopted Transportation Element.

The Transportation Element establishes the framework for a multimodal transportation system that seeks to promote walking, biking and transit and improved mobility to major trip attractors and SunRail through an interconnected network. The Mobility Fees are one of multiple revenue sources that will be utilized to fund multimodal transportation improvements consistent with the 2040 Comprehensive Plan.

Map A - Roadway Network UGB - 2040

TRN 1B: Roadway Network UGB - 2040



List of Map Amendments		
Ordinance	CPA Index	Date
13-14	CPA 13-0001	TBD

Legend

- Urban Growth Boundary
- Roadway Reconstruction
- Planned Limited Access Expressways
- Planned Roadway Network
- Existing Roadways
- Other Jurisdictions

Disclaimer: Future new roadways as shown on this map are strictly conceptual in nature and the proposed alignments and actual construction of the roadways are subject to change.

MAP PRODUCED BY OSCEOLA COUNTY
COMMUNITY DEVELOPMENT - GIS SECTION
21 MARCH 2013

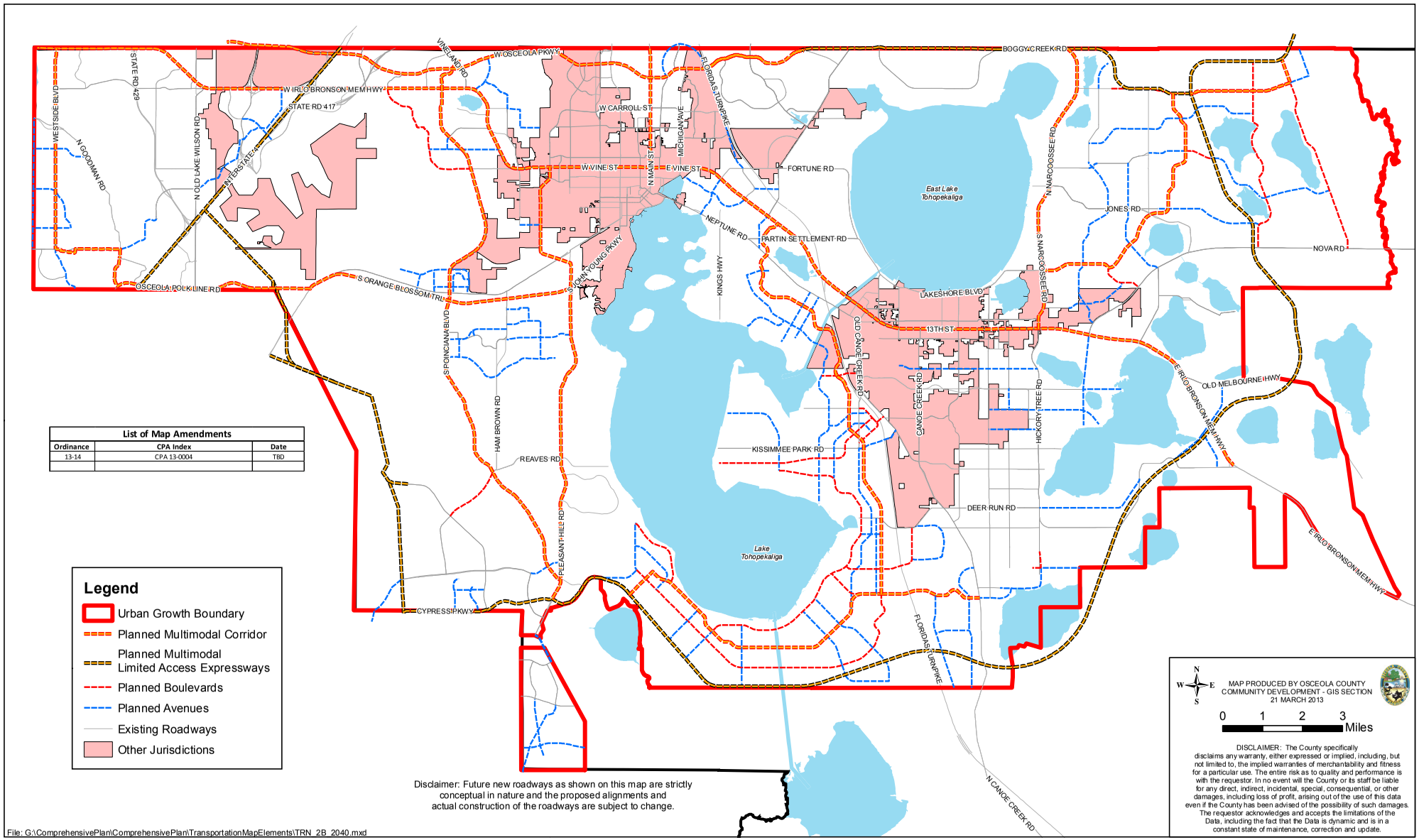
0 1 2 3 Miles

DISCLAIMER: The County specifically disclaims any warranty, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular use. The entire risk as to quality and performance is with the requestor. In no event will the County or its staff be liable for any direct, indirect, incidental, special, consequential, or other damages, including loss of profit, arising out of the use of this data even if the County has been advised of the possibility of such damages. The requestor acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction and update.

File: G:\ComprehensivePlan\ComprehensivePlan\TransportationMapElements\TRN_1B_2040.mxd

Map B - Roadway Classifications UGB - 2040

TRN 2B: Roadway Classification System UGB - 2040



List of Map Amendments		
Ordinance	CPA Index	Date
13-14	CPA 13-0004	TBD

Legend

- Urban Growth Boundary
- Planned Multimodal Corridor
- Planned Multimodal Limited Access Expressways
- Planned Boulevards
- Planned Avenues
- Existing Roadways
- Other Jurisdictions

Disclaimer: Future new roadways as shown on this map are strictly conceptual in nature and the proposed alignments and actual construction of the roadways are subject to change.

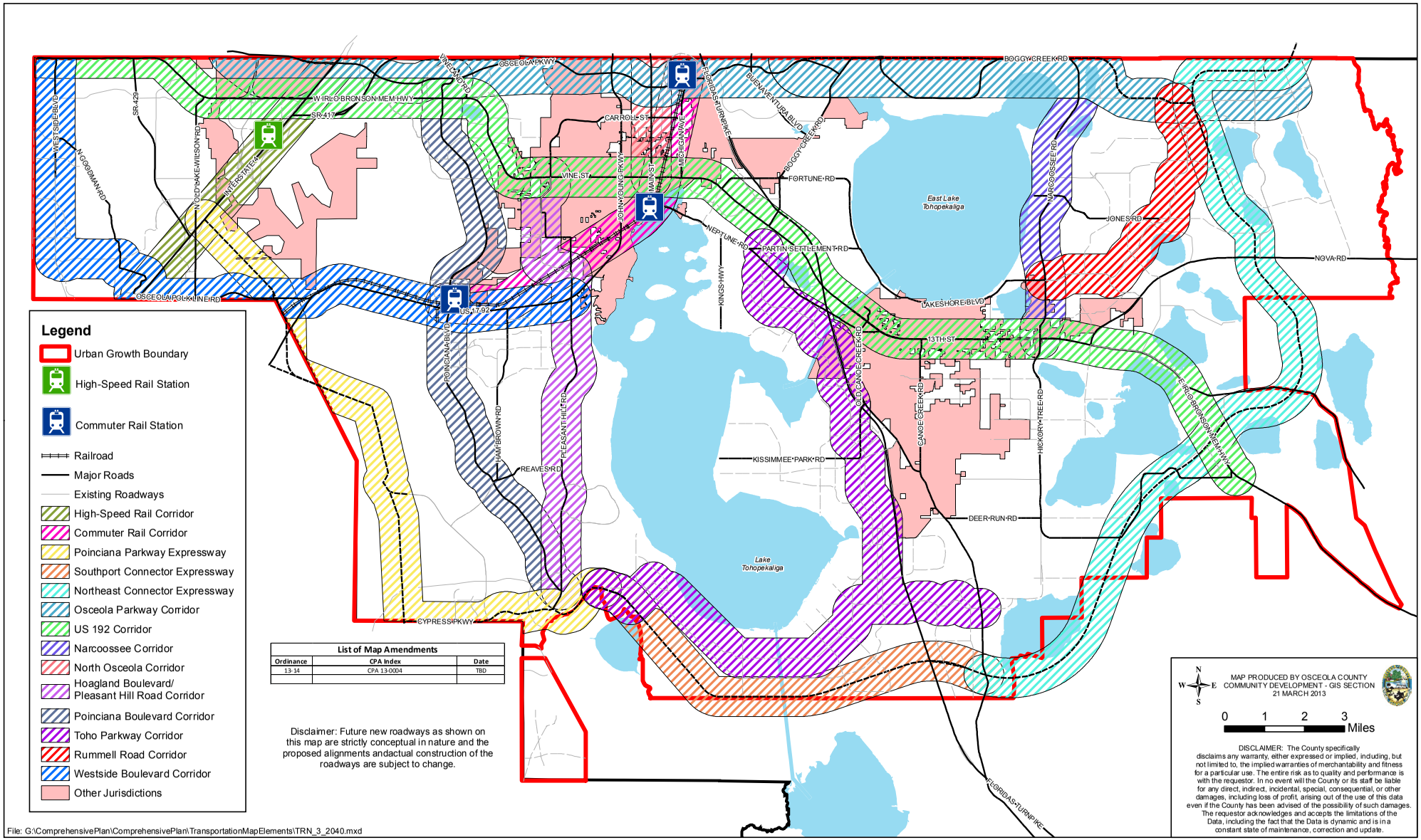
MAP PRODUCED BY OSCEOLA COUNTY COMMUNITY DEVELOPMENT - GIS SECTION
21 MARCH 2013

0 1 2 3 Miles

File: G:\ComprehensivePlan\ComprehensivePlan\TransportationMapElements\TRN_2B_2040.mxd

Map C - Multimodal Corridors - 2040

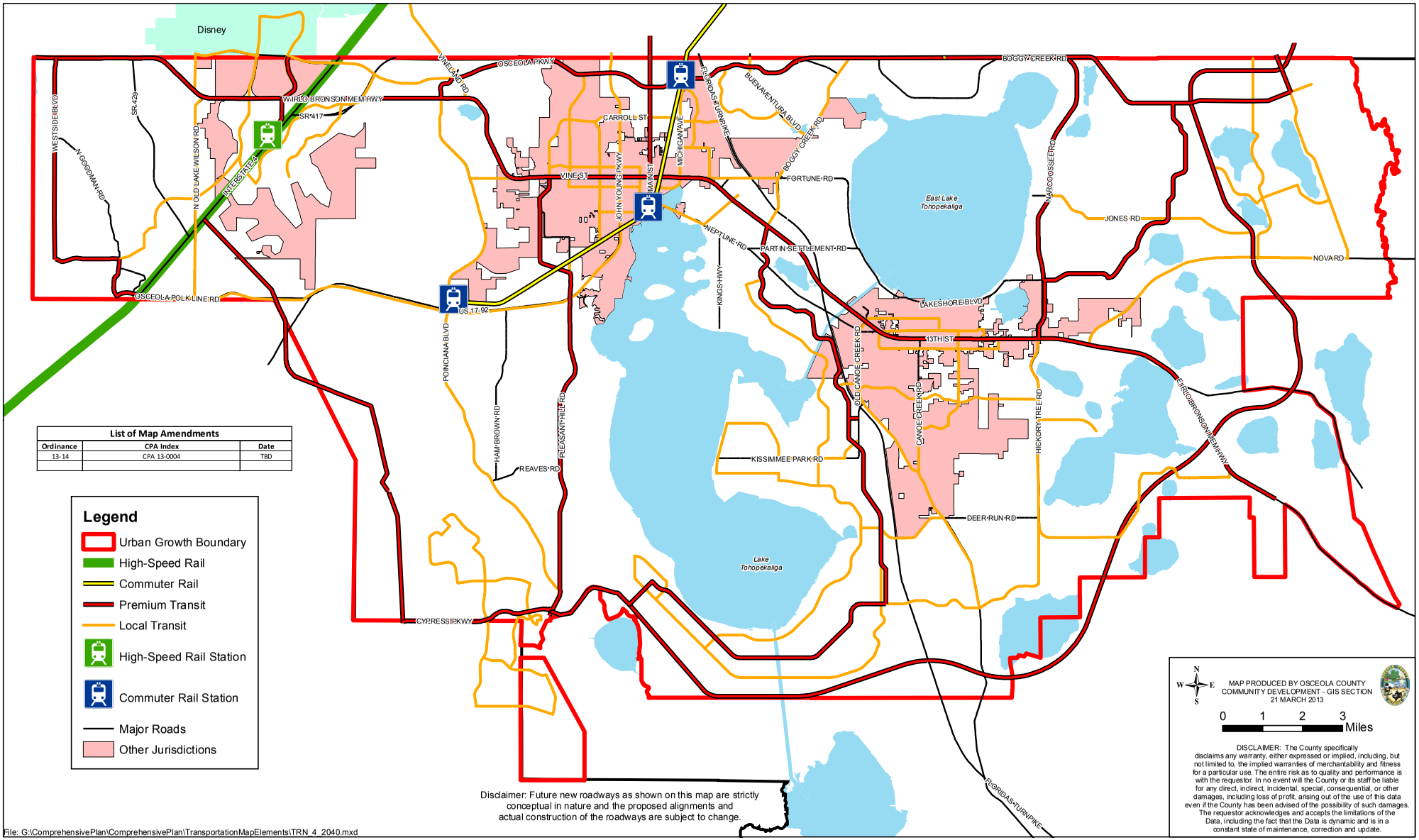
TRN 3: Multimodal Corridors - 2040



File: G:\ComprehensivePlan\ComprehensivePlan\TransportationMapElements\TRN_3_2040.mxd

Map D - Transit System - 2040

TRN 4: Transit System - 2040



List of Map Amendments		
Ordinance	CPA Index	Date
13-14	CPA 13-0004	TBD

Legend

- Urban Growth Boundary
- High-Speed Rail
- Commuter Rail
- Premium Transit
- Local Transit
- High-Speed Rail Station
- Commuter Rail Station
- Major Roads
- Other Jurisdictions

Disclaimer: Future new roadways as shown on this map are strictly conceptual in nature and the proposed alignments and actual construction of the roadways are subject to change.

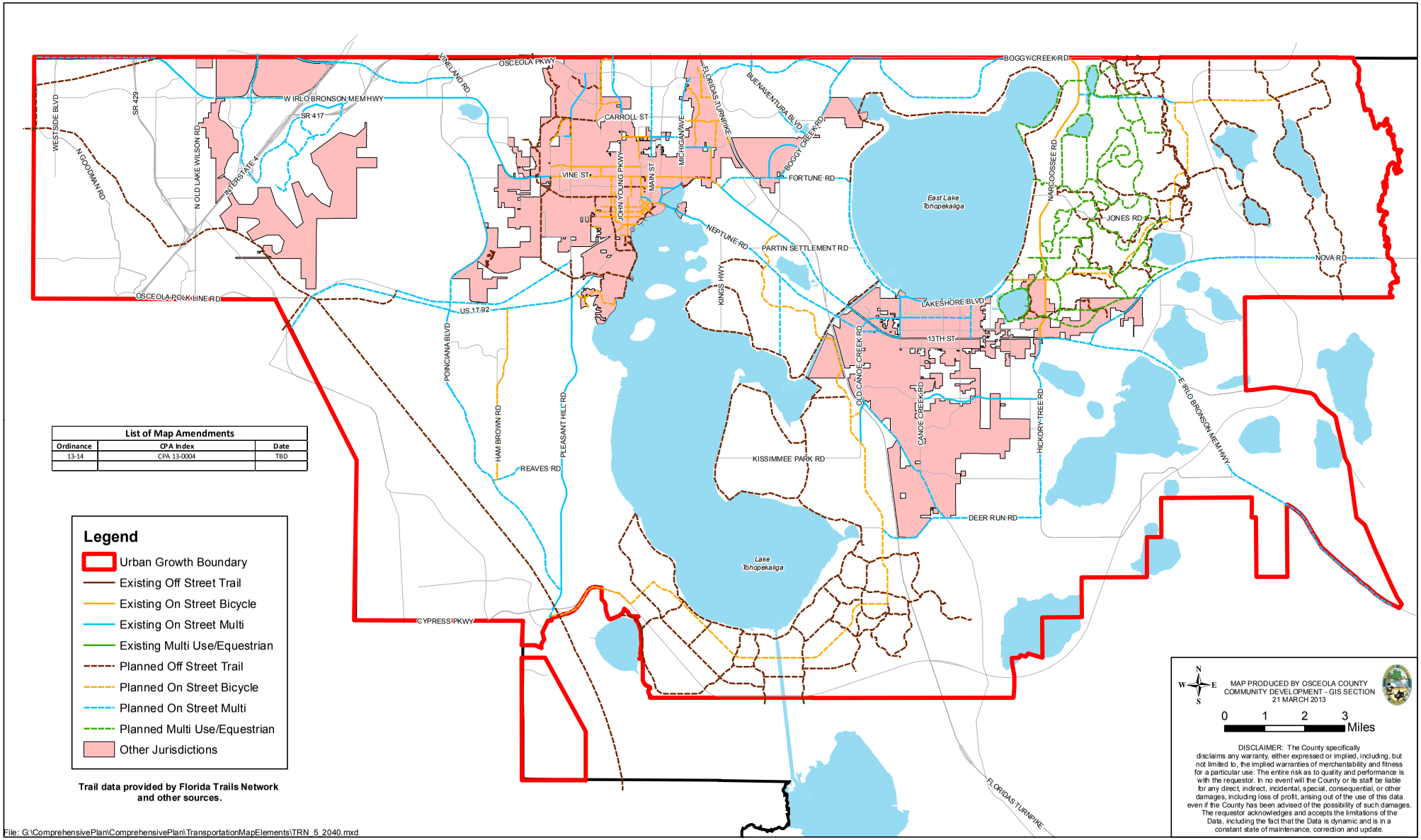
MAP PRODUCED BY OSCEOLA COUNTY
COMMUNITY DEVELOPMENT - GIS SECTION
21 MARCH 2013

0 1 2 3 Miles

File: G:\ComprehensivePlan\ComprehensivePlan\TransportationMapElements\TRN_4_2040.mxd

Map E - Bicycle Trail Facilities - 2040

TRN 5: Bicycle and Trail Facilities - 2040



List of Map Amendments		
Ordinance	CPA Index	Date
13-14	CPA 13-0004	TBD

Legend

- Urban Growth Boundary
- Existing Off Street Trail
- Existing On Street Bicycle
- Existing On Street Multi
- Existing Multi Use/Equestrian
- Planned Off Street Trail
- Planned On Street Bicycle
- Planned On Street Multi
- Planned Multi Use/Equestrian
- Other Jurisdictions

Trail data provided by Florida Trails Network and other sources.

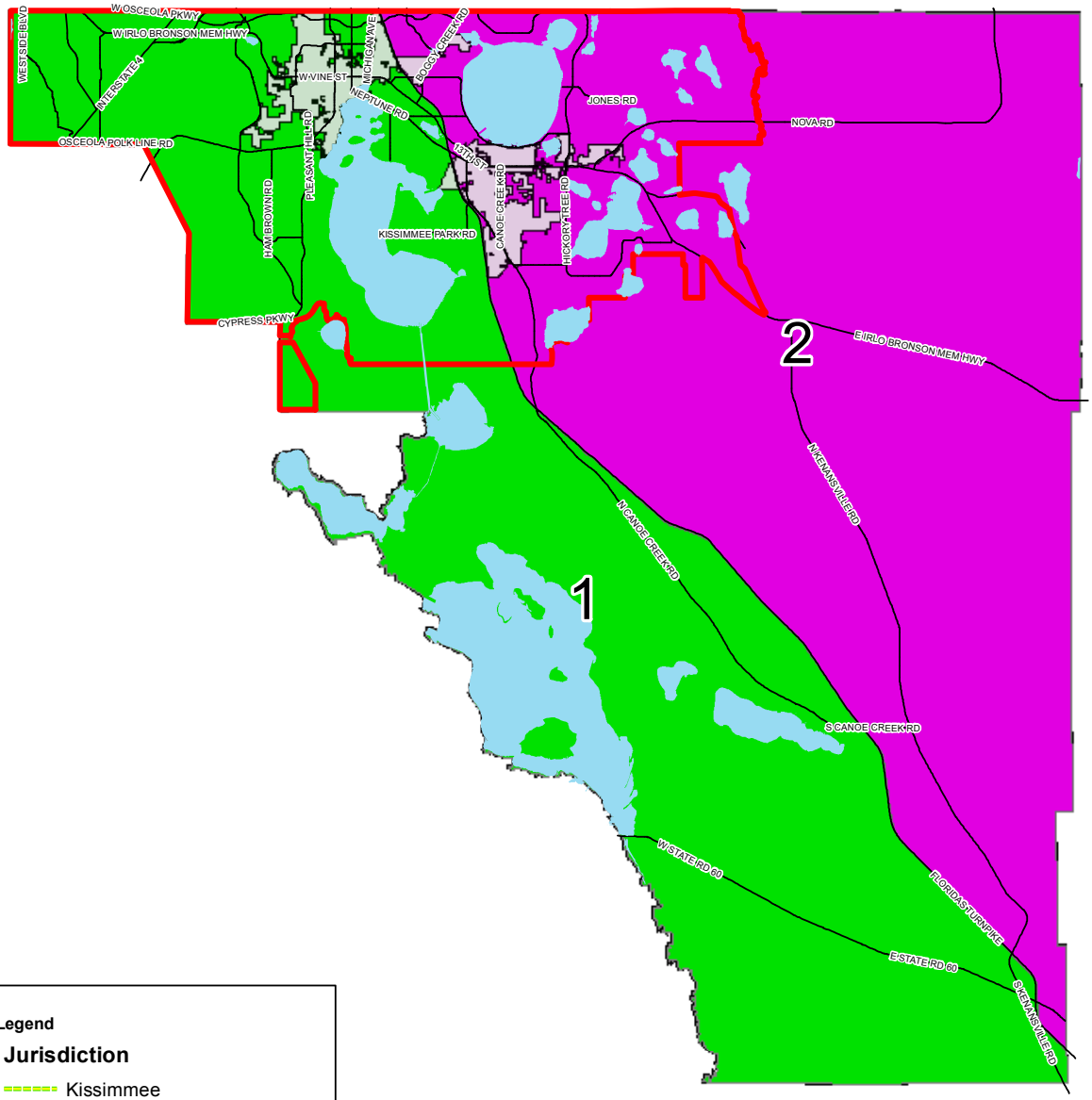
MAP PRODUCED BY OSCEOLA COUNTY
COMMUNITY DEVELOPMENT - GIS SECTION
21 MARCH 2013

0 1 2 3 Miles

File: G:\ComprehensivePlan\ComprehensivePlan\TransportationMapElements\TRN_5_2040.mxd

Map F - Osceola County Mobility Fee Districts

Osceola County Mobility Fee Districts



Legend

Jurisdiction

- Kissimmee
- Osceola
- St. Cloud
- City
- Urban Growth Boundary

Mobility Fee District

- 1
- 2

Disclaimer: Future new roadways as shown on this map are strictly conceptual in nature and the proposed alignments and actual construction of the roadways are subject to change.

MAP PRODUCED BY OSCEOLA COUNTY COMMUNITY DEVELOPMENT - GIS SECTION 20AUGUST2014

0 2 4 6 Miles

DISCLAIMER: The County specifically disclaims any warranty, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular use. The entire risk as to quality and performance is with the requestor. In no event will the County or its staff be liable for any direct, indirect, incidental, special, consequential, or other damages, including loss of profit, arising out of the use of this data even if the County has been advised of the possibility of such damages. The requestor acknowledges and accepts the limitations of the Data, including the fact that the Data is dynamic and is in a constant state of maintenance, correction and update.

Document Path: U:\PLNSHARE\Planning\Transportation Planning\Mobility Fee\GIS\Mobility_Districts_09-12-2014.mxd

Appendix A - 2009 National Household Travel Survey Trip Characteristics

3.0 HOUSEHOLD TRAVEL

Overall, the decreases in person travel shown in Table 3 were indicated in household-generated travel. Table 5 shows the trends in person trips and person miles of travel (PMT) by purpose. While most estimates are statistically the same as in 2001, important exceptions include the significant decrease in person miles, person trips, and average person trip length for family and personal business (errands), and the decrease in person trips per household and average person trip length for shopping. Another significant change is the number of person trips per household to and from work; although the total PMT and average trip length to work have not changed (the 2001 estimate is within the margin of error of the 2009 estimate).

Table 5. Average Annual PMT, Person Trips and Trip Length by Trip Purpose
1969, 1977, 1983, 1990, and 1995 NPTS, and 2001 and 2009 NHTS.

Trip Purpose	1983	1990	1995	2001	2009	95% CI
Average Annual PMT per Household						
All Purposes	22,802	30,316	34,459	35,244	33,004	1,235.1
To/From Work	4,586	5,637	7,740	6,706	6,256	170.1
Work Related Business	1,354	1,043	1,987	2,987	2,078	247.2
Shopping	2,567	3,343	4,659	4,887	4,620	181.4
Other Family/Personal Errands	3,311	7,167	7,381	6,671	5,134	222.8
School/Church	1,522	1,599	1,973	2,060	2,049	123.0
Social and Recreational	8,964	11,308	10,571	10,586	9,989	585.8
Other	500	214	131	1,216	2,878	864.6
Average Annual Person Trips per Household						
All Purposes	2,628	3,262	3,828	3,581	3,466	31.8
To/From Work	537	539	676	565	541	7.9
Work Related Business	62	38	100	109	106	7.4
Shopping	474	630	775	707	725	14.6
Other Family/Personal Errands	456	854	981	863	748	13.9
School/Church	310	304	337	351	333	9.8
Social and Recreational	728	874	953	952	952	14.1
Other	61	22	6	30	61	4.1
Average Person Trip Length (miles)						
All Purposes	8.7	9.5	9.1	10.0	9.7	0.4
To/From Work	8.5	10.7	11.6	12.1	11.8	0.3
Work Related Business	21.8	28.2	20.3	28.3	20.0	2.0
Shopping	5.4	5.4	6.1	7.0	6.5	0.2
Other Family/Personal Errands	7.3	8.6	7.6	7.8	7.0	0.3
School/Church	4.9	5.4	6.0	6.0	6.3	0.3
Social and Recreational	12.3	13.2	11.3	11.4	10.7	0.6
Other	8.2	10.3	22.8	43.1	51.5	14.5

Note:

- Average person trip length is calculated using only those records with trip mileage information present.
- 1990 person and vehicle trips were adjusted to account for survey collection method changes (see 2001 Summary of Travel Trends Appendix 2).
- 1995 Vehicle Miles of Travel (VMT) and vehicle trips with "To or From Work" as a trip purpose is believed to be overstated.
- "Other Family/Personal Errands" includes personal business and medical/dental. Please see Appendix A - Glossary for definition.
- PMT is Person Miles of Travel. CI is Confidence Interval.

Appendix B - 2013 FDOT Generalized LOS Tables

TABLE 1

Generalized **Annual Average Daily** Volumes for Florida's **Urbanized Areas**

12/18/12

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	16,800	17,700	**
4	Divided	*	37,900	39,800	**
6	Divided	*	58,400	59,900	**
8	Divided	*	78,800	80,100	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	7,300	14,800	15,600
4	Divided	*	14,500	32,400	33,800
6	Divided	*	23,300	50,000	50,900
8	Divided	*	32,000	67,300	68,100

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding two-directional volumes in this table by 0.6

BICYCLE MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	2,900	7,600	19,700
50-84%	2,100	6,700	19,700	>19,700
85-100%	9,300	19,700	>19,700	**

PEDESTRIAN MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	2,800	9,500
50-84%	*	1,600	8,700	15,800
85-100%	3,800	10,700	17,400	>19,700

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Core Urbanized

Lanes	B	C	D	E
4	47,400	64,000	77,900	84,600
6	69,900	95,200	116,600	130,600
8	92,500	126,400	154,300	176,600
10	115,100	159,700	194,500	222,700
12	162,400	216,700	256,600	268,900

Urbanized

Lanes	B	C	D	E
4	45,800	61,500	74,400	79,900
6	68,100	93,000	111,800	123,300
8	91,500	123,500	148,700	166,800
10	114,800	156,000	187,100	210,300

Freeway Adjustments

Auxiliary Lanes Present in Both Directions	Ramp Metering
+ 20,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	8,600	17,000	24,200	33,300
4	Divided	36,700	51,800	65,600	72,600
6	Divided	55,000	77,700	98,300	108,800

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

[1]Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Planning Office
www.dot.state.fl.us/planning/systems/sm/los/default.shtm

Appendix C - Osceola County LOS Report

Roadway	From	To	Federal Functional Classification	Jurisdiction	# of Lanes	Segment Length (miles)	LOS Standard	Service Volume at LOS Std	Count Year	ADT	Achieves LOS Standard	VMT (Vehichle Miles Traveled)	VMC (Vehichle Miles Capacity)
Bass Highway	Pine Grove Rd	End	Collector	County	2	2.1	E	9200	2013	2,304	YES	4,723.20	18,860.00
Bass Road	Yowell Rd	US 192	Collector	Kissimmee	2	0.7	E	15,930	2013	7,220	YES	5,270.60	11,628.90
Bill Beck Blvd	US 192-441	Boggy Creek Rd	Collector	Kissimmee	4	1.0	E	35,820	2013	4,308	YES	4,135.68	34,387.20
Boggy Creek Rd	Boggy Creek Rd (East)	Osceola Pkwy	Principal Art	County	2	1.3	E	16,730	2013	23,589	NO	30,429.81	21,581.70
Boggy Creek Rd	Osceola Pky	Buenaventura Blvd	Minor Art	County	2	1.8	E	16,730	2013	19,454	NO	34,044.50	29,277.50
Boggy Creek Rd	Buenaventura Blvd	Simpson Rd	Minor Art	County	4	1.3	E	35,820	2013	43,116	NO	55,188.48	45,849.60
Boggy Creek Rd	Simpson Rd	U.S. 192-441	Collector	County	4	1.6	E	30,420	2013	26,586	YES	43,335.18	49,584.60
Boggy Creek Rd (East)	Narcoossee Rd (CR 15)	Austin Tyndell Park	Minor Art	County	2	3.6	E	33,300	2013	8,651	YES	30,711.05	118,215.00
Boggy Creek Rd (East)	Austin Tyndell Park	Boggy Creek Rd (West)	Minor Art	County	2	2.4	E	15,930	2013	12,460	YES	30,153.20	38,550.60
SR 417	Orange County Line	Osceola Pky	Freeway	County	4	0.7	E	84,600	2013	19600	YES	12,936.00	55,836.00
SR 417	Osceola Pky	Celebration Ave	Freeway	County	4	1.3	E	84,600	2013	18200	YES	24,206.00	112,518.00
SR 417	Celebration Ave	I-4	Freeway	County	4	1.2	E	84600	2013	13400	YES	16,482.00	104,058.00
SR 429 (Western Beltway)	I-4	Sinclair Rd	Freeway	County	4	1.1	E	84600	2013	11200	YES	11,984.00	90,522.00
SR 429 (Western Beltway)	Sinclair Rd	US 192	Freeway	County	4	3.7	E	84600	2013	9600	YES	35,904.00	316,404.00
Brown Chapel Rd	13th ST (US 192-441)	Lakeshore Blvd	Collector	St Cloud	2	1.1	E	15930	2013	4,183	YES	4,726.79	18,000.90
Buenaventura Blvd	Boggy Creek Rd	Florida Pky	Minor Art	County	4	1.0	E	30420	2013	22,236	YES	21,124.20	28,899.00
Buenaventura Blvd	Florida Pky	Osceola Pkwy	Minor Art	County	4	1.3	E	35820	2013	20,869	YES	27,547.08	47,282.40
Buenaventura Blvd	Osceola Pkwy	Orange County Line	Minor Art	County	4	0.2	E	35820	2013	31,452	YES	6,604.92	7,522.20
Canoe Creek Rd (CR 523)	Deer Run Rd	Old Canoe Creek Rd	Minor Art	County	4	1.4	E	35,820	2013	1,500	YES	2,025.00	48,357.00
Canoe Creek Rd (CR 523)	US 441	Sullivan Dr	Major Coll	County	2	28.1	E	28,600	2013	1,901	YES	53,418.10	803,660.00
Canoe Creek Rd (CR 523)	Sullivan Dr	Deer Run Rd	Minor Art	County	2	2.2	E	33,300	2013	4,701	YES	10,389.21	73,593.00
Canoe Creek Rd (CR 523)	Deer Run Rd	Old Canoe Creek Rd	Minor Art	St Cloud	2	1.4	E	15,930	2013	14,929	YES	20,154.15	21,505.50
Canoe Creek Rd (CR 523)	Old Canoe Creek Rd	New Nolte Rd	Minor Art	St Cloud	2	1.8	E	15,930	2013	14,761	YES	26,569.80	28,674.00
Carroll St	Dyer Blvd	Thacker Ave	Minor Art	St Cloud	4	0.6	E	35,820	2013	17900	YES	11,456.00	22,924.80
Canoe Creek Rd (CR 523)	New Nolte Rd	US 192-441	Minor Art	St Cloud	2	1.7	E	15930	2013	12,145	YES	20,403.60	26,762.40
Carroll St	Thacker Ave	John Young Pky	Minor Art	Kissimmee	6	0.6	E	53910	2013	12400	YES	7,192.00	31,267.80
Carroll St	Columbia Ave	Dyer Blvd	Minor Art	Kissimmee	2	1.5	E	15930	2013	17,755	NO	26,277.40	23,576.40
Carroll St	John Young Pky	Main St (US 441)	Minor Art	Kissimmee	4	0.8	E	35820	2013	14000	YES	10,500.00	26,865.00
Carroll St	Dyer Blvd	Thacker Ave	Minor Art	Kissimmee	2	0.6	E	15,930	2013	11,176	YES	7,152.64	10,195.20
Carroll St	Main St (US 441)	Old Dixie Hwy	Minor Art	Kissimmee	4	0.3	E	35,820	2013	14000	YES	4,060.00	10,387.80
Carroll St	Thacker Ave	John Young Pky	Minor Art	Kissimmee	4	0.6	E	35820	2013	16,674	YES	9,670.92	20,775.60
Carroll St	John Young Pky	Main St (US 441)	Minor Art	County	2	0.8	E	16730	2013	14,346	YES	10,759.50	12,547.50
Carroll St	Main St (US 441)	Old Dixie Hwy	Minor Art	County	2	0.3	E	16730	2013	12,080	YES	3,503.20	4,851.70
Carroll St	Old Dixie Hwy	Michigan Ave	Minor Art	County	4	0.5	E	34030	2013	11,484	YES	5,627.16	16,674.70
Celebration Ave	US 192	Celebration Blvd	Collector	County	4	0.7	E	30420	2013	15,877	YES	10,320.05	19,773.00
Celebration Blvd	Celebration Pl	World Dr	Collector	County	4	2.2	E	35820	2013	8,795	YES	19,173.10	78,087.60
Championsgate Blvd	Polk County Line	I-4	Collector	County	4	0.6	E	30420	2013	20,512	YES	12,307.20	18,252.00
Clay St	Thacker Ave	Pleasant Hilll Rd	Collector	Kissimmee	2	0.9	E	15930	2013	12,546	YES	11,165.94	14,177.70
Clay St/Penfield St	Randolph Ave	Thacker Ave	Collector	Kissimmee	2	0.8	E	12740	2013	4,703	YES	3,903.49	10,574.20
Creek Woods Dr	Canoe Creek Rd	Michigan Ave	Collector	St Cloud	2	0.8	E	15930	2013	4,136	YES	3,184.72	12,266.10
Cypress Pky	Marigold Ave	Pleasant Hilll Rd	Minor Art	County	4	1.6	E	35820	2013	42,375	NO	66,105.00	55,879.20
Cyrils Dr	Narcoossee Rd (CR 15)	Absher Road	N/A	County	2	1.8	E	11660	2009	1,112	YES	1,990.48	20,871.40
Deer Park Rd (CR 419)	US 192	Nova Rd (CR 532)	Collector	County	2	13.1	E	28600	2009	463	YES	6,042.15	373,230.00
Deer Run Rd	Canoe Creek Rd (CR 523)	Hickory Tree Rd	Minor Art	County	2	2.4	E	33300	2013	3,613	YES	8,707.33	80,253.00
Donegan Ave	John Young Pky	US 17/92	Collector	County	2	0.7	E	16730	2013	10,561	YES	7,709.53	12,212.90
Donegan Ave	US 17/92	Michigan Ave	Collector	County	2	0.8	E	16730	2013	14,219	YES	10,664.25	12,547.50

Roadway	From	To	Federal Functional Classification	Jurisdiction	# of Lanes	Segment Length (miles)	LOS Standard	Service Volume at LOS Std	Count Year	ADT	Achieves LOS Standard	VMT (Vehichle Miles Traveled)	VMC (Vehichle Miles Capacity)
Doverplum Ave	Old Pleasant Hill Rd	Cypress Pky	Collector	County	2	0.6	E	15930	2013	10,642	YES	5,853.10	8,761.50
Doverplum Ave	Cypress Pky	Koa St	Collector	County	2	0.7	E	15,930	2013	14,481	YES	10,136.70	11,151.00
Eden Dr	Nova Rd (CR 532)	End	Collector	County	2	1.1	E	9,200	2009	1,284	YES	1,412.40	10,120.00
Enterprise Dr/Mercantile Ln	Poinciana Blvd	Ham Brown Rd	Collector	County	2	1.6	E	12740	2013	1,005	YES	1,587.90	20,129.20
Hoagland Blvd	Suhl's Ln	US 192	Minor Art	Kissimmee	4	1.7	E	35820	2013	11,925	YES	20,272.50	60,894.00
Fifth St (St Cloud)	Vermont Ave	US 192-441	Collector	St Cloud	2	1.4	E	9200	2013	3,615	YES	5,097.15	12,972.00
Florence Villa Grove Rd	Polk County Line	Westside Blvd	Collector	County	2	0.6	E	15930	2013	5,719	YES	3,431.40	9,558.00
Florida Pky	Osceola Pky	Buenaventura Blvd	Collector	County	2	2.6	E	11510	2013	7,276	YES	18,844.84	29,810.90
Florida's Turnpike	Indian River County	Kissimmee Park Rd	Freeway	County	4	45.9	E	60000	2013	27,000	YES	1,239,300.00	2,754,000.00
Florida's Turnpike	Kissimmee Park Rd	US 192/441	Freeway	County	4	3.3	E	84600	2013	32,000	YES	104,960.00	277,488.00
Florida's Turnpike	US 192/441	Osceola Pky	Freeway	Kissimmee	4	6.1	E	84600	2009	46,000	YES	280,140.00	515,214.00
Florida's Turnpike	Osceola Pky	Orange County Line	Freeway	County	4	0.5	E	84600	2013	53,000	YES	27,030.00	43,146.00
Formosa Gardens Blvd	Sinclair Rd	Funie Steed Rd	Collector	County	2	2.6	E	33300	2013	5,529	YES	14,596.56	87,912.00
Formosa Gardens Blvd	Funie Steed Rd	US 192	Collector	County	4	0.9	E	35820	2013	8,247	YES	7,422.30	32,238.00
Fortune Rd	Boggy Creek Rd	Lakeshore Blvd	Collector	County	2	1.8	E	33300	2013	16,484	YES	29,671.20	59,940.00
Friars Cove Rd	Florida's Turnpike	Canoe Creek Rd (CR 523)	Collector	St Cloud	2	1.5	E	9200	2013	3,003	YES	4,564.56	13,984.00
Funie Steed Rd	Westside Blvd	Formosa Gardens Blvd	Collector	County	2	2.6	E	33300	2013	3,305	YES	8,593.00	86,580.00
Funie Steed Rd	Formosa Gardens Blvd	Old Lake Wilson Rd	Collector	County	2	1.2	E	11510	2013	1,908	YES	2,251.44	13,581.80
Goodman Rd	Tri-County Rd	Westside Blvd	Collector	County	2	3.8	E	11510	2013	1,066	YES	4,029.48	43,507.80
Griffen Rd	US 192	World Dr	Collector	County	2	1.0	E	15930	2013	1800	YES	1,710.00	15,133.50
Ham Brown Rd	Reaves Rd	Cattle Drive Ln	Collector	County	2	1.0	E	33300	2013	5,193	YES	5,244.93	33,633.00
Ham Brown Rd	Cattle Drive Ln	US 17/92	Collector	County	4	3.3	E	68970	2013	9,057	YES	30,069.24	228,980.40
Henry Partin Rd	Kings Hwy	Neptune Rd	Local	County	2	1.8	E	11510	2013	1,063	YES	1,913.40	20,718.00
Hickory Tree Rd	Deer Run Rd	Bullis Rd (S)	Minor Art	County	2	3.0	E	33300	2013	3,750	YES	11,137.50	98,901.00
Hickory Tree Rd	Bullis Rd (S)	US 192 (West)	Minor Art	County	2	1.6	E	15930	2013	6,231	YES	9,907.29	25,328.70
Hickory Tree Rd	US 192 (East)	Deer Run Rd	Collector	County	2	6.7	E	33300	2013	2,301	YES	15,485.73	224,109.00
Hoagland Blvd	CSX/Clay St	Suhl's Ln	Minor Art	Kissimmee	2	1.2	E	15930	2013	11,488	YES	13,785.60	19,116.00
International Drive South	US 192	Orange County Line	Collector	County	6	1.1	E	53910	2013	14,390	YES	15,829.00	59,301.00
Interstate 4	Osceola Polk Line Rd (CR 532)	SR 429	Freeway	County	6	1.9	E	130600	2012	112,783	YES	217,671.19	252,058.00
Interstate 4	SR 429	World Dr	Freeway	County	6	2.2	E	130600	2012	114,769	YES	246,753.35	280,790.00
Interstate 4	World Dr	US 192	Freeway	County	6	1.9	E	130600	2012	88,638	YES	171,071.34	252,058.00
Interstate 4	US 192	Orange County Line	Freeway	County	6	1.3	E	130600	2012	104,386	YES	135,701.80	169,780.00
Jack Brack Rd	Narcoossee Rd (CR 15)	Absher Road	Local	County	2	2.6	E	11660	2013	1,274	YES	3,363.36	30,782.40
John Young Pky	US 192	Columbia Ave	Principal Art	Kissimmee	6	0.2	E	53910	2013	38,767	YES	8,141.07	11,321.10
John Young Pky	Columbia Ave	Carroll St	Principal Art	Kissimmee	6	1.3	E	53910	2013	37,861	YES	48,083.47	68,465.70
John Young Pky	Carroll St	Orange County Line	Principal Art	County	6	1.6	E	53910	2013	41,482	YES	64,711.92	84,099.60
Jones Rd	Narcoossee Rd	Gerry Ct	Collector	County	2	2.4	E	9200	2013	1,055	YES	2,574.20	22,448.00
Kings Hwy	Pine Island Rd	Neptune Rd	Collector	County	2	1.9	E	33300	2013	7,362	YES	13,693.32	61,938.00
Kissimmee Park Rd	Old Canoe Creek Rd	Lake Tohopekaliga	Collector	County	2	4.8	E	33300	2013	2,470	YES	11,856.00	159,840.00
Koa St	Rhododendrom Ave	Marigold Ave	Collector	County	2	2.0	E	15930	2013	13,651	YES	26,892.47	31,382.10
Koa St	Marigold Ave	Doverplum Ave	Collector	County	2	1.2	E	15930	2013	13,521	YES	15,684.36	18,478.80
Lakeshore Blvd	Fortune Rd	Partin Settlement Rd	Collector	St Cloud	2	1.9	E	33300	2013	8,800	YES	16,280.00	61,605.00
Lakeshore Blvd	Partin Settlement Rd	Brown Chapel Rd	Collector	County	2	1.1	E	33300	2013	10,714	YES	11,571.12	35,964.00
Lakeshore Blvd	Brown Chapel Rd	Mississippi Ave	Collector	County	2	2.6	E	33300	2013	8,360	YES	21,568.80	85,914.00
Marigold Ave	Cypress Pky	Koa St	Collector	County	2	1.0	E	15930	2013	20,014	NO	19,613.72	15,611.40
Marigold Ave	Koa St	Eastbourne Rd	Collector	County	2	2.9	E	15930	2013	14,607	YES	42,506.37	46,356.30
Masters Blvd/Goodman Rd	Championsgate Blvd	Tri-County Rd	Collector	County	2	1.0	E	15930	2013	5,783	YES	5,667.34	15,611.40
Michigan Ave (CR 531)	Osceola Pky	Carroll St	Minor Art	County	4	1.1	E	35820	2013	31,734	YES	33,320.70	37,611.00
Michigan Ave (CR 531)	Carroll St	Donegan Ave	Minor Art	County	4	0.5	E	35820	2013	32,115	YES	15,094.05	16,835.40
Michigan Ave (CR 531)	Donegan Ave	US 192-441	Minor Art	Kissimmee	4	1.0	E	35820	2013	27,136	YES	27,407.36	36,178.20
Michigan Ave (St Cloud)	Lakeshore Blvd	US 192	Collector	St Cloud	2	0.8	E	11510	2013	2,115	YES	1,776.60	9,668.40
Michigan Ave (St Cloud)	US 192	New Nolte Rd	Collector	St Cloud	2	1.4	E	33300	2013	8,345	YES	11,849.90	47,286.00
Michigan Ave (St Cloud)	New Nolte Rd	Creek Woods Dr	Collector	St Cloud	2	0.8	E	33300	2013	4,651	YES	3,581.27	25,641.00

Roadway	From	To	Federal Functional Classification	Jurisdiction	# of Lanes	Segment Length (miles)	LOS Standard	Service Volume at LOS Std	Count Year	ADT	Achieves LOS Standard	VMT (Vehichle Miles Traveled)	VMC (Vehichle Miles Capacity)
Narcoossee Rd (CR 15)	U.S. 192-441	10th St	Principal Art	St Cloud	4	0.2	E	35820	2013	17,471	YES	3,843.62	7,880.40
Narcoossee Rd (CR 15)	10th St	Rummel Rd	Principal Art	St Cloud	4	1.2	E	35820	2013	16,496	YES	20,455.04	44,416.80
Narcoossee Rd (CR 15)	Rummel Rd	Jones Rd	Principal Art	County	4	2.2	E	72600	2013	18,543	YES	40,609.17	158,994.00
Narcoossee Rd (CR 15)	Jones Rd	Orange County Line	Principal Art	County	4	3.7	E	35820	2013	16,284	YES	60,413.64	132,892.20
Neptune Rd	Broadway Ave/Main St	Lakeshore Blvd	Minor Art	Kissimmee	4	0.5	E	35820	2013	19,587	YES	9,010.02	16,477.20
Neptune Rd	Lakeshore Blvd	Kings Hwy	Minor Art	Kissimmee	4	1.5	E	35820	2013	21,910	YES	33,303.20	54,446.40
Neptune Rd	Kings Hwy	Partin Settlement Rd	Minor Art	County	4	0.8	E	35820	2013	21,597	YES	17,061.63	28,297.80
Neptune Rd	Partin Settlement Rd	Kissimmee Park Rd	Minor Art	County	2	3.4	E	15930	2013	17,874	NO	60,414.12	53,843.40
Neptune Rd	Kissimmee Park Rd	U.S. 192-441	Minor Art	St Cloud	2	0.5	E	14040	2013	9,317	YES	4,378.99	6,598.80
Nolte Rd	Old Canoe Creek Rd	Canoe Creek Road (CR 523)	Collector	St Cloud	4	1.6	E	35820	2013	9,272	YES	14,835.20	57,312.00
Nolte Rd	Canoe Creek Road (CR 523)	Michigan Ave	Collector	County	4	0.8	E	35820	2013	5,719	YES	4,575.20	28,656.00
Nolte Rd	Michigan Ave	Hickory Tree Rd	Collector	County	4	2.1	E	35820	2013	3,793	YES	7,775.65	73,431.00
Nova Rd (CR 532)	U.S. 192-441	Eden Dr	Collector	County	2	3.4	E	33300	2013	6,410	YES	21,473.50	111,555.00
Nova Rd (CR 532)	Eden Dr	Orange County Line	Collector	County	2	20.3	E	28600	2013	1,545	YES	31,332.60	580,008.00
Old Boggy Creek Rd	Denn John Ln	Boggy Creek Rd	Collector	County	2	0.5	E	15930	2013	9,780	YES	4,694.40	7,646.40
Old Canoe Creek Rd	US 192	Neptune Rd	Minor Art	St Cloud	4	0.3	E	35820	2013	18,510	YES	5,182.80	10,029.60
Old Canoe Creek Rd	Neptune Rd	Kissimmee Park Rd	Minor Art	St Cloud	4	1.9	E	35820	2013	27,119	YES	50,712.53	66,983.40
Old Canoe Creek Rd	Kissimmee Park Rd	Canoe Creek Road (CR 523)	Minor Art	St Cloud	2	2.3	E	15930	2013	15,567	YES	35,804.10	36,639.00
Old Dixie Hwy	Donegan Ave	Osceola Pky	Collector	County	2	1.3	E	12740	2013	5,613	YES	7,296.90	16,562.00
Old Hickory Tree Rd	Nolte Rd	US 192	Collector	St Cloud	2	1.3	E	15930	2013	3,216	YES	4,020.00	19,912.50
Old Lake Wilson Rd (CR 545)	US 192	Westgate Blvd	Minor Art	County	6	0.3	E	53910	2013	19,995	YES	6,798.30	18,329.40
Old Lake Wilson Rd (CR 545)	Westgate Blvd	Sinclair Rd	Minor Art	County	4	2.3	E	35820	2013	6,321	YES	14,411.88	81,669.60
Old Lake Wilson Rd (CR 545)	Sinclair Rd	Osceola Polk Line Rd (CR 532	Minor Art	County	2	2.5	E	15930	2013	8,928	YES	22,230.72	39,665.70
Old Melbourne Hwy	US 192	Bronco Dr	Collector	County	2	2.4	E	33300	2013	3,452	YES	8,112.20	78,255.00
Old Tampa Hwy	US 17/92	Poinciana Blvd	Collector	County	2	2.6	E	33300	2013	1,958	YES	5,129.96	87,246.00
Old Tampa Hwy	Poinciana Blvd	Broad St	Collector	County	2	1.5	E	33300	2013	4,512	YES	6,542.40	48,285.00
Old Tampa Hwy	Broad St	Pleasant Hill Rd	Collector	County	2	1.9	E	33300	2013	5,242	YES	9,750.12	61,938.00
Old Vineland Rd	US 192	Princess Way	Collector	County	2	0.9	E	12740	2013	2,002	YES	1,781.78	11,338.60
Orange Ave (CR 527)	Osceola Pky	Orange County Line	Minor Art	County	2	0.5	E	15930	2013	20,480	NO	10,649.60	8,283.60
Orange Ave (St Cloud)	Rummel Rd	US 192-441 (13th St)	Collector	St Cloud	2	1.1	E	9200	2013	1,822	YES	1,949.54	9,844.00
Oren Brown Rd	Poinciana Blvd	US 192	Collector	County	2	1.0	E	15930	2013	6,705	YES	6,705.00	15,930.00

Roadway	From	To	Federal Functional Classification	Jurisdiction	# of Lanes	Segment Length (miles)	LOS Standard	Service Volume at LOS Std	Count Year	ADT	Achieves LOS Standard	VMT (Vehichle Miles Traveled)	VMC (Vehichle Miles Capacity)
Osceola Pky	I-4	SR 417	Principal Art	County	4	1.3	E	35820	2012	16,657	YES	21,320.96	45,849.60
Osceola Pky	SR 417	Vineland Rd (SR 535)	Principal Art	County	4	2.0	E	35820	2013	14,501	YES	28,421.96	70,207.20
Osceola Pky	Vineland Rd (SR 535)	Dyer Blvd	Principal Art	County	4	3.2	E	25870	2013	20,428	YES	66,186.72	83,818.80
Osceola Pky	Dyer Blvd	John Young Pky	Principal Art	County	4	0.7	E	30420	2013	27,415	YES	18,368.05	20,381.40
Osceola Pky	John Young Pky	US 17-92-441 (O.B.T.)	Principal Art	County	4	1.1	E	30420	2013	30,877	NO	33,655.93	33,157.80
Osceola Pky	US 17-92-441 (O.B.T.)	Florida's Turnpike	Principal Art	County	6	1.5	E	45810	2013	48,426	NO	72,639.00	68,715.00
Osceola Pky	Florida's Turnpike	Buenaventura Blvd	Principal Art	County	6	1.1	E	45810	2013	44,536	YES	50,771.04	52,223.40
Osceola Pky	Buenaventura Blvd	Boggy Creek Rd	Principal Art	County	2	2.4	E	15930	2013	22,041	NO	53,559.63	38,709.90
Osceola Polk Line Rd (CR 532)	US 17/92	Lake Wilson Rd	Minor Art	County	2	3.0	E	15930	2013	15,981	NO	47,143.95	46,993.50
Osceola Polk Line Rd (CR 532)	Lake Wilson Rd	I-4	Minor Art	County	4	1.5	E	35820	2013	23,930	YES	36,852.20	55,162.80
Partin Settlement Rd	Neptune Rd	US 192-441	Collector	County	2	1.2	E	15930	2013	6,639	YES	7,966.80	19,116.00
Partin Settlement Rd	US 192-441	Lakeshore Blvd	Collector	County	2	1.5	E	33300	2013	11,776	YES	17,664.00	49,950.00
Pine Grove Rd	US 192-441	Nova Rd (CR 532)	Collector	County	2	2.0	E	33300	2013	3,179	YES	6,230.84	65,268.00
Pine Tree Rd	Canoe Creek Rd	Hickory Tree Rd	Collector	County	2	3.0	E	33300	2013	7,970	YES	23,910.00	99,900.00
Pleasant Hill Rd	Cypress Pky	Poinciana Blvd	Minor Art	County	6	0.6	E	53910	2013	55,308	NO	30,972.48	30,189.60
Pleasant Hill Rd	Poinciana Blvd	Grasmere View Pkwy	Minor Art	County	4	3.6	E	35820	2013	36,004	NO	129,614.40	128,952.00
Pleasant Hill Rd	Grasmere View Pkwy	US 17/92	Minor Art	County	4	3.9	E	35820	2013	47,681	NO	184,525.47	138,623.40
Pleasant Hill Rd	US 17/92	Clay St	Minor Art	County	2	1.0	E	15930	2013	15,516	YES	14,740.20	15,133.50
Poinciana Blvd	Pleasant Hill Rd	Crescent Lakes Way	Minor Art	County	2	5.8	E	33300	2013	16,255	YES	93,628.80	191,808.00
Poinciana Blvd	Crescent Lakes Way	US 17/92	Minor Art	County	4	2.3	E	35820	2013	25,985	YES	58,985.95	81,311.40
Poinciana Blvd	US 17/92	One Mile North of CSX RR	Principal Art	County	4	1.2	E	72600	2013	26,008	YES	31,469.68	87,846.00
Poinciana Blvd	One Mile North of CSX RR	Oren Brown Rd	Principal Art	County	2	2.5	E	33300	2013	29,243	YES	73,107.50	83,250.00
Poinciana Blvd	Oren Brown Rd	US 192 (Bronson Hwy)	Principal Art	County	4	2.3	E	35820	2013	27,009	YES	61,310.43	81,311.40
Poinciana Blvd	US 192 (BRONSON HWY)	Vineland Rd (SR 535)	Minor Art	County	4	0.8	E	35820	2013	20,513	YES	16,615.53	29,014.20
Polynesian Isle Blvd	US 192	Vineland Rd (SR 535)	Collector	County	4	1.2	E	34030	2013	8,178	YES	9,895.38	41,176.30
Princess Way/Seven Dwarfs Ln	US 192 (Bronson Hwy)	Old Vineland Rd	Collector	County	2	1.2	E	15930	2013	2,202	YES	2,598.36	18,797.40
Reaves Rd	Poinciana Blvd	Pleasant Hill Rd	Collector	County	2	1.8	E	12740	2013	2,890	YES	5,202.00	22,932.00
Royal Palm Dr	Buenaventura Blvd	Boggy Creek Road	Collector	County	2	0.8	E	12740	2013	3,405	YES	2,724.00	10,192.00
Rummel Rd	Mississippi Ave	Narcoosee Rd (CR 15)	Collector	County	2	1.9	E	12740	2013	3,691	YES	6,828.35	23,569.00
Sand Hill Rd	Old Lake Wilson Rd (CR 545)	Formosa Gardens Blvd	Collector	County	2	1.1	E	15930	2013	2,169	YES	2,277.45	16,726.50
Shady Ln	Partin Settlement Rd	US 192-441 (Bronson Hwy)	Collector	County	2	0.6	E	16730	2013	9,028	YES	4,965.40	9,201.50
Sherberth Rd	US 192	Orange County Line	Collector	County	2	0.9	E	15930	2013	13,896	YES	12,506.40	14,337.00
Siesta Lago Dr	US 192	Poinciana Blvd	Collector	County	2	1.2	E	15930	2013	4,537	YES	5,444.40	19,116.00
Simpson Rd	Boggy Creek Rd/Fortune Rd	U.S. 192-441	Minor Art	County	2	1.2	E	15930	2013	16,669	NO	19,836.11	18,956.70
Sinclair Rd	SR 429 (Western Beltway)	Old Lake Wilson Rd	Collector	County	4	0.8	E	35820	2013	2,173	YES	1,825.32	30,088.80
Southport Rd	Pleasant Hill Rd	Southport	Minor Coll	County	2	5.6	E	33300	2013	1,490	YES	8,344.00	186,480.00
SR 535 (Vineland Rd)	US 192	Poinciana Blvd	Minor Art	County	4	0.7	E	33800	2012	28,823	YES	20,176.10	23,660.00
SR 535 (Vineland Rd)	Poinciana Blvd	Orange County Line	Minor Art	County	4	0.4	E	33800	2013	54,486	NO	21,794.40	13,520.00
SR 60	Indian River County Line	Polk County Line	Principal Art	County	2	21.9	E	28600	2012	5,339	YES	116,924.10	626,340.00
Tenth (10th) St	Narcoossee Rd (CR 15)	Michigan Ave	Collector	St Cloud	2	2.0	E	11510	2013	3,217	YES	6,498.34	23,250.20
Tenth (10th) St	Michigan Ave	US 192-441 (13th St)	Collector	St Cloud	2	2.0	E	9200	2013	5,371	YES	10,473.45	17,940.00
Thacker Ave	Osceola Pky	John Young Pky	Collector	Kissimmee	4	0.6	E	35820	2013	8,230	YES	4,608.80	20,059.20
Thacker Ave	Clay St	MLK Jr Blvd	Collector	Kissimmee	2	1.1	E	14740	2013	9,266	YES	10,007.28	15,919.20

Roadway	From	To	Federal Functional Classification	Jurisdiction	# of Lanes	Segment Length (miles)	LOS Standard	Service Volume at LOS Std	Count Year	ADT	Achieves LOS Standard	VMT (Vehichle Miles Traveled)	VMC (Vehichle Miles Capacity)
US 17/92	Penfield St	Emmett St	Principal Art	Kissimmee	4	0.3	E	39800	2012	52,916	NO	13,758.16	10,348.00
US 17/92	Pleasant Hill Rd	Penfield St	Principal Art	Kissimmee	4	2.4	E	39800	2013	53,613	NO	129,207.33	95,918.00
US 17/92	MLK Jr Blvd	US 192	Principal Art	Kissimmee	4	0.5	E	39800	2013	38,042	YES	19,401.42	20,298.00
US 17/92 (N Orange Blossom Tr	Donegan Ave	Carroll St	Principal Art	County	6	0.5	E	59900	2012	29,920	YES	15,259.20	30,549.00
US 17/92 (N Orange Blossom Tr	Carroll St	Osceola Pky	Principal Art	County	4	0.8	E	39800	2013	38,080	YES	28,560.00	29,850.00
US 17/92 (N Orange Blossom Tr	Osceola Pky	Orange County Line	Principal Art	County	6	0.8	E	59900	2013	34,375	YES	26,125.00	45,524.00
US 17/92 (S Orange Blossom Tr	Polk County Line	Osceola Polk Line Rd (CR 532	Principal Art	County	2	0.9	E	17700	2012	7,000	YES	6,300.00	15,930.00
US 17/92 (S Orange Blossom Tr	Osceola Polk Line Rd (CR 532)	Old Tampa Hwy	Principal Art	County	2	0.7	E	17700	2013	20,544	NO	14,791.68	12,744.00
US 17/92 (S Orange Blossom Tr	Old Tampa Hwy	Poinciana Blvd	Principal Art	County	2	2.9	E	17700	2013	19,372	NO	56,178.80	51,330.00
US 17/92 (S Orange Blossom Tr	Poinciana Blvd	Ham Brown Rd	Principal Art	County	2	1.5	E	17700	2013	24,320	NO	36,723.20	26,727.00
US 17/92 (S Orange Blossom Tr	Ham Brown Rd	Pleasant Hill Rd	Principal Art	County	4	1.7	E	39800	2013	28,440	YES	46,926.00	65,670.00
US 192	Lake County Line	SR 429 (Western Beltway)	Principal Art	County	4	2.5	E	39800	2012	50,200	NO	124,496.00	98,704.00
US 192	World Dr	I-4	Principal Art	County	6	1.4	E	130600	2012	69,952	YES	98,632.32	184,146.00
US 192	I-4	Parkway Blvd	Principal Art	County	6	0.6	E	50900	2012	60,524	NO	33,288.20	27,995.00
US 192	Polynesian Isle Blvd	Vineland Rd (SR 535)	Principal Art	County	6	1.0	E	59900	2012	35,597	YES	36,308.94	61,098.00
US 192	Thacker Ave	Main St (US 441)	Principal Art	County	6	1.3	E	50900	2012	46,043	YES	58,935.04	65,152.00
US 192	SR 15/Holopaw Rd	Brevard County Line	Principal Art	County	4	13.7	E	57900	2012	5,719	YES	78,350.30	793,230.00
US 192	SR 429	World Dr	Principal Art	County	6	3.3	E	50900	2013	69,694	NO	230,687.14	168,479.00
US 192	Parkway Blvd	Polynesian Isle Blvd	Principal Art	County	6	2.4	E	50900	2013	45,952	YES	110,284.80	122,160.00
US 192	Vineland Rd (SR 535)	Siesta Lago Dr	Principal Art	County	6	1.3	E	59900	2013	51,261	YES	67,151.91	78,469.00
US 192	Siesta Lago Dr	Hoagland Blvd	Principal Art	County	6	2.1	E	59900	2013	56,738	YES	120,284.56	126,988.00
US 192	Hoagland Blvd	Thacker Ave	Principal Art	Kissimmee	6	1.2	E	50900	2013	43,679	YES	52,414.80	61,080.00
US 192-441	Main St (US 441)	Michigan Ave	Principal Art	Kissimmee	6	0.7	E	59900	2012	45,190	YES	33,440.60	44,326.00
US 192-441	Commerce Center Dr	Columbia Ave	Principal Art	St Cloud	4	1.2	E	33800	2012	39,458	NO	48,533.34	41,574.00
US 192-441	Columbia Ave	Mississippi Ave	Principal Art	St Cloud	6	2.0	E	50900	2012	36,423	YES	71,753.31	100,273.00
US 192-441	Narcoossee Rd (CR 15)	Nova Rd (CR 532)	Principal Art	County	4	1.3	E	72600	2012	20,039	YES	25,249.14	91,476.00
US 192-441	Old Melbourne Hwy	SR 15/Holopaw Rd	Principal Art	County	4	9.1	E	69600	2012	9,570	YES	87,087.00	633,360.00
US 192-441	Michigan Ave	Boggy Creek Rd	Principal Art	Kissimmee	6	1.1	E	59900	2013	55,380	YES	60,364.20	65,291.00
US 192-441	Boggy Creek Rd	Shady Ln	Principal Art	County	6	1.8	E	59900	2013	38,170	YES	67,179.20	105,424.00
US 192-441	Shady Ln	Partin Settlement Rd	Principal Art	County	4	0.8	E	39800	2013	51,370	NO	39,554.90	30,646.00
US 192-441	Partin Settlement Rd	Commerce Center Dr	Principal Art	County	4	2.3	E	39800	2013	40,343	NO	91,982.04	90,744.00
US 192-441	Mississippi Ave	Narcoossee Rd (CR 15)	Principal Art	St Cloud	4	1.5	E	33800	2013	26,748	YES	40,656.96	51,376.00
US 192-441	Nova Rd (CR 532)	Old Melbourne Hwy	Principal Art	County	2	2.6	E	34970	2013	21,037	YES	54,065.09	89,872.90
US 441/SR 15	SR 60	Canoe Creek Rd/CR 523	Principal Art	County	2	14.0	E	28600	2012	1,257	YES	17,598.00	400,400.00
US 441/SR 15	Canoe Creek Rd/CR 523	US 192	Principal Art	County	2	19.7	E	28600	2012	1,928	YES	37,981.60	563,420.00
Vermont Ave	Lakeshore Blvd	US 192	Local	St Cloud	2	0.9	E	9200	2013	2,344	YES	2,109.60	8,280.00
Woodcrest Blvd	Michigan Ave	Bill Beck Blvd	Collector	Kissimmee	2	1.0	E	15930	2009	7,470	YES	7,694.10	16,407.90
World Dr	I-4	US 192	Minor Art	County	4	1.8	E	35820	2013	15,172	YES	27,916.48	65,908.80
World Dr	US 192	Osceola Pky	Minor Art	County	6	1.1	E	130600	2013	22,966	YES	25,262.60	143,660.00
Osceola Pky	Victory Way	I-4	Minor Art	County	6	1.1	E	53910	2013	26500	YES	30,210.00	61,457.40
Tri-County Rd	Polk County Line	Goodman Rd	Collector	County	2	2.2	E	15930	2013	3700	YES	7,992.00	34,408.80

Appendix D – US Household PMT/VMT

The trends data indicate that the *per capita* growth in travel that the U.S. experienced over the last four decades may be slowing. Statistically, of the ten major travel indicators shown in Table 3, in 2009 seven estimates were lower than the same estimate in 2001 estimates and the remainder are statistically the same (within the confidence interval).

Importantly, all of the travel estimates related to households are slightly lower in 2009 than 2001--including person and vehicle trips and the average daily person and vehicle miles generated by U.S. households. The longstanding decline in household size continued between 2001 and 2009. In addition, the average number of vehicle trips and vehicle miles of travel per driver are significantly lower than the 2001 estimate. The data shows both average person trip length and average vehicle trip length to be about the same as in 2001 (that is, within the confidence interval).

Table 3. Summary of Travel Statistics
1969, 1977, 1983, 1990, and 1995 NPTS, and 2001 and 2009 NHTS.

	1969	1977	1983	1990	1995	2001	2009	95% CI
Per Person								
Daily Person Trips	2.02	2.92	2.89	3.76	4.30	3.74	3.79	0.03
Daily PMT	19.51	25.95	25.05	34.91	38.67	36.89	36.13	1.35
Per Driver								
Daily Vehicle Trips	2.32	2.34	2.36	3.26	3.57	3.35	3.02	0.03
Daily VMT	20.64	19.49	18.68	28.49	32.14	32.73	28.97	0.71
Per Household								
Daily Person Trips	6.36	7.69	7.20	8.94	10.49	9.66	9.50	0.09
Daily PMT	61.55	68.27	62.47	83.06	94.41	95.24	90.42	3.38
Daily Vehicle Trips	3.83	3.95	4.07	5.69	6.36	5.95	5.66	0.06
Daily VMT	34.01	32.97	32.16	49.76	57.25	58.05	54.38	1.34
Per Trip								
Average person trip length (miles)	9.67	8.87	8.68	9.47	9.13	10.04	9.75	0.36
Average vehicle trip length (miles)	8.89	8.34	7.90	8.85	9.06	9.87	9.72	0.22

Note:

- Average trip length is calculated using only those records with trip mileage information present.
- 1990 person and vehicle trips were adjusted to account for survey collection method changes (see 2001 Summary of Travel Trends Appendix 2).
- PMT is Person Miles of Travel. VMT is Vehicle Miles of Travel. CI is Confidence Interval. NPTS is Nationwide Personal Transportation Survey.

Appendix E – Alternative Mobility Fee Schedule

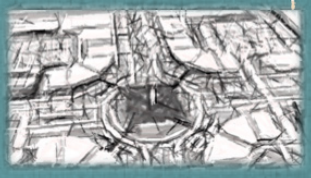
Appendix E Mobility Fee Category/Land Use Type	Mobility Fee	Mixed-Use Districts	Transit Oriented
Residential Per Dwelling Unit			
Single Family	$3,290	$2,467	$1,645
Rural Single Family	$5,199	N/A	N/A
Multi-Family	$2,298	$1,723	$1,149
Townhome/Urban Flat/Condo	$2,008	$1,506	$1,004
Mobile Home	$1,724	N/A	N/A
Active Adult	$1,230	$923	$615
Assisted Living/Care	$816	$612	$408
Recreation/Entertainment per specific unit of measure			
Marina per Berth	$1,273	$954	N/A
Golf Course per Hole	$3,841	$2,881	N/A
Amusement Park per Acre	$6,870	N/A	N/A
Multipurpose Recreational Facility per Acre	$5,464	$4,098	$2,732
Movie Theater per Seat	$645	$484	$322
Racquet/Tennis Club per Court	$3,748	$2,811	$1,874
Health/Fitness/Athletic Club per 1,000 FT^2	$4,080	$3,060	$2,040
Recreational Community Center per 1,000 FT^2	$3,636	$2,727	$1,818
Institutional per 1,000 FT2			
Place of Assembly	$1,356	$1,017	$678
Day Care Center	$2,450	$1,838	$1,225
Office per 1,000 FT2			
Less than 20,000 FT^2	$980	$735	$490
20,000 FT^2 to 100,000 FT^2	$2,071	$1,553	$1,035
Greater than 100,000 FT^2	$3,317	$2,488	$1,658
Medical Buildings per 1,000 FT2			
Medical/Dental Offices	$3,593	$2,695	$1,797
Hospitals	$3,944	$2,958	$1,972
Nursing Home	$962	$722	$481

Appendix E Mobility Fee Category/Land Use Type	Mobility Fee	Mixed-Use Districts	Transit Oriented
Industrial Buildings per 1,000 FT2			
Warehousing/Manufacturing/Industrial	$1,452	$1,089	$726
Mini-Warehousing	$658	$493	$329
General Commercial Retail per 1,000 FT2			
Neighborhood Retail (< 20,000 FT^2)	$2,315	$1,737	$1,158
Community Retail (20,000 FT^2 to 100,000 FT^2)	$4,895	$3,671	$2,447
Regional Retail (Greater than 100,000 FT^2)	$8,462	$6,347	$4,231
Variety / Dollar Store	$3,345	$2,509	$1,673
Factory Outlet Center	$6,251	$4,688	$3,125
Grocery Store	$6,305	$4,729	$3,152
Pharmacy with Drive-Thru	$4,884	$3,663	$2,442
Restaurant with Drive-Thru	$5,088	$3,816	$2,544
Car Sales	$7,079	$5,309	$3,540
Auto Parts Store	$4,851	$3,639	$2,426
Tire & Auto Repair	$2,773	$2,079	$1,386
Non-Residential per specific unit of measure			
Hotel per Room	$2,390	$1,793	$1,195
Resort Hotel with Conference Center per Room	$4,063	$3,048	$2,032
Bank/Savings with Drive-Thru per Drive-Thru Lane	$3,918	$2,938	$1,959
Convenience Market & Gas per Fuel Position	$6,189	$4,642	$3,095
Quick Lube Vehicle Service per Bay	$1,125	$844	$563
Car Wash per Stall	$1,899	$1,424	$950

KEITH and SCHNARS, P.A.
FLORIDA'S Big LOCAL FIRM

6500 North Andrews Avenue, Fort Lauderdale, Florida 33309
Phone: (954) 776-1616 • Fax: (954) 771-7690 • Toll Free: (800) 488-1255
www.ksfla.com

NUE Urban Concepts



Innovative Planning

FISHKIND
& ASSOCIATES