



Technical Report

MOBILITY FEE

July 2016



Prepared By



CITY OF MAITLAND

MOBILITY FEE

TECHNICAL REPORT

July 2016

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EXECUTIVE SUMMARY

The Florida Legislature has made significant amendments to growth management statutes over the last several years. These amendments provide the City of Maitland with the opportunity to continue to be a leader in Planning and potentially streamline how development mitigates its transportation impact consistent with the *2030 Comprehensive Development Plan*. The *Plan* recognizes that new development and sometimes redevelopment will generate new travel demand that cannot be addressed solely through adding roadway capacity. To address future travel demand, the policies articulated in the *2030 Comprehensive Development Plan* envision a multi-modal transportation system that promotes walking, biking and transit.

To encourage development that supports a multi-modal transportation system consistent with the Community Redevelopment Area and Mobility Tiers established in the Comprehensive Development Plan, the City is seeking to replace transportation concurrency, proportionate share and impact fees with a ***simplified, equitable*** process that will allow development that generates new travel demand to mitigate its impact to the transportation system through a one-time Mobility Fee payment. Adoption and implementation of a Mobility Fee schedule will allow an applicant for new development or redevelopment to simply lookup the uses that are proposed and calculate the required mitigation; ***no more concurrency or proportionate share*** analysis will be required. New development or redevelopment may still be required to conduct a traffic impact analysis to determine if site related turn lanes, signalization or roadway structural upgrades are needed to address any safety or operation issues.

There are three assessment areas included in the Mobility Fee. The 1st assessment area is land within the Community Redevelopment Area (CRA). The 2nd assessment area is comprised of Tier 1 and Tier 2 identified in the Comprehensive Development Plan. The 3rd assessment area is comprised of Tier 3. The Mobility Fee within the CRA is lower than the other two assessment areas due to the internal capture of trips. The Mobility Fee within Tier 1 and 2 is lower than Tier 3 due to the community capture of trips.



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 development in the CRA, the 3rd column is the Mobility Fee rate for land uses located within Tier 1 and 2, the 5th column is the Mobility Fee rate for land uses located within Tier 3. The 5th column is the currently adopted City of Maitland Road Impact Fee.

In the 5th column, not all categories are identical between the Mobility Fee and the Road Impact Fee. For some land uses, there is not a comparable land use category. After some land use categories there is a note (RIF ...) that denotes the current impact fee uses a different variable to determine a Fee. While the data is provided for comparative purposes, it should be noted that the Roadway Impact Fee was calculated in 1990 and is now 26 years old. The methodologies are completely different between the roadway impact fee and the mobility fee. Care should be taken when comparing between the current road impact fee and the proposed Mobility Fee. The technical analysis in this Report will document the methodology utilized to calculate the following Mobility Fee schedule.

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Mobility Fee Schedule Category / Land Use Type	Community Redevelopment Area	Tiers 1 & 2	Tier 3	Current Impact Fee
Residential Per Dwelling Unit				
Single Family Detached	\$1,574	\$1,784	\$2,099	\$1,315
Multi-Family Apartments	\$1,100	\$1,246	\$1,466	\$794
Single Family Attached / Townhome / Condo	\$961	\$1,089	\$1,281	\$768
Active Adult / Continuing Care (55+ Age Restricted)	\$589	\$667	\$785	Not in schedule
Recreation & Entertainment				
Racquet/Tennis Club per Court (RIF per sq. ft.)	\$1,749	\$1,982	\$2,332	\$938
Multipurpose Recreational Facility per Acre	\$9,390	\$10,642	\$12,520	Not in schedule
Health/Fitness/Athletic Club per 1,000 sq. ft.	\$4,208	\$4,769	\$5,610	Not in schedule
Recreational Community Center per 1,000 sq. ft.	\$2,499	\$2,833	\$3,332	Not in schedule
Movie Theater per Seat	\$291	\$330	\$388	\$21
Institutional per 1,000 sq. ft.				
Private School (Pre K-12) (RIF per student)	\$767	\$869	\$1,023	\$133
College / University (RIF per student)	\$2,254	\$2,554	\$3,005	\$227
Place of Worship	\$896	\$1,016	\$1,195	\$734
Place of Worship with School (Pre K-12)	\$1,012	\$1,147	\$1,349	Not in schedule
Day Care Center	\$2,024	\$2,294	\$2,699	\$2,586
Office per 1,000 sq. ft.				
Office	\$1,796	\$2,036	\$2,395	\$1,378
Medical Buildings per 1,000 sq. ft.				
Medical / Dental / Veterinary Offices	\$2,615	\$2,963	\$3,486	\$3,735
Hospitals (RIF per bed)	\$3,027	\$3,431	\$4,036	\$1,640
Nursing Home	\$1,031	\$1,169	\$1,375	Not in schedule
RIF = Current Roadway Impact Fee. If applicable, closest land use chosen for comparison purposes only. RIF was adopted in 1990.				



Mobility Fee Schedule Category / Land Use Type	Community Redevelopment Area	Tiers 1 & 2	Tier 3	Current Impact Fee
Industrial Buildings per 1000 sq. ft.				
Warehousing / Manufacturing / Industrial	\$702	\$795	\$935	\$839
Mini-Warehousing	\$305	\$346	\$407	\$184
General Commercial Retail per 1000 sq. ft.				
Neighborhood Retail (less than 10,000 sq. ft.)	\$2,255	\$2,556	\$3,007	\$1,376
Community Retail (10,000 to 100,000 sq. ft.)	\$3,380	\$3,831	\$4,507	\$2,267
Regional Retail (Greater than 100,000 sq. ft.)	\$5,081	\$5,759	\$6,775	\$2,403
Sit Down Restaurant	\$5,524	\$6,260	\$7,365	\$9,608
Restaurant with Drive-Thru	\$14,867	\$16,849	\$19,822	\$17,564
Car Sales	\$4,072	\$4,615	\$5,429	\$4,601
Tire & Auto Repair	\$2,003	\$2,270	\$2,670	\$1,356
Non-Residential				
Assisted Living per Bed (RIF per bed)	\$390	\$442	\$520	\$153
Hotel per Room	\$1,530	\$1,734	\$2,040	\$1,106
Bank/Savings with Drive-Thru per Drive-Thru Lane	\$6,299	\$7,138	\$8,398	\$7,525
Convenience Market & Gas per Fuel Position	\$8,492	\$9,624	\$11,322	\$9,832
Quick Lube Vehicle Service per Bay	\$1,809	\$2,051	\$2,412	\$1,356
Free Standing Car Wash per Stall and Bay	\$3,257	\$3,691	\$4,342	\$4,293
RIF = Current Roadway Impact Fee. If applicable, closest land use chosen for comparison purposes only. RIF was adopted in 1990.				

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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 that 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 to provide to suburban and rural areas where capacity was available or cheaper to construct.

In the late 90’s as the negative impacts of transportation concurrency became more apparent, the Legislature adopted statutes to provide urban areas with alternative means to address the impact of new development with the introduction of Transportation Concurrency Exception Areas (TCEA) whereby local governments could identify alternative solutions to provide Mobility. In the mid 2000’s, Florida experienced phenomenal growth 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. Between 2005 and 2009 the Florida Legislature enacted several laws related to 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.

In 2009, the Legislature declared Dense Urban Land Areas (DULA), communities with a population greater than 1,000 persons per square mile, as TCEA’s and it also introduced the ideas of Mobility Fees as an alternative to concurrency, proportionate share and road impact fees. The Legislature during the 2011 session repealed state mandated transportation concurrency and enacted further restrictions on local governments to implement transportation concurrency, calculate proportionate share and address over capacity roadways.



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. The intent of the Mobility Fee is to eliminate transportation concurrency, proportionate share and impact fees and enact a streamlined, simplified mitigation mechanism whereby a development can mitigate its impact through a one-time payment. The concurrency evaluation for City transportation and proportionate share determination would be eliminated.

In 2011, the City of Maitland amended the 2030 Comprehensive Development Plan to designate the City as a Transportation Concurrency Exception Area (TCEA) and to adopt land use and transportation strategies (i.e., Mobility Plan) to support and fund mobility within the exception area. The 1st Goals articulated in the Future Land Use Element and Transportation Element of the 2030 Comprehensive Development Plan recognizes the importance of integrating land use and transportation consistent with State requirements for DULAs and TCEAs:

FUTURE LAND USE ELEMENT

“GOAL 1: To ensure that future development balances land use and transportation and is directed in a harmonious pattern with existing development and the natural environment so that the City's image as a residential community is maintained and improved.”

TRANSPORTATION ELEMENT

“GOAL 1: The main goal is to protect the quality of neighborhoods. This entails providing safe and efficient automobile and non-automobile transportation systems for residents and nonresidents consistent with the adopted Future Land Use Map. These systems must ensure convenient access to property while protecting the residential character of City neighborhoods from traffic impacts”.



The 2nd Goal articulated in the Transportation Element of the 2030 Comprehensive Development Plan recognizes the importance of multi-modal travel options in order to achieve the desired level of Mobility:

“GOAL 2: The City shall meet existing and future transportation needs through a comprehensive, sustainable, effective and energy efficient multi-modal transportation system and mobility plan that provides multi-modal travel options to achieve the City’s mobility goal.”

The City established Objective and Policies that defines the importance of Mobility:

“OBJECTIVE 2.1. The City shall use the Transportation Concurrency Exception Area (TCEAs), Mobility Plan and Mobility Tiers as tools for promoting infill development and redevelopment. These tools shall be supported by land use and transportation strategies to support and fund mobility.”

POLICY 2.1.1: The City has established and shall maintain the 2009 TCEA which includes portions of the CRA, TOD Study Area A and a portion of TOD Study Area B. The 2009 TCEA boundary is illustrated in Map 1-A.

POLICY 2.1.1.a: In an effort to simplify the existing transportation concurrency and contribution systems, the City will adopt a mobility plan to include mobility district(s) and a fee schedule for the 2009 TCEA and the citywide TCEA described in Policy 2.12 and illustrated in Map 1-B.

POLICY 2.1.1.b: When the City adopts a mobility plan, it may elect to replace existing transportation/road impact fees, proportionate share, proportionate fair-share and fair-share programs, the 2009 TCEA, the citywide TCEA or transportation concurrency with the Mobility Plan and Mobility Fees.

POLICY 2.1.1.c: Should the Council elect to replace transportation/road impact fees, proportionate share, proportionate fair-share and fair-share programs, the 2009 TCEA, the citywide TCEA and transportation concurrency, the Mobility Plan will be included in the Capital Improvements Element (CIE) and other applicable elements of the CDP and Future Land Use Map (FLUM) Series maybe amended. The mobility plan will be updated and incorporated into the CIE annually thereafter.”



“OBJECTIVE 2.2. The City shall continue to address mobility throughout the City through a multimodal transportation system that includes walking, bicycling, transit (bus and rail), and roadways. Mobility will be administered through three “Mobility Tiers”, as indicated in Map 1-C (Map A). Each Mobility Tier has a distinct development pattern and associated opportunities for redevelopment that are also associated with the targeted mobility strategies.”

“POLICY 2.2.2: The City defines mobility as the provision of multiple opportunities or choices in transportation modes for travel within and to/from the City through a multi-modal transportation system. The general hierarchy of modes is 1) walking, 2) bicycling, 3) transit (bus and rail), and 4) private vehicles. The primary focus or overall mobility strategy is on the minimum provision of facilities for all modes and the connectivity based upon the mode hierarchy. Where adequate facilities exist for all modes, the City will prioritize enhancing the quality of the facilities based upon the mode hierarchy.”

“POLICY 2.2.3: For sidewalks and bicycle facilities, the mobility strategy is the provision of facilities and connectivity with land use and transit, followed by the enhancement of the facilities including wider sidewalks, pedestrian amenities, and separate bicycle facilities. For transit, the current mobility strategy is the enhancement of facilities and operations including improved route coverage, provision of shelters and reduced headways. The ultimate strategy is the addition of commuter rail and light rail to be supported by pedestrian, bicycle and transit feeder systems. For constrained roadways, the mobility strategy is to effectively utilize the existing roadways and right-of-ways through transportation system management (TSM) and the promotion of transportation demand management (TDM).”

“OBJECTIVE 2.3: Mobility Tier 1 consists of the 2009 TCEA, adjacent High Density Residential land uses, the Maitland Avenue Special District and Major Trip Generators and Attractors. These areas are candidates for redevelopment and offer the greatest opportunities for increased densities and intensities that incorporate pedestrian friendly/transit oriented design principles and also contribute toward the City’ prioritized mobility strategies.”

POLICY 2.3.1: The development pattern for the Tier 1 areas is compact and includes vertically and horizontally integrated mixed uses that are designed to provide connectivity to adjacent developments through pedestrian facilities, access/connections to local and regional transit, and the adjacent sidewalk and bicycle networks.



POLICY 2.3.2: The mobility strategy for the Tier 1 areas is to enhance the existing transportation systems for all modes and increasing the connections between the Tier 1 areas. The degree to which a development will contribute toward enhancing the existing systems is dependent on the density and intensity of the development. The transportation contributions will include pedestrian and bicycle facilities, roadway TSM and capacity projects, transit infrastructure and contributions to operations. Any new streets or connections within this Tier will be designed as a “complete street.” TDM will also be integrated as a key part of the transportation/mobility system in this Tier.

OBJECTIVE 2.4: Mobility Tier 2 includes all areas outside Tier 1 which are not Single Family Detached Residential.

POLICY 2.4.1: The existing development pattern in Tier 2 is generally a mixture of existing Low Medium and High Density Residential uses and office and mixed-use office/residential/commercial developments. These areas are generally built out, but offer some opportunities for redevelopment. When redevelopment occurs, the development will be required to incorporate the same design principles as Tier 1 to the greatest extent possible, particularly pedestrian-oriented design and increased access/connectivity to transit.

POLICY 2.4.2: The mobility strategy for Tier 2 is to enhance the existing transportation system for all modes, but generally at a less intense scale than Tier 1. The transportation contributions shall include pedestrian and bicycle facilities, roadway TSM and capacity projects, transit infrastructure and contributions to operations. TDM will be encouraged, but will likely not be an integral part of mobility in this Tier.

POLICY 2.5.1: The existing Tier 3 development pattern is generally a suburban single family and auto-oriented in semi-gridded and cul-de-sac street pattern. Redevelopment will be required to support pedestrian and bicycle travel.

POLICY 2.5.1: The City will identify and develop opportunities to enhance bicycle and pedestrian facilities within Tier 3 to provide connectivity to the land uses and transportation infrastructure within the Tier 1 and Tier 2 areas. TDM activities in this Tier will be targeted toward the individual for ride-sharing/carpooling and related TDM activities.



“OBJECTIVE 2.6: Maintain a Future Transportation Map Series and Capital Improvements Program, which support the Future Land Use Map Series and Policies. Together, the Future Land Use Map Series and the Transportation Element Map Series illustrate land use and transportation strategies to support and fund mobility; and collectively illustrate the City of Maitland’s Mobility Plan. Coordinate population densities, housing, employment patterns, and land uses with transportation modes and services.”

“OBJECTIVE 2.7: Implement a coordinated and integrated transit, bicycle and pedestrian system that recognizes the needs and desires of the City's pedestrians and cyclists, furthers the reduction of greenhouse gas emissions and allows for their safe travel to the City's parks, schools, shopping and employment centers.”

“POLICY 2.7.1: The City promotes a sidewalk network and pedestrian connections to serve the needs, desires, and safety of the City’s pedestrians and cyclists, including connections and access to schools, parks, public open spaces, and regional trail facilities.”

“OBJECTIVE 2.8: The City shall continue to provide for safe, efficient and convenient non-automobile regional travel alternatives for residents and nonresidents of Maitland.”

“POLICY 2.8.1: The City supports expanded mass transit service on regional facilities and collectors as an option for motorists seeking to reduce travel time and costs associated with congestion and as a means to protect its neighborhoods from cut-through non-local traffic.”

“OBJECTIVE 2.9: The City shall continue to provide for the safe and convenient movement of non-automobile transportation throughout the City with links to the regional non-automobile transportation network.”

“POLICY 2.9.1: The City shall begin exploring potential intra-City, non-regional transit options to provide better non-automobile access from neighborhoods to businesses and recreational areas in the MPA.”



The City has established the foundation for the adoption of a Mobility Fee through the adoption of Multi-Modal LOS standards into the 2030 Comprehensive Development Plan that have been used as a guide to identify multi-modal transportation improvements. Consistent with the policies adopted in the Comprehensive Plan, the improvements identified in the Plan include sidewalks, trails, bike lanes and roadways. In addition, car, bicycle and ride sharing service are included in the Mobility Fee calculations to address last mile mobility and accessibility to SunRail passengers. The following are the Multi-Modal LOS standards that have been adopted into the Comprehensive Development Plan:

“OBJECTIVE 1: Upon adoption of this Plan, ensure that recognized improvements in this Plan are included in the appropriate State and regional improvement plans. Work with neighboring and regional jurisdictions and the State to provide and maintain a safe and efficient regional transportation network so that non-resident traffic does not adversely impact City neighborhoods. These recognized roadways shall be classified as arterials.”

“POLICY 1.2: The City hereby adopts a peak hour Level of Service (LOS) standard of E for all regional arterial transportation facilities (principal and minor arterials) within the MPA, except Maitland Boulevard (from I-4 to U.S. 17-92), and I-4, U.S. 17-92, Horatio Avenue and Maitland Avenue. For Maitland Boulevard (from I-4 to U.S. 17-92), the City shall adopt a peak hour LOS standard of E until this portion of Maitland Boulevard is widened to 6-lanes at which time the LOS standard will be changed to F. For I-4 (S.R. 400) the City shall adopt a peak hour LOS standard of F until I-4 is improved to include special use lanes in its median at which time the LOS standard will be changed to E. For U.S. 17-92, Horatio Avenue and Maitland Avenue (which due to right-of-way constraints, cannot be widened to improve level of service), the City shall adopt a peak hour LOS standard of F.”

“OBJECTIVE 2: Provide and maintain the safe and efficient movement of automobile, pedestrian and bicycle traffic on all major non-regional roads (classified as collectors), with the primary purpose of these facilities being access from MPA neighborhoods to regional roads or to MPA businesses and recreational areas.”

“POLICY 2.7: The City shall adopt a peak hour LOS standard of D for all collector roadways within the MPA, except Lake Avenue, Park Avenue and Wymore Road which shall be LOS standard F.”



“OBJECTIVE 3: The City shall continue to maintain the integrity of the City's residential street system by ensuring that safety, convenient property access and neighborhood character are not adversely affected by non-local traffic or incompatible land uses that would disrupt existing travel patterns.”

“STANDARD 3.1.2: Neighborhood streets (local collectors, local streets) shall be evaluated in terms of volume, speed, and the percentage of cut-through traffic. The City has established an ELOS of C for all three measures.”

“OBJECTIVE 4: Establish level of service standards for non-automobile modes of transportation, including pedestrian, bicycle and transit.”

“POLICY 4.1: The presence of a sidewalk (minimum five feet wide) on roadways on both sides of the roadway or a multi-use lane on one side which runs the length of the respective roadway shall be the measure for pedestrian facilities and shall be considered an LOS standard of “B”. The City’s objective is to achieve an LOS B within Mobility Tiers 1 and 2, for the collector and arterial roadways by 2030, not a standard that is intended to be achieved on an annual basis for each roadway. The City will strive to achieve an LOS B within Tier 3. Mobility Tiers are illustrated in Map 1-C.

POLICY 4.2: The presence of a bike lane, paved shoulder, or multi-use path on roadways which runs the length of the respective roadway segment shall be the measure for bicycle facilities and shall be considered an LOS standard of “B”. The City’s objective is to achieve an LOS B within Mobility Tier 1 and 2 for the collector and arterial roadways by 2030, not a standard that is intended to be achieved on an annual basis for each roadway.

POLICY 4.3: The City shall utilize the 2009 FDOT Quality/Level of Service Handbook Transit Level of Service (TLOS) thresholds based on the Transit Capacity and Quality of Service Manual (TCQSM). These thresholds are limited and applicable to scheduled fixed route bus transit. The City hereby adopts a TLOS standard of “E” within Mobility Tier 1.”



The adoption of a Mobility Fee would replace the City of Maitland’s TCEA and proportionate share mitigation policies and could eliminate transportation impact fees. Implementation of a Mobility Fee schedule will allow an applicant for new development or redevelopment to simply lookup the uses that are proposed and calculate the required mitigation. The growth management changes by the Florida Legislature over the last few years provide the City of Maitland with the opportunity to continue to be a leader an innovator in Community Planning and streamline the process through which development mitigates its transportation impact consistent with the adopted Comprehensive Plan.

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MOBILITY FEE METHODOLOGY

TRAVEL DEMAND

The evaluation of future travel demand is the initial component in the development of a Mobility Fee. Travel demand is initially assessed through calculation of the vehicle miles of travel (VMT) within the City of Maitland. The Orlando Urban Area Transportation Study (OUATS) Regional Travel Demand Model developed as part of the Orlando MetroPlan 2030 Long Range Transportation Plan (LRTP) was utilized to conduct the VMT analysis. The 2030 horizon year for the LRTP is the same as the adopted City of Maitland Comprehensive Development Plan. The OUATS model was used to calculate both the base year 2015 VMT and the future year 2030 VMT for the major thoroughfare network established in the adopted Comprehensive Development Plan (**Map B**). The methodology for calculating the growth in VMT is described below in **Figure 1**:

FIGURE 1

$$VMT_{growth} = VMT_{future} - VMT_{base}$$

Where:

VMT growth = Total increased VMT within the planning horizon

VMT future = VMT in the horizon year of Mobility Plan

VMT base = VMT in the base year of the Mobility Plan

The results of the VMT analysis resulted in an increase of 186,631 VMT between the base year of 2015 and the future year of 2030. The VMT from Interstate 4 was excluded in the analysis, as limited access facilities are not projects that are included in Mobility Fees due to the facilities being maintained and constructed by federal funds and gas taxes allocated to states from the Federal Highway Administration (FHWA). As illustrated in **Table 1** below, the annual growth rate of growth over the 15-year period was just under one (1%) percent.



**TABLE 1. REGIONAL TRAVEL DEMAND MODEL
VEHICLE MILES OF TRAVEL**

2004 Base Year Model Vehicle Miles of Travel (VMT)	1,278,771
2015 Future Year Model Vehicle Miles of Travel (VMT)	1,531,544
2030 Future Year Model Vehicle Miles of Travel (VMT)	1,718,175
Increase in Vehicle Miles of Travel	186,631
Annual Rate of Growth in VMT	0.812%
<i>Source: Vehicle Miles of Travel based on Orlando Urban Area Transportation Study (OUATS) as part of the MetroPlan 2030 Regional Long Transportation Plan. Vehicle Miles of Travel excludes travel on Interstate 4.</i>	

To account for person trips made by walking, biking, riding transit and vehicle occupancy in a multi-modal 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. The analysis resulted in a PMT factor of 1.3, which was applied to the growth in VMT to determine the future multi-modal travel demand to be accommodated. The results in **Table 2** indicate an increase in PMT of 242,621 by 2030.

**TABLE 2. INCREASE IN PERSON MILES OF TRAVEL
(BETWEEN 2015 AND 2030)**

Increase in Vehicle Miles of Travel (VMT)	186,631
Person Miles of Travel (PMT) Factor	1.30
Person Miles of Travel	242,621
<i>Source: Vehicle Miles of Travel based on 2030 Regional Travel Demand Model from MetroPlan Orlando. Vehicle Miles of Travel excludes travel on Interstate 4. Person Miles of Travel based on 2030 Regional Travel Demand Model from MetroPlan Orlando, local data and 2009 National Household Travel Survey (Appendix A).</i>	



MULTI-MODAL CAPACITY & IMPROVEMENTS

The City of Maitland Transportation Element has adopted a Mobility Plan to address future travel demand needs (**Map C**). The improvements identified in the Multi-Modal Transportation Element form the basis of the capital improvements used to develop the Mobility Fee. Consistent with the adopted LOS standards for roads, bicycle and pedestrian facilities and transit; the City has identified capital improvements as part of the Multi-Modal Transportation Element. The multi-modal capital improvements necessary to serve multi-modal travel demand include sidewalks, bike lanes, trails, paths, parking garage, car, bicycle and ride sharing service, intersections and roadways.

To ensure that the multi-modal capital improvements identified will adequately address future travel demand while ensuring developments are not assessed for more than their impact, it is necessary to evaluate the Person Miles of Capacity (PMC) that will be added to the multi-modal network through the identified multi-modal transportation improvements. The 2013 Florida Department of Transportation’s Quality / Level of Service Report was utilized to establish capacities for roadways and intersections as shown in **Table 3** below:

TABLE 3. DAILY VEHICLE CAPACITIES

Lane Type & Number	Total Capacity	Capacity per Lane
2-Lane Divided	18,585	9,293
4-Lane Divided	39,800	9,950
6-Lane Divided	59,900	9,983
8-Lane Divided	80,100	10,013
Average Capacity	49,596	9,810

Source: Florida Department of Transportation, 2013 Quality/Level of Service (LOS) Handbook, Generalized Annual Average Daily Volumes for Florida's Urbanized Areas, Appendix B. Capacities are based on Class I State Roads at LOS D. The capacity of 2 lane divided road accounts for a 5% increase in capacity over a 2 lane undivided due to a center turn lane and median.



To obtain an equivalent PMC, 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 multi-modal LOS reports and the *Transportation Research Board 2010 Highway Capacity Manual*. The capacity for SunRail is based upon methodologies from the *Transportation Research Board Transit Capacity and Quality of Service Manual, 3rd Edition*. The capacity derived for SunRail assumed that transit service was funded by means other than a Mobility Fee. Operations and maintenance for SunRail service is not included in the Mobility Fee calculations. The Mobility Fee unfunded projects do include provisions for car, bicycle and ride sharing services to provide mobility and accessibility to SunRail service. **Table 4** below illustrates the calculated multi-modal capacities.

TABLE 4. MULTI-MODAL CAPACITIES

Facility Type	Unit of Measure	Daily Capacity
Sidewalk	5' – 6' wide	2,000
Bicycle Lane	4' – 7' wide	3,000
Trail / Multi-Use Path	8' - 16' wide	5,000
SunRail	per train car	5,800

Source: The capacity for bicycle lane, trail, multi-use path based on capacity procedures at a "LOS B" 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 SunRail based on occupancy of 150 passengers per train car running at 30 minute headways (bi-directional) for a span of service of 7 hours during AM and PM peak hours and once every two hours for a span of service of 8 hours during off-peak periods. The cost to operate and maintain SunRail is funded by sources other than the Mobility Fee. SunRail frequency and span of service subject to change.

The City of Maitland’s Capital Improvements Element and Program, Orange County Capital Improvements Element and the MetroPlan 2030 Long Range Transportation Improvement Program were evaluated to determine multi-modal improvements and current funding allocated to those multi-modal transportation improvements. Funded multi-modal improvements that include capital improvements and multi-modal enhancements are identified in **Appendix C**.



The list of unfunded multi-modal improvements that forms the basis for calculation of the Mobility Fee is identified in **Appendix D**. Unfunded pedestrian facilities such as sidewalks, multi-use paths and trail improvements along with associated streetscape elements, used in the Mobility Fee are based on the facilities identified in the Multi-Modal Transportation Element (**Map D**). Unfunded bicycle facilities such as bike lanes, shared-use paths and bikeways are identified on **Map E** in the Multi-Modal Transportation Element. Along some roadway corridors, bicycle and pedestrian facilities maybe accommodated through construction of a shared-use path or multi-use trail. In some instances, low speed electric vehicles and golf carts maybe permitted on wider bicycle lanes or on a shared-use path or multi-use trail. Other non-motorized travel such as hoverboards, Segways, unicycles, rollerblades, skateboards, as well as jogging, running and electric bicycles can be accommodated on shared-use path or multi-use trail. Increases to unfunded roadway capacity used to calculate the Mobility Fee will be accomplished through a combination of multi-model corridor improvements, roadway widening, targeted intersection improvements and a downtown parking garage that will reduce congestion and increase capacity on downtown corridors by reducing travel associated with attempting to locate on and off-street parking (**Maps F & G**). In addition, the unfunded improvements include funds for car, bicycle and ride sharing services to address last mile mobility and accessibility barriers to the Maitland SunRail Station (**Map G**).

Utilizing the capacities for roadways and multi-modal facilities, a Person Miles of Capacity (PMC) was calculated for funded and unfunded improvements that are expected to add capacity. The funded list of capacity projects consistent mostly of roadway and intersection projects. The unfunded list of multi-modal capacity projects includes a balance of bicycle and pedestrian facilities, transit and roadways. Based upon funded and unfunded multi-modal capacity improvements, future travel demand will be accommodated fairly equally between the modes of transportation.

Table 5 provides a future breakdown of the PMC to be provided based on the multi-modal improvements in **Appendix B & C**. Current funding is projected to provide 87,357 PMC. The unfunded multi-modal projects are projected to provide 118,620 PMC. The total PMC that can be accommodated based on funded and unfunded multi-modal capacity improvements is 205,977.



TABLE 5. PERSON MILES OF CAPACITY (PMC)

Multi-Modal Facility	Funded Person Miles of Capacity (VMC)	Unfunded Person Miles of Capacity (PMC)	Total Person Miles of Capacity (PMC)
Bicycle / Pedestrian	33,500	75,000	108,500
SunRail Transit	0	11,600	11,600
Roadway / Intersection	53,857	32,020	85,877
Total	87,357	118,620	205,977

Source: Funded Person Miles of Capacity based on data from Appendix C. Unfunded Miles of Capacity based on data from Appendix D. Sidewalks, Multi-Use Paths, Trails and bicycle facilities can accommodate both bicycle and pedestrian mobility. Car, bike and ride sharing services provide access to SunRail which is funded by means other than Mobility Fees.

The identified funded and unfunded multi-modal improvements are projected to add 205,977 Person Miles of Capacity. The projected future person miles of travel demand is 242,621 based on **Table 2**. A capacity-to-demand ratio less than 1.0 indicates that the funded and unfunded multi-modal capacity improvements are not providing more capacity than what is required to accommodate future person miles of travel demand and the City of Maitland is not charging new development more than its impact to the transportation system (**Table 6**).

TABLE 6. CAPACITY-TO-DEMAND RATIO

Funded Person Miles of Capacity	87,357
Unfunded Person Miles of Capacity	118,620
Future Person Miles of Capacity	205,977
Person Miles of Travel Demand (PMT)	242,621
Capacity-to-Demand Ratio	0.85

Source: Funded and Unfunded Person Miles of Capacity (PMC) based on data in table 5. Future Person Miles of Travel (PMT) based on data in table 2. Capacity-to-Demand Ratio derived by dividing by Future Person Miles of Capacity (PMC) by Future Person Miles of Travel (PMT).

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The City of Maitland and FDOT have allocated resources to fund multi-modal improvements within the City. As illustrated in **Table 7**, the total funded multi-modal improvements are just over \$27 million dollars. Consistent with the City of Maitland’s Capital Improvements Element and Program, the total unfunded multi-modal capital improvements needed is \$23,450,000 (**Appendix D**).

TABLE 7. FUNDING FOR MULTI-MODAL CAPITAL IMPROVEMENTS

Funded Multi-Modal Capital Improvements	\$27,117,100
Unfunded Multi-Modal Capital Improvements	\$23,450,000
Total Cost of Multi-Modal Capital Improvements	\$50,567,100

Source: Future funding for capital improvements, multi-modal enhancements and reconstruction and maintenance based upon improvements identified in Appendix C. Unfunded multi-modal capital improvements based upon improvements identified in Appendix D. The total cost of multi-modal improvements based on improvements identified in Appendix C & D. Each Appendix includes additional detail on the source of the cost for the multi-modal improvements.

The unfunded multi-modal capital improvements are divided between bicycle and pedestrian facilities, complete and living streets and streetscape at \$11,300,000, car, bicycle and ride sharing service, including autonomous vehicles, to provide access to transit at \$2,250,000 and roadways, intersections and parking facility at \$9,900,000. The \$23,450,000 million dollars in unfunded multi-modal capital improvements is broken down into pedestrian, bicycle, transit and roadway projects as shown in **Table 8**.

TABLE 8. UNFUNDED CAPITAL IMPROVEMENTS

Capital Improvements	Cost
Bicycle/Pedestrian/Complete & Living Streets	\$11,300,000
Transit (access via Car, Bicycle and Ride Sharing)	\$2,250,000
Roadway / Intersection / Parking	\$9,900,000
Total	\$23,450,000

NOTE: Projects are based on unfunded capital needs identified in table 6 based on the City of Maitland Multi-Modal Transportation Element, Capital Improvements Element and Program.



PERSON MILES OF TRAVEL RATE

The rate per Person Miles of Travel (PMT) is used as the baseline assessment for travel in the Mobility Fee calculation and is calculated per the formula in **Figure 2**. To derive a PMT Rate for the Mobility Fee, the total cost of unfunded multi-modal transportation improvements identified in **Table 8** was divided by the projected growth in PMT between 2015 and 2030 from **Table 2**.

FIGURE 2

$$PMT_{rate} = (Cost_{unfunded\ improvements} / PMT_{growth})$$

With unfunded multi-modal transportation improvements of \$23,450,000 a projected growth in Person Miles of Travel of 242,621, the calculated rate per Person Miles of Travel is \$96.65 as shown in **Table 9** below.

TABLE 9. PERSON MILES OF TRAVEL (PMT) RATE

Total Unfunded Capital Cost	\$23,450,000
Growth in Person Miles of Travel	242,621
Person Miles of Travel Rate	\$96.65
<i>Source: Total Unfunded Capital Improvements based on table 6. Person Miles of Travel Demand based on Table 2. Person Miles of Travel Rate is derived by dividing cost of unfunded improvements by person miles of travel demand.</i>	

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EXISTING TRAVEL CHARACTERISTICS

One of the steps in development of a Mobility Fee is the evaluation of the travel characteristics on the major thoroughfare system within the City of Maitland. The Traffic Data Report based on data from Orange County identifies the roadways within the thoroughfare system. The Report includes the length of the roads, the functional classification, daily traffic, the number of lanes, and the capacity for each road (**Appendix E**). The traffic count data represents the most recent data available was collected in 2012 and 2013. The calculation of vehicle miles of travel (VMT) is accomplished through multiplying the length of a roadway segment by the daily traffic on the roadway. **Table 10** illustrates the VMT on the major thoroughfare system in the City.

**TABLE 10. EXISTING TRAVEL
ON MAJOR THOROUGHFARE SYSTEM**

Roadway Category	Miles	Daily Vehicle Miles of Travel (VMT)
Collector	13.9	95,170
Minor Arterial	8.4	317,945
Principal Arterial	2.0	77,028
Interstate	1.5	254,075
Total	25.8	744,217
<i>Source: Daily VMT based on Traffic Counts from FDOT, Orange County and the City of Maitland and the Traffic Data Report in Appendix E. VMT derived by multiplying ADT by length of roadway. Decimal numbers rounded to the nearest 100th.</i>		

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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 are not charged for travel on the interstate system, the VMT on Interstate 4 is excluded from the major thoroughfare system within the City. **Table 11** illustrates the adjustment factor calculated to exclude travel on Interstate 4.

TABLE 11. INTERSTATE ADJUSTMENT FACTOR

Roadway Category	Miles	Daily Vehicle Miles of Travel (VMT)
Interstate	1.5	254,075
Major Thoroughfare System	25.8	744,217
Interstate Adjustment Factor	24.3	0.66

Source: Daily VMT based on Traffic Counts from FDOT, Orange County and the City of Maitland and the Traffic Data Report in Appendix E. VMT derived by multiplying ADT by length of roadway. Decimal numbers rounded to the nearest 100th.

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 the interstate highway system. An adjustment factor for local trip lengths is necessary to ensure development that generates new trips is not charged for trips on local roads or Interstate 4.

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 within the City. Existing land use data within the City of Maitland was compiled using information from the Orange County Property Appraiser and 2010 Census data. To estimate total citywide 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 12** below, existing citywide land uses, using national trip generation and trip length data, would be expected to generate 1,063,852 daily VMT.

TABLE 12. EXISTING LAND USE VEHICLE MILES OF TRAVEL

Land Use Type	Unit	Existing Units	Trip Rate	Primary Trips	Daily Trips	Length (miles)	Daily VMT
Single-Family Detached	Dwelling	3,602	4.75	100%	17,110	8.50	145,431
Single-Family Attached	Dwelling	576	2.91	100%	1,676	8.50	14,247
Multi-Family	Dwelling	3,860	3.5	100%	13,510	8.50	114,835
Assisted Living / Congregate Care	Dwelling	221	1.15	100%	254	8.50	2,160
Hotel/Motel	Rooms	882	4.06	90%	3,223	10.70	34,484
Commercial/Retail	1,000 sq ft	880	25.25	70%	15,561	6.50	101,145
Office	1,000 sq ft	9,050	5.86	90%	47,728	11.80	563,191
Government	1,000 sq ft	167	24.21	90%	3,641	11.80	42,970
Place of Worship	1,000 sq ft	367	4.56	90%	1,505	6.30	9,484
Education	1,000 sq ft	227	7.02	50%	796	6.30	5,015
Civic / Community / Social	1,000 sq ft	164	16.91	80%	2,213	10.70	23,676
Industrial	1,000 sq ft	192	2.70	90%	465	11.80	5,490
Park	Acres	98	1.62	100%	158	10.70	1,692
Total Daily VMT							1,063,820

Source: Land Use Data from the Orange County Property Appraiser and Residential units from U.S. Census Bureau American Community Survey. Primary trip lengths from US Household Travel Survey; daily trips is a product of 1/2 ITE Daily trip generation rates for various land uses and primary trips; daily VMT is product of daily trips and trip length. Decimal numbers rounded to the nearest 100th.



The VMT based on existing land use data and national travel demand characteristics overestimates VMT actually observed on the major roadway system. This is not surprising given that the major thoroughfare system excludes local roads and Interstate 4. 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 VMT on collectors and arterials versus the projected VMT based on existing land uses. To account for person miles of travel, the adjusted VMT and the projected VMT are both multiplied by the PMT factor of 1.3. As shown in **Table 13**, the average daily demand for each land use should be multiplied by a local adjustment factor of 0.46.

TABLE 13. LOCAL ADJUSTMENT FACTOR

Daily Vehicle Miles of Travel (VMT) on Major Thoroughfare	744,217
Interstate Adjustment Factor	0.66
Adjusted Daily Vehicle Miles of Travel (VMT)	491,183
Projected Daily Vehicle Miles of Travel (VMT)	1,063,820
Adjusted Daily Person Miles of Travel (PMT)	638,538
Projected Daily Person Miles of Travel (PMT)	1,382,966
Local Adjustment Factor	0.46
<p><i>Source:</i> Daily VMT from Table 10. Interstate Adjustment Factor based on Table 12. Adjusted Daily derived by multiplying Daily VMT by the Interstate Adjustment Factor. Existing Land Use VMT based on Table 12. Adjust PMT and Existing Land Use PMT obtained by multiplying PMT Factor of 1.3 to account for person miles of travel on major therefore system and from existing land uses. Local Adjustment Factor derived by dividing Adjusted PMT by Existing Land Use PMT. Decimal numbers rounded to the nearest 100th.</p>	

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Average Travel Length

The U.S. Department of Transportation’s 2009 National Household Travel Survey identifies average person trips lengths for specific trip purposes, including work, school/church, family / personal, shopping and social / recreational trips (**Appendix F**). In addition, an average residential trip length was calculated using the average of all trip purposes. The longer the overall average travel length for a land use, the higher the person 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 14**.

TABLE 14. AVERAGE PERSON TRIP LENGTH BY TRIP PURPOSE

Trip Purpose	2009 National Average Person Trip Length (miles)	Local Adjustment Factor	Local Average Person Trip Length (miles)
To/From Work	11.8	0.46	5.4
Shopping	6.5	0.46	3.0
Other Family/Personal Errands	7	0.46	3.2
School/Church	6.3	0.46	2.9
Social and Recreational	10.7	0.46	4.9
Residential	8.5	0.46	3.9

Source: National average person trip lengths from US Department of Transportation, National Household Travel Survey, 2009 (Appendix F); Residential is an average of the five trip purposes; local adjustment factor from Table 13. Trip length decimal numbers rounded to the nearest 10th. Local Adjustment factors decimal rounded to nearest 100th.

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Information from the U.S. Department of Transportation, Federal Highway Administration “National Personal Transportation Survey” were utilized to develop factors that reduced the average travel length of overall trips for uses classified as convenience, neighborhood, community and regional. In addition, a Geographic Information System (GIS) analysis was conducted for existing non-residential uses to establish factors for further adjusting trip lengths to capture convenience, neighborhood, community and regional trips to further adjust to real world conditions in Maitland. The regional factor is utilized due to the high percentage of regional travel from the Orlando Metropolitan Area through the City of Maitland.

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 Orange 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 the City of Maitland was conducted utilizing Google Earth to evaluate the frequency of various land uses within the City.

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, then drive a mile or less 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.



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.”

Table 15 illustrates the trip length adjustment factors that will be applied to the person travel length on collector and arterial roadways from **Table 14**. These adjustments will factor into the calculations for the average trip length used to determine the Person Miles of Travel for individual land uses.

TABLE 15. TRIP LENGTH ADJUSTMENT FACTORS

Convenience % reduction	60%
Neighborhood % reduction	40%
Community % reduction	20%
Regional % reduction	10%
<i>Source: Trip reduction factors based on National Personal Transportation Survey and a GIS evaluation of existing land development pattern within City of Maitland.</i>	



Backlog Evaluation

Case law and State Statute prohibit local governments from charging new development for over capacity or “backlogged” roadways. 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 16**, 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 16**, the system wide VMC/VMT ratio is 1.31. Thus, there are no backlogged facilities on a system wide basis for which new development is being assessed.

TABLE 16. EXISTING MAJOR ROADS CAPACITY/DEMAND RATIO

Functional Classification	Existing Vehicle Miles of Capacity (VMC)	Existing Vehicle Miles of Travel (VMT)	VMC/VMT Ratio
Collector	221,396	95,170	2.33
Minor Arterial	346,936	317,945	1.09
Principal Arterial	121,597	77,028	1.58
Interstate	221,925	254,075	.87
Total	911, 854	744,217	1.23

Source: Data based on Traffic Data Report (Appendix E).



PERSON MILES OF TRAVEL PER LAND USE

The City of Maitland's Mobility Fee is based on an "improvements-based" model, which charges a new development its share of the cost of providing multi-modal improvements. There are three essential components in determining the Person Miles of Travel per land use. The 1st component is new trips that will utilize the multi-modal transportation system. New development and, in some instances, redevelopment generate new vehicle and person trips. The City through its adopted Comprehensive Plan has elected to provide mobility for these new trips through the planning and provision of a multi-modal transportation system. A Mobility Fee is one means for development that generates new trips to equitably pay for the mobility demands placed on the multi-modal 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 2nd component is the length of trips. The lengths of trips are determined based upon data from the 2009 National Household Travel Study (NHTS) and adjusted for local travel rates based on **Table 13**. The trip lengths are further adjusted to address convenience, neighborhood, community and regional travel patterns per the percentages on **Table 14**. For development within Mobility Tiers 1 and 2, a community capture rate of 25% is applied to account for the significant mixture of land uses within these tiers. The 3rd and final component is the conversion of vehicle miles of travel (VMT) per land to person miles of travel (PMT) per land use.



The factor in **Table 2** 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 in **Figure 3**.

FIGURE 3

PMT per Land Use (CRA)	=	$(TG \times IC \times \% \text{ NEW} \times (LEN \times TLA) \times PMTF)$
PMT per Land Use (Tier 1 & 2)	=	$(TG \times CC \times \% \text{ NEW} \times (LEN \times TLA) \times PMTF)$
PMT per Land Use (Tier 3)	=	$(TG \times \% \text{ NEW} \times (LEN \times TLA) \times PMTF)$
Where:		
PMT:		Person Miles of Travel
TG:		Trip Generation during average weekday
IC:		Internal Capture Rate of 25%
CC:		Community Capture Rate of 15%
% NEW:		Percent of trips that are primary trips, as opposed to pass-by or diverted-link trips
LEN:		Average length of a trip on the major roadway system
TLA:		Trip Length adjustment factor to calibrate national travel demand factors to local conditions
PMTF:		Person Miles of Travel Factor of 1.3 to account for multi-modal travel

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Daily 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 and-uses and trip characteristics found in Maitland. The ITE Manual is used in communities across the US and is the accepted source for trip generation utilized by the Florida Department of Transportation.

Internal & Community Capture

The percentage of **Internal & Community Capture** reflects the reduced impact on the overall transportation system by when there is a mixture of uses and interconnectivity. The CRA has a dense mixture of existing and planned land uses within a tight gridded network that reduces the need to travel outside the CRA and therefore reflects a development pattern where an internal capture of trips occurs. Tier 1 & 2 currently have a mixture of existing and planned land uses that allows for the community capture of trips within the Tiers. The *ITE Trip Generation Handbook, 3rd edition* and the Transportation Research Board National Cooperative Highway Research Program (NCHRP) Report 684 "Enhancing Internal Trip Capture Estimation for Mixed-Use Development" are tools for evaluating mixed-use development and urbanized areas. The Handbook and Report references studies that illustrate internal and community capture rates between 15% and 50%.

The transportation impact for developments that are located within the CRA and Tier 1 & 2 include a mixture of residential, commercial, office and civic uses. The mixture of uses allows for a reduction in external trips by **25%** to account for internal capture within the CRA and 15% to account for community capture within Tier 1 & 2.



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 uses 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 convenience trip length reduction 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 reduction in travel applies to the trip length between uses and the need to access another roadway.

Trip Length

The trip lengths per individual land uses are based upon the adjusted person trip lengths per **Table 13**. The trip purpose is matched with the varying land use based upon professional judgment of the trip purpose that most closely resembles the travel patterns for each land use. Residential uses are fairly straightforward. For office and industrial uses, the trip lengths associated with trip purposes to and from work are applied. For the vast majority of retail land uses, the trip length associated with trip made to and from shopping is utilized.



For places of worship and education, the trip length associated with school / church is utilized as the appropriate trip purpose. For recreation and entertainment land uses and hotels, the trip lengths associated with social and recreational are utilized as the appropriate trip purposes. For trips to the bank or gas station or auto service and detail, the trip length associated with other family / personal errands are deemed to be appropriate based on trip purpose.

To account for shorter trips and trip chaining, the practice of stopping at multiple destinations on the way to and from work, an additional trip length adjustment is applied. For convenience land uses such as trips to the fast food restaurant or gas station, a higher adjustment factor is used; as these convenience uses are places most individuals on a daily basis stop at on the way to somewhere else. For trip to the grocery store or mom and pop retail uses, the neighborhood reduction factor is utilized as these uses tend to be fairly evenly distributed throughout a community and are located in closer proximity to residential uses. Schools and places of worship typically attract trips from within the community; however most of those trips tend to stay fairly local. The regional adjustment factor is applied to trip that will travel throughout a community or are a regional destination such as a residential use and a large format retail use. This factor is applied, as the various adjustments do not necessarily account for the full metropolitan travel through the City of Maitland. In addition, while these trips travel longer distances, not all uses are located at one edge of the City and then travel through the entire length of the City on a daily basis.

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 analysis resulted in a PMT factor of 1.3, which was applied to the growth in VMT to evaluate future multimodal travel demand within the City of Maitland. The **PMT** factor of **1.3** is utilized to adjust the VMT for individual land uses to a PMT per land use.



Travel Demand Schedule

The result of combining trip generation rates, percent of new trips, average trip length, trip adjustment factor and the final trip length is a travel demand schedule that establishes the PMT during the average weekday generated by various land uses types per unit of development for the City of Maitland. The final trip length is derived by multiplying the trip length from **Table 14** by the trip length adjustment factor from **Table 15**. The travel demand schedule for each land use is presented in **Table 17**.

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Table 17. Trip Characteristics Category / Land Use Type	Trip Gen	% New Trips	Trip Len	Trip Length Factor	Adj Trip Length
Residential Per Dwelling Unit					
Single Family Detached	9.52	1.00	3.90	0.90	3.51
Multi-Family Apartments	6.65	1.00	3.90	0.90	3.51
Single Family Attached / Townhome / Condo	5.81	1.00	3.90	0.90	3.51
Active Adult / Continuing Care (55+ Age Restricted)	3.56	1.00	3.90	0.90	3.51
Recreation & Entertainment					
Racquet/Tennis Club per Court	14.03	0.90	4.90	0.60	2.94
Multipurpose Recreational Facility per Acre	90.38	0.75	4.90	0.60	2.94
Health/Fitness/Athletic Club per 1,000 sq. ft.	37.97	0.80	4.90	0.60	2.94
Recreational Community Center per 1,000 sq. ft.	33.83	0.80	4.90	0.40	1.96
Movie Theater per Seat	2.00	0.70	4.90	0.90	4.41
Institutional per 1,000 sq. ft.					
Private School (Pre K-12)	14.03	0.50	2.90	0.80	2.32
College / University	27.49	0.75	2.90	0.80	2.32
Place of Worship	9.11	0.90	2.90	0.80	2.32
Place of Worship with School (Pre K-12)	11.57	0.80	2.90	0.80	2.32
Day Care Center	74.06	0.50	2.90	0.40	1.16
Office per 1,000 sq. ft.					
Office	11.03	0.80	5.40	0.80	4.32
Medical Buildings per 1,000 sq. ft.					
Medical / Dental / Veterinary Offices	36.13	0.80	3.20	0.60	1.92
Hospitals	13.22	1.00	5.40	0.90	4.86
Nursing Home	7.60	1.00	3.20	0.90	2.88



Table 17. Trip Characteristics Category / Land Use Type	Trip Gen	% New Trips	Trip Len	Trip Length Factor	Adj Trip Length
Industrial Buildings per 1000 sq. ft.					
Warehousing / Manufacturing / Industrial	3.40	0.90	5.40	0.90	4.86
Mini-Warehousing	2.50	0.90	3.20	0.90	2.88
General Commercial Retail per 1000 sq. ft.					
Neighborhood Retail (less than 10,000 sq. ft.)	44.32	0.60	3.00	0.60	1.80
Community Retail (10,000 to 100,000 sq. ft.)	42.70	0.70	3.00	0.80	2.40
Regional Retail (Greater than 100,000 sq. ft.)	49.93	0.80	3.00	0.90	2.70
Sit Down Restaurant	108.55	0.60	3.00	0.60	1.80
Restaurant with Drive-Thru	657.35	0.40	3.00	0.40	1.20
Car Sales	33.34	0.90	3.00	0.90	2.88
Tire & Auto Repair	23.72	0.70	3.20	0.80	2.56
Non-Residential					
Assisted Living per Bed	2.36	1.00	3.90	0.90	3.51
Hotel per Room	8.18	0.90	4.90	0.90	4.41
Bank/Savings with Drive-Thru per Drive-Thru Lane	139.25	0.50	3.20	0.60	1.92
Convenience Market & Gas per Fuel Position	352.00	0.40	3.20	0.40	1.28
Quick Lube Vehicle Service per Bay	40.00	0.50	3.20	0.60	1.92
Free Standing Car Wash per Stall and Bay	108.00	0.50	3.20	0.40	1.28

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Person Miles of Travel per Land Use

The PMT factor is applied to the VMT per land use per **Table 17** to derive a PMT per land use. The PMT is applied to each of the three assessment areas. The PMT for land uses in the CRA reflects a 25% reduction in PMT due to the application of internal capture. The PMT for land uses in the Tier 1 and 2 reflects a 15% reduction in PMT due to the application of community capture. The Person Miles of Travel per Land Use illustrated in **Table 18**.

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Table 18. Person Miles of Travel (PMT) Category / Land Use Type	Community Redevelopment Area	Tiers 1 & 2	Tier 3
Residential Per Dwelling Unit			
Single Family Detached	32.58	36.92	43.44
Multi-Family Apartments	22.76	25.79	30.34
Single Family Attached / Townhome / Condo	19.88	22.53	26.51
Active Adult / Continuing Care (55+ Age Restricted)	12.18	13.81	16.24
Recreation & Entertainment			
Racquet/Tennis Club per Court	36.20	41.02	48.26
Multipurpose Recreational Facility per Acre	194.31	220.21	259.07
Health/Fitness/Athletic Club per 1,000 sq. ft.	87.07	98.68	116.10
Recreational Community Center per 1,000 sq. ft.	51.72	58.62	68.96
Movie Theater per Seat	6.02	6.82	8.03
Institutional per 1,000 sq. ft.			
Private School (Pre K-12)	10.58	17.99	21.16
College / University	31.09	52.86	62.18
Place of Worship	12.36	21.02	24.73
Place of Worship with School (Pre K-12)	13.96	23.73	27.92
Day Care Center	27.92	47.47	55.84
Office per 1,000 sq. ft.			
Office	37.17	42.12	49.56
Medical Buildings per 1,000 sq. ft.			
Medical / Dental / Veterinary Offices	54.11	61.32	72.14
Hospitals	62.64	71.00	83.52
Nursing Home	21.34	24.19	28.45



Table 18. Person Miles of Travel (PMT) Category/Land Use Type	Community Redevelopment Area	Tiers 1 & 2	Tier 3
Industrial Buildings per 1000 sq. ft.			
Warehousing / Manufacturing / Industrial	14.52	16.45	19.36
Mini-Warehousing	6.32	7.16	8.42
General Commercial Retail per 1000 sq. ft.			
Neighborhood Retail (less than 10,000 sq. ft.)	46.67	52.89	62.23
Community Retail (10,000 to 100,000 sq. ft.)	69.94	79.27	93.26
Regional Retail (Greater than 100,000 sq. ft.)	105.15	119.17	140.20
Sit Down Restaurant	114.30	129.54	152.40
Restaurant with Drive-Thru	307.64	348.66	410.19
Car Sales	84.26	95.49	112.34
Tire & Auto Repair	76.06	86.20	101.41
Non-Residential			
Assisted Living per Bed	8.08	9.15	10.77
Hotel per Room	31.65	35.88	42.21
Bank/Savings with Drive-Thru per Drive-Thru Lane	130.34	147.72	173.78
Convenience Market & Gas per Fuel Position	175.72	199.15	234.29
Quick Lube Vehicle Service per Bay	37.44	42.43	49.92
Free Standing Car Wash per Stall and Bay	67.39	76.38	89.86

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MOBILITY FEE SCHEDULE

The Mobility Fee for land uses is based on the PMT rate established in Table 9 multiplied by the net PMT rate per land use from Table 18, after dividing by two. The PMT per land use is divided by two to adjust for Origin and Destination trips. The PMT rate per land use represent trip ends, or driveway crossings at the site of a land use. Thus, a single one-way 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 is 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. The formula below is utilized to determine the Mobility Fee per land use:

Figure 4.

$$\text{Mobility Fee}_{\text{per land use}} = (\text{PMT}_{\text{rate}} \times (\text{PMT}_{\text{land use}} / 2))$$

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 19. The following is an example of the Mobility Fee formula for a single family detached residential dwelling in Tier 3:

$$\text{Mobility Fee}_{\text{single family detached}} = (\$96.65 \times (43.44 / 2)) = \$2,099$$

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Table 19. Mobility Fee Schedule Category / Land Use Type	Community Redevelopment Area	Tiers 1 & 2	Tier 3
Residential Per Dwelling Unit			
Single Family Detached	\$1,574	\$1,784	\$2,099
Multi-Family Apartments	\$1,100	\$1,246	\$1,466
Single Family Attached / Townhome / Condo	\$961	\$1,089	\$1,281
Active Adult / Continuing Care (55+ Age Restricted)	\$589	\$667	\$785
Recreation & Entertainment			
Racquet/Tennis Club per Court	\$1,749	\$1,982	\$2,332
Multipurpose Recreational Facility per Acre	\$9,390	\$10,642	\$12,520
Health/Fitness/Athletic Club per 1,000 sq. ft.	\$4,208	\$4,769	\$5,610
Recreational Community Center per 1,000 sq. ft.	\$2,499	\$2,833	\$3,332
Movie Theater per Seat	\$291	\$330	\$388
Institutional per 1,000 sq. ft.			
Private School (Pre K-12)	\$767	\$869	\$1,023
College / University	\$2,254	\$2,554	\$3,005
Place of Worship	\$896	\$1,016	\$1,195
Place of Worship with School (Pre K-12)	\$1,012	\$1,147	\$1,349
Day Care Center	\$2,024	\$2,294	\$2,699
Office per 1,000 sq. ft.			
Office	\$1,796	\$2,036	\$2,395
Medical Buildings per 1,000 sq. ft.			
Medical / Dental / Veterinary Offices	\$2,615	\$2,963	\$3,486
Hospitals	\$3,027	\$3,431	\$4,036
Nursing Home	\$1,031	\$1,169	\$1,375



Table 19. Mobility Fee Schedule Category / Land Use Type	Community Redevelopment Area	Tiers 1 & 2	Tier 3
Industrial Buildings per 1000 sq. ft.			
Warehousing / Manufacturing / Industrial	\$702	\$795	\$935
Mini-Warehousing	\$305	\$346	\$407
General Commercial Retail per 1000 sq. ft.			
Neighborhood Retail (less than 10,000 sq. ft.)	\$2,255	\$2,556	\$3,007
Community Retail (10,000 to 100,000 sq. ft.)	\$3,380	\$3,831	\$4,507
Regional Retail (Greater than 100,000 sq. ft.)	\$5,081	\$5,759	\$6,775
Sit Down Restaurant	\$5,524	\$6,260	\$7,365
Restaurant with Drive-Thru	\$14,867	\$16,849	\$19,822
Car Sales	\$4,072	\$4,615	\$5,429
Tire & Auto Repair	\$2,003	\$2,270	\$2,670
Non-Residential			
Assisted Living per Bed	\$390	\$442	\$520
Hotel per Room	\$1,530	\$1,734	\$2,040
Bank/Savings with Drive-Thru per Drive-Thru Lane	\$6,299	\$7,138	\$8,398
Convenience Market & Gas per Fuel Position	\$8,492	\$9,624	\$11,322
Quick Lube Vehicle Service per Bay	\$1,809	\$2,051	\$2,412
Free Standing Car Wash per Stall and Bay	\$3,257	\$3,691	\$4,342

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MOBILITY FEE ASSESSMENT AREAS AND DISTRICT

There are two kinds of geographic areas in mobility fee systems: assessment areas and mobility fee districts. Assessment areas are served by a defined group of capital facilities and subject to a uniform mobility fee schedule. A mobility fee district is an area within which mobility fees collected are earmarked for expenditure. There are a total of three assessment areas in the City of Maitland. The first assessment area applies to all land uses within the Community Redevelopment Area (CRA) (**MAP I**). The second assessment area applies to all land uses in Tier 1 & Tier 2. The third assessment area applies to all land uses in Tier 3. The Mobility Fee in the CRA is 25% lower due to the application of internal capture. The Mobility Fee in Tier 1 & Tier 2 is 15% lower due to the application of community capture. The City will use a single mobility fee schedule that would apply uniformly across the three assessment areas throughout the City; meaning the Mobility Fee per land uses is the same for all areas within the CRA, the same for all areas within Tier 1 & Tier 2 and for all areas within Tier 3.

The entire City of Maitland is envisioned as a single mobility fee district given the relative compactness of the community and the high likelihood that over the course of normal daily traffic patterns, significant portions of the multi-modal transportation network are utilized to accommodate mobility. Mobility fees collected anywhere within the City maybe spent on multi-modal transportation projects that add capacity anywhere within the City. Establishing the City boundary as a Mobility Fee District ensures the second prong of the dual rational nexus test is met by clearly defining where funds are collected and where they are expended and that the land uses within the City that pay the Fee are provided the benefit of mobility from the multi-modal improvements to be funded within the District.

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DEFINITIONS

The following are definitions of unique terms referenced in the Mobility Fee Technical Study. These definitions will be incorporated into the definitions section of the implementing Mobility Fee Ordinance:

Autonomous vehicle: “Autonomous vehicle” is a motor vehicle that uses artificial intelligence, sensors and global positioning system coordinates to drive itself with or without the active intervention of a human operator.”

Bicycle sharing: “Bicycle sharing” short term bicycle rental available at unattended stations A bicycle-sharing system, public bicycle system, or bike-share scheme, is a short term bicycle rental service in which bicycles are made available for shared use to individuals on a very short term basis. Bike share systems allow people to rent a bicycle at any self-serve bike-station and return it to any other bike station located within the system’s service area.

Car sharing: “Car sharing” Car-sharing is defined as the organized collective use of a dispersed network of shared vehicles available 24-hours, 7 days a week at unattended self-service locations through a membership based service and is available to all qualified drivers in a community with no separate written agreement required each time a member reserves and uses a vehicle.

Community Retail: “Community retail” shall mean individual freestanding retail uses outside of a retail center or a retail center that are between 10,001 square feet and 100,000 square feet in size and are not otherwise specifically included as a separate and distinct land use in the Mobility Fee Schedule.

Complete Streets: “Complete Streets” means a transportation policy and design approach that requires multi-modal transportation improvements to be planned, designed, operated, and maintained to enable safe, convenient and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation and to allow for safe travel by those walking, bicycling or using other forms of non-motorized travel, riding public transportation or driving motor vehicles or low speed electric vehicles. Separate and defined spaces are provided for the various modes of travel planned within the cross-section.

Convenience Market & Gas: “Convenience Market & Gas” means any use which sells fuel to the public or through a membership club and includes land uses with fuel pumps such as, but not limited to, gas station, service station or convenience market. Fuel positions are the total number of motor vehicles that can fuel at one time, with a standard fuel pump typically having two fuel positions. An attached restaurant with drive-thru shall be assessed a separate mobility fee per the Mobility Fee Schedule.

Living Streets: “Living Streets” means a multi-modal transportation facilities based on the Dutch Woonerf concept that treats all modes equally with no defined spaces for any mode. Living Streets typically do not have curbs, pavement markings, traffic control devices, parking spaces, speed limit signs or have posted speed limits 15 MPH or less.

Multi-modal: “Multi-modal” means multiple modes of travel including, but not limited to, walking, bicycling, jogging, rollerblading, kayaking, riding transit, driving a golf cart, low speed electric vehicle or motor vehicle.

Multipurpose Recreational Facility: “Multipurpose Recreational Facility” is an indoor and/or outdoor entertainment venue where impact is measured by the total acreage of the area used to carry out the principal function of the facility and include uses such as, but not limited to, bowling, skating, go-carts, mini-golf, batting cages, bounce houses, trampolines, dance, gymnastics, climbing walls and driving ranges, and not otherwise specified in the Mobility Fee Schedule.



Neighborhood Retail: “Neighborhood retail” shall mean an individual freestanding retail uses outside of a retail center or a retail center that is less than 10,000 square feet in size and are not otherwise specifically included as a separate and distinct land use in the Mobility Fee Schedule.

Person mile of travel (PMT): “Person mile of travel” means the number of miles traveled by each person on a trip in order to account for all miles traveled by motor vehicle, transit, walking and/or bicycling.

Person trip: “Person Trip” means a trip by one person by one or more modes of travel including, but not limited to, driving a motor vehicle or low speed electric vehicle, riding transit, walking, bicycling or paddling.

Regional Retail: “Regional retail” shall mean an individual freestanding retail uses outside of a retail center or a retail center that is greater than 100,000 square feet in size and are not otherwise specifically included as a separate and distinct land use in the Mobility Fee Schedule.

Restaurant with Drive-Thru: “Restaurant with Drive-Thru” means a free standing, out parcel or inline retail center restaurant establishment that prepares and serves any food or drink for consumption on or off premise that has one or more drive-thru lanes, pick-up window accessible by motor vehicle or any drive-in facilities or drive-up facilities where orders are placed while in a motor vehicle.

Ride sharing: “Ride sharing” is where than more than one person rides primarily with unrelated persons using carpools, vanpools or a real-time, on-demand ride sharing service, also know as ridesourcing, accessed through a smartphone application or through an online portal where one-time shared rides are provided on short notice by private motor vehicles.

Streetscape: “Streetscape” includes hardscape elements such as pavers, benches, lighting, trash and recycling receptacles, fountains, seating, shade structure, landscape elements such as canopy and understory trees, shrubs, bushes, grasses and flowers, green infrastructure and architectural structures and projections that provide shade and protection from various weather conditions.

Vehicle miles of travel (VMT): “Vehicle miles of travel” means a unit to measure vehicle travel made by a private motor vehicle, such as an automobile, van, pickup truck, or motorcycle where each mile traveled is counted as one vehicle mile regardless of the number of persons in the vehicle.

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CONCLUSION

The City of Maitland's Mobility Fee is based upon the Goals, Objectives and Policies in the adopted 2030 Comprehensive Development 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 the City of Maitland between 2015 and 2030 and the multi-modal improvements in the adopted Transportation Element. The Transportation Element establishes the framework for a multi-modal transportation system that seeks to promote walking, biking and improved mobility and accessibility to major trip attractors and SunRail through an interconnected multi-modal network. Mobility Fees are one of multiple revenue sources that will be utilized to fund multi-modal transportation improvements consistent with the 2030 Comprehensive Plan.

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Appendix A

2009 National Household Travel Survey Person Miles of Travel



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

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

TABLE 1

12/18/12

INTERRUPTED FLOW FACILITIES						UNINTERRUPTED FLOW FACILITIES					
STATE SIGNALIZED ARTERIALS						FREEWAYS					
Class I (40 mph or higher posted speed limit)						Core Urbanized					
Lanes	Median	B	C	D	E	Lanes	B	C	D	E	
2	Undivided	*	16,800	17,700	**	4	47,400	64,000	77,900	84,600	
4	Divided	*	37,900	39,800	**	6	69,900	95,200	116,600	130,600	
6	Divided	*	58,400	59,900	**	8	92,500	126,400	154,300	176,600	
8	Divided	*	78,800	80,100	**	10	115,100	159,700	194,500	222,700	
						12	162,400	216,700	256,600	268,900	
Class II (35 mph or slower posted speed limit)						Urbanized					
Lanes	Median	B	C	D	E	Lanes	B	C	D	E	
2	Undivided	*	7,300	14,800	15,600	4	45,800	61,500	74,400	79,900	
4	Divided	*	14,500	32,400	33,800	6	68,100	93,000	111,800	123,300	
6	Divided	*	23,300	50,000	50,900	8	91,500	123,500	148,700	166,800	
8	Divided	*	32,000	67,300	68,100	10	114,800	156,000	187,100	210,300	
Non-State Signalized Roadway Adjustments (Alter corresponding state volumes by the indicated percent.)						Freeway Adjustments					
Non-State Signalized Roadways - 10%						Auxiliary Lanes Present in Both Directions + 20,000					
						Ramp Metering + 5%					
Median & Turn Lane Adjustments						UNINTERRUPTED FLOW HIGHWAYS					
Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors		Lanes	Median	B	C	D	E
2	Divided	Yes	No	+5%		2	Undivided	8,600	17,000	24,200	33,300
2	Undivided	No	No	-20%		4	Divided	36,700	51,800	65,600	72,600
Multi	Undivided	Yes	No	-5%		6	Divided	55,000	77,700	98,300	108,800
Multi	Undivided	No	No	-25%							
-	-	-	Yes	+ 5%		Uninterrupted Flow Highway Adjustments					
One-Way Facility Adjustment Multiply the corresponding two-directional volumes in this table by 0.6						Lanes	Median	Exclusive left lanes	Adjustment factors		
						2	Divided	Yes	+5%		
						Multi	Undivided	Yes	-5%		
						Multi	Undivided	No	-25%		
BICYCLE MODE² (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)						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.					
Paved Shoulder/Bicycle Lane Coverage						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.					
	B	C	D	E		³ Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.					
0-49%	*	2,900	7,600	19,700		* Cannot be achieved using table input value defaults.					
50-84%	2,100	6,700	19,700	>19,700		** 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.					
85-100%	9,300	19,700	>19,700	**		Source: Florida Department of Transportation Systems Planning Office www.dot.state.fl.us/planning/systems/sm/los/default.shtm					
PEDESTRIAN MODE² (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							

Appendix C

Funded Capital Improvements

APPENDIX C. FUNDED MULTI-MODAL IMPROVEMENTS

Project Name	Project Description	Cost	Project Funding/Notes	Person Miles of Capacity Added
Independence Lane Extension	Multi-Modal Facility Improvements	\$800,000	Developer Funded	2,500
Independence Lane Festival Street	Multi-Modal Facility Improvements	\$1,200,000	Developer / City Funded	1,500
Maitland Center Parkway Loop	Design/Construction of Maitland Center Parkway Loop	\$5,136,000	Developer Funded	21,680
N. Keller Road Improvements	Feasibility/Design/Construction Streetscape and Roadway	\$2,200,000	Gen. Fund - \$50,000 SAD* - \$2,150,000	4,905
Bike Trails Lake Lucien/Lake Harvest	Design/Construction of Bike Trails from I-4 to Fennell St.	\$2,650,000	Gen. Funds - \$50,000 SAD* - \$2,600,000	20,000
Maitland/Eatonville Bike Wayfinding Signing	Install guide signs for bike paths citywide	\$265,000	Transportation Impact Fees and Grants	1,000
S. Lake Sybelia Drive (Boynton Road to Cranes Court)	Sidewalk Construction	\$110,000	General Fund	1,000
Thistle Lane (Mohawk Trail and Mohican Trail)	Sidewalk Construction	\$45,000	General Fund	1,000
Choctaw Trail (Arapaho Trail to Dommerich Drive)	Sidewalk Construction	\$250,800	General Fund	2,000
Kyle Drive (Horatio Ave to Minnehaha Circle)	Sidewalk Construction	\$55,000	General Fund	500
Mohican Trail & Choctaw Trail	Sidewalk Construction	\$382,300	General Fund	2,000
Tuscarora Trail	Sidewalk Construction	\$660,000	General Fund	2,000
Florida East Coast Railroad	Preliminary Design	\$200,000	General Fund	--
Maitland Blvd. (SR 414)	Widen to 6-lanes: I-4 to Maitland Ave	\$13,163,000	FDOT	27,272
Total		\$27,117,100		87,357

Appendix D

Unfunded Capital Improvements

Appendix D. UNFUNDED MULTI-MODAL IMPROVEMENTS

Project Name	Project Description	Cost	Person Miles of Capacity Added
Maitland Center Improvements	Multi-Modal Facility Improvements	\$300,000	1,000
Downtown Master Plan	Multi-Modal Capacity Improvements	\$5,500,000	11,000
Keller Road: from Fennell to Lucien	ROW acquisition and widen to 4 lane boulevard with multi-modal improvements	\$5,700,000	21,680
Seneca/Thistle I/S Improvements	Intersection Improvements	\$450,000	980
Sandspur Rd at Maitland Ave	Intersection Improvements	\$225,000	980
Horatio Ave at Maitland Ave	Intersection Improvements	\$225,000	980
Future Bicycle and Pedestrian Facilities	10 Miles per adopted Mobility Fee Maps	\$3,750,000	50,000
Future Sidewalk Connections	New Pedestrian Facilities	\$500,000	4,000
Future Bicycle Connections	New Bicycle Wayfinding Facilities	\$250,000	1,000
Mobility Tier One Improvements	Multi-Modal Facility Improvements	\$1,000,000	8,000
Car, Ride & Bicycle Sharing , including Autonomous Vehicles	Transportation Mobility Provisions to facilitate accessibility to SunRail	\$2,250,000	11,600
Downtown Parking Facility	100 Space Parking Facility	\$1,800,000	2,400
Intersection Improvements	Major Road Intersection Improvements	\$1,500,000	5,000
Total		\$23,450,000	118,620

Source: Projects are based on unfunded capital needs from the adopted City of Maitland Transportation Element and Capital Improvements Element, Capital Improvements Program and the MetroPlan Long Range Transportation Plan. Bicycle Facilities may consist of in-street bike lanes, multi-use paths, marked and signed bike-ways, sharrow pavement markings and restriping in conjunction with a roadway resurfacing project. Roadway and Intersection cost obtained from City of Maitland Public Works. Intersection cost vary widely based on needed improvements, right-of-way, utilities and stormwater. Cost projections can vary from \$250,000 to \$1,500,000 per intersection. The intersection improvements cost are estimated to fund between 2 to 4 intersections. The intersection influence area is assumed to be 1/10 of a mile in length with new turns lanes measuring between 300 and 600 feet in length. Pedestrian and bicycle facilities average cost of \$250,000 per mile and \$500,000 per mile for multi-use paths and trails is based on recent cost data from Orange County, City of Maitland and FDOT. Car, ride and bicycle sharing and use of autonomous vehicles are intended to provide access to SunRail. Car, ride and bicycle sharing and autonomous vehicles can be provided by various vendors over a 15 year period. Allocations can range from \$20,000 to \$30,000 a year for car, ride and bicycle sharing programs and use of autonomous vehicles. The time period is for 15 years. Sharing economy technologies are constantly evolving. The car and bicycling sharing program capacity is based on the maximum available capacity provided by SunRail service assuming that 2 train cars are provided. The car and bicycle sharing are intended to facilitate accessibility to SunRail in order to maximize utilization of the transit capacity provided by SunRail. The capacity for parking garages is based upon the premise that creating a park once environment that potentially reduces the amount of time motorist drive around on the street network in search of on and off-street parking spaces. The parking garage makes capacity available by reducing the number of vehicular trips taken on surrounding roads in search of parking, thus making roadway capacity available that otherwise would have been consumed. The capacity was derived based on the assumption of parking turn over on average every two hours (typical length of parking meter time) and utilizing two road for access and circulation versus circling around a block and impacting four or more roads.

Appendix E

Traffic Data Report

Appendix E. TRAFFIC DATA REPORT

					Dist	Capacity	Volumes		
Road Name	From	To	Functional	LN	mi	Daily	Daily	VMT	VMC
E Sybellia Way	US 17-92	Maitland Ave	Collector	2	0.14	14,040	2,427	340	1,966
Forest City Rd	Lake Ave / Kennedy Blvd	Maitland Blvd	Min Art	4	1.53	39,800	23,500	35,955	60,894
Hope Road	Wymore Rd	SR 414 - Hope Rd Connector	Collector	2	0.14	14,040	4,500	630	1,966
Horatio Ave	Orlando Ave	Thistle Lane	Min Art	4	1.12	35,820	30,000	33,600	40,118
Horatio Ave / Howell Branch Rd	Thistle Lane	Temple Trail	Min Art	4	0.61	35,820	33,500	20,435	21,850
Interstate 4	Seminole County Line	Maitland Blvd	Prin Art - Expy	6	0.65	123,300	155,500	101,075	80,145
Interstate 4	Maitland Blvd	Kennedy Blvd	Prin Art - Expy	8	0.85	166,800	180,000	153,000	141,780
Keller Rd	Kennedy Blvd	Maitland Summit Blvd	Collector	2	1.28	15,930	6,400	8,192	20,390
Keller Rd	Maitland Summit Blvd	Seminole County Line	Collector	2	0.25	14,040	9,044	2,261	3,510
Kennedy Blvd / Lake Ave	Wymore Rd	Orlando Ave	Collector	2	3.53	14,040	11,500	40,595	49,561
Kewanee Trail	Tuscarora Trail	Derbyshire Rd	Collector	2	0.41	14,040	2,900	1,189	5,756
Lake Destiny Road	Seminole County Line	Eaton St	Collector	2	1.75	15,930	2,800	4,900	27,878
Lucien Way	Lake Destiny Road	Keller Rd	Collector	2	0.8	14,040	2,286	1,829	11,232

Appendix E. TRAFFIC DATA REPORT

Road Name	From	To	Functional	LN	Dist mi	Capacity Daily	Volumes Daily	VMT	VMC
Maitland Ave	Orlando Ave	Seminole County Line	Min Art	4	1.35	30,420	22,000	29,700	41,067
Maitland Blvd	Forest City Rd	Maitland Summit Blvd	Min Art	6	0.88	59,900	48,500	42,680	52,712
Maitland Blvd	Maitland Summit Blvd	Lake Destiny Dr	Min Art	6	0.74	59,900	71,250	52,725	44,326
Maitland Blvd	Lake Destiny Dr	Wymore Rd	Min Art	6	0.46	39,800	38,500	17,710	18,308
Maitland Blvd	Wymore Rd	Maitland Ave	Min Art	4	1.28	39,800	57,000	72,960	50,944
Maitland Blvd	Maitland Ave	Orlando Ave	Min Art	4	0.42	39,800	29,000	12,180	16,716
Maitland Center Parkway	Keller Rd	Lake Destiny Rd	Collector	4	0.52	30,420	5,900	3,068	15,818
Maitland Summit Boulevard	Pembroke Dr	Keller Rd	Collector	4	0.54	30,420	6,600	3,564	16,427
Orlando Ave	Park Ave	Kennedy / Lake Ave	Prin Art	6	0.47	59,900	39,000	18,330	28,153
Orlando Ave	Kennedy / Lake Ave	Maitland Ave	Prin Art	6	0.27	59,900	52,000	14,040	16,173
Orlando Ave	Maitland Ave	Horatio Ave	Prin Art	6	0.37	59,900	41,750	15,448	22,163
Orlando Ave	Horatio Ave	Maitland Blvd	Prin Art	6	0.92	59,900	31,750	29,210	55,108

Appendix E. TRAFFIC DATA REPORT

Road Name	From	To	Functional	LN	Dist mi	Capacity Daily	Volumes Daily	VMT	VMC
Packwood Ave	Swoope Ave	US 17-92	Collector	2	0.1	14,040	2,829	283	1,404
Pembrook Drive	Maitland Summit Blvd	Keller Rd	Collector	2	0.36	15,930	16,500	5,940	5,735
Sandspur Road	Wymore Rd	Maitland Ave	Collector	2	1.25	14,040	6,400	8,000	17,550
Tuscarora Trail	Temple Trail	Brookside Rd	Collector	2	0.58	14,040	2,100	1,218	8,143
Temple Trail	Howell Branch Rd	Tuscarora Trail	Collector	2	0.69	14,040	4,400	3,036	9,688
Wymore Rd	Kennedy Blvd	Maitland Blvd	Collector	2	0.88	15,930	6,122	5,388	14,018
Wymore Rd	Maitland Blvd	Seminole County Line	Collector	2	0.65	15,930	7,289	4,738	10,355

Appendix F

2009 National Household Travel Survey Travel Length



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:

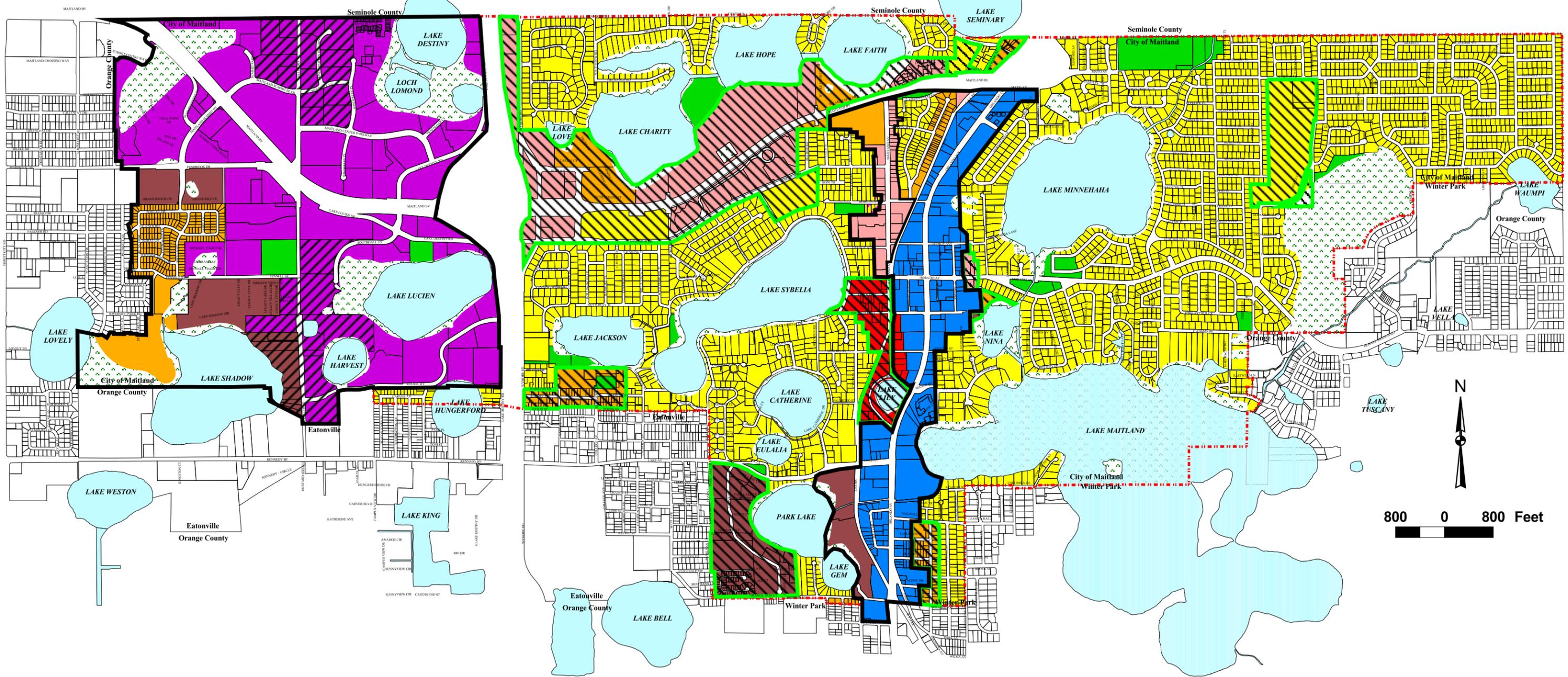
- Average trip length is calculated using only those records with trip mileage information present.
- 1990 person and vehicle trips were adjusted to account for survey collection method changes (see 2001 Summary of Travel Trends Appendix 2).
- PMT is Person Miles of Travel. VMT is Vehicle Miles of Travel.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

Map A

Mobility Tiers

“Future Land Use Map Series – Map 1-C, Year 2030”

**Future Land Use Map Series - Map 1-C
Year 2030
MOBILITY TIERS
MAITLAND, FLORIDA**



Legend

-  Mobility Tier 1
-  Mobility Tier 2 - Other Non Single Family Residential
-  Mobility Tier 3 - Remaining Single Family Residential

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Conservation areas depicted on the Future Land Use Map are not intended for official regulatory purposes and shall require site specific analysis and protection measures consistent with the Conservation Element of the City of Maitland's Comprehensive Development Plan.

Please note: Public/Semi-Public Uses Allowable as a Permitted Conditional Use or Planned Development In Applicable Land Use Districts, Based on Location Criteria and Size of Development.

*Source: City of Maitland Community Development Department, October 2004, 2010
Orange County Property Appraiser GIS-2004*

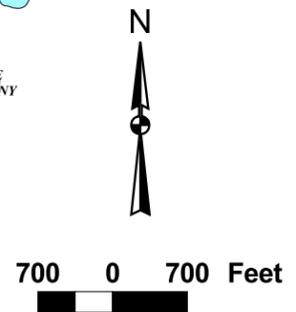
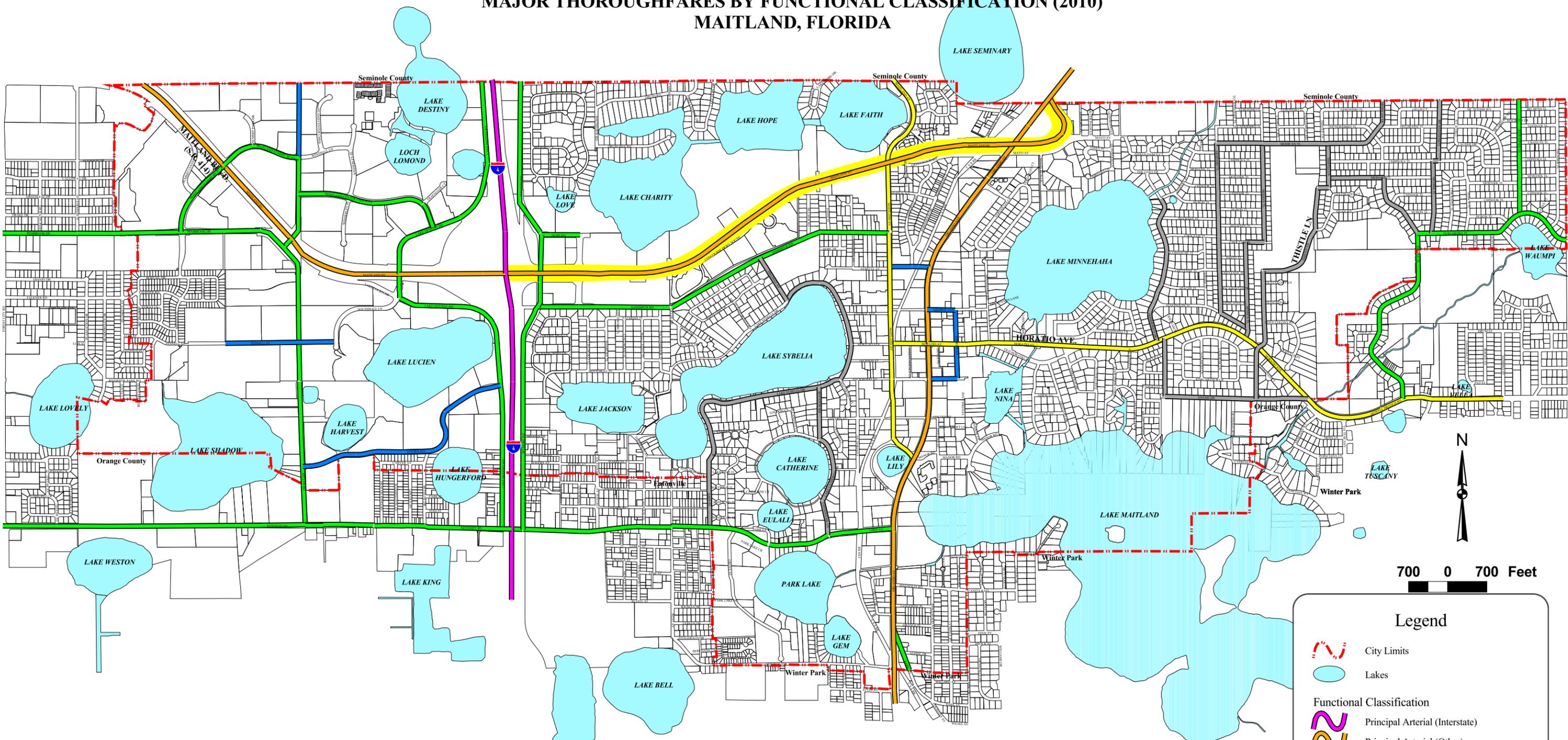


Map B

2010 Roadway Functional Classification

“Future Land Use Map Series – Map 3, Year 2030”

Future Land Use Map Series - Map 3
Year 2030
MAJOR THOROUGHFARES BY FUNCTIONAL CLASSIFICATION (2010)
MAITLAND, FLORIDA



Legend

- City Limits
- Lakes
- Functional Classification**
- Principal Arterial (Interstate)
- Principal Arterial (Other)
- Minor Arterial
- Collector (Federal)
- Collector (City)
- Local Collector (City)
- Long Term Mobility Management System

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*Source: City of Maitland Community Development Department, October 2004, 2010
 Orange County Property Appraiser GIS-2004*



Map C

2030 Mobility Plan

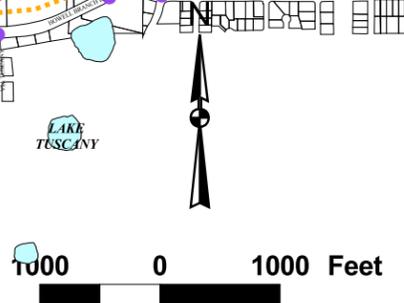
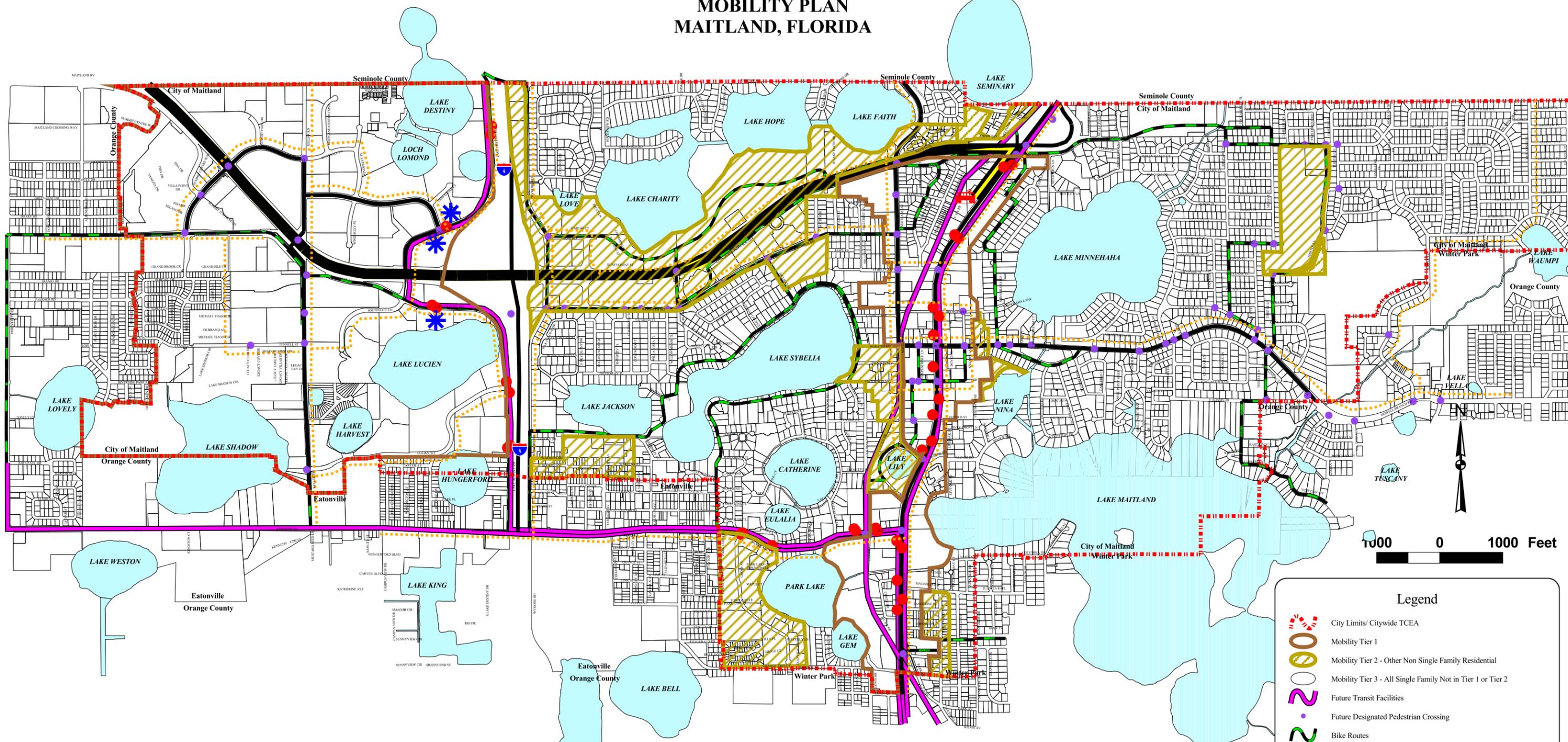
“Future Land Use Map Series – Map 50, Year 2030”

Future Land Use Map Series - Map 50

Year 2030

MOBILITY PLAN

MAITLAND, FLORIDA



Legend

- City Limits/ Citywide TCEA
- Mobility Tier 1
- Mobility Tier 2 - Other Non Single Family Residential
- Mobility Tier 3 - All Single Family Not in Tier 1 or Tier 2
- Future Transit Facilities
- Future Designated Pedestrian Crossing
- Bike Routes
- Potential Rail/ Bus Connection corridor from SunRail Station to West
- Bus Stops
- Busstop Shelters
- Sunrail Station
- 2 Lane Roadways
- Roadways Greater Than 2 Lanes
- Sidewalks

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*Source: City of Maitland Community Development Department, October 2004, 2010
Orange County Property Appraiser GIS-2004*



Map D

2030 Pedestrian Plan

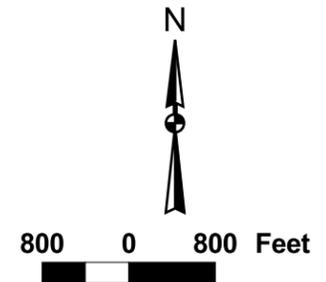
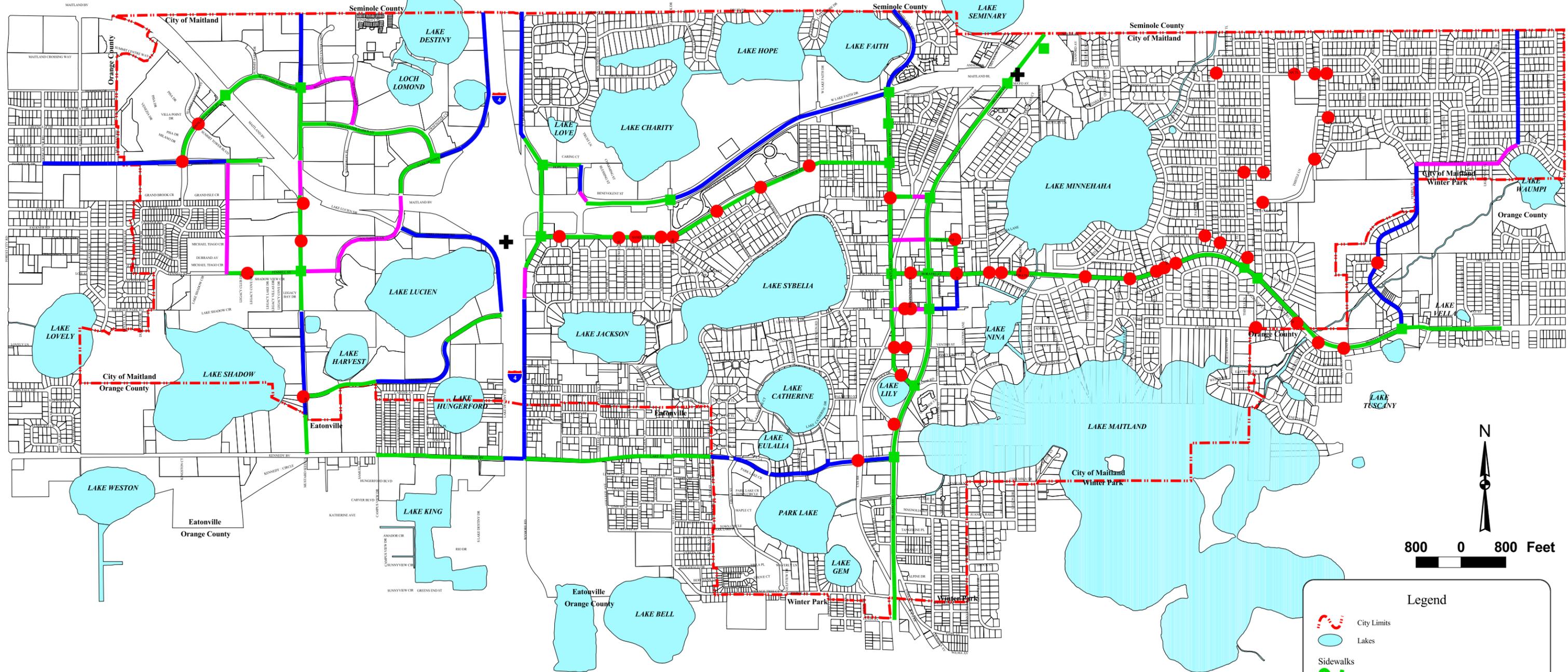
“Future Land Use Map Series – Map 5M2, Year 2030”

Future Land Use Map Series - Map 5M2

Year 2030

FUTURE SIDEWALK, WALKWAYS and PEDESTRIAN CROSSINGS

MAITLAND, FLORIDA



Legend

- City Limits
- Lakes
- Sidewalks**
 - BOTH SIDES
 - ONE SIDE
 - Potential Future Sidewalks
- Future Designated Pedestrian Crossing**
 - Signalized Intersection, Ped Crossing and Striped Crosswalk
 - Striped Crosswalk
 - Pedestrian Bridge
 - Parks, Schools and Attractions

This map is prepared for planning purposes only and is not a survey. Every effort has been made to produce and publish the most accurate information possible. No warranties, expressed or implied are provided for the data herein, its use or its interpretation. Contact the City of Maitland Community Development Department for all Bike Route/ Pedestrian Path System Verification.

Source: City of Maitland Community Development Department, October 2004, 2010
Orange County Property Appraiser GIS-2004

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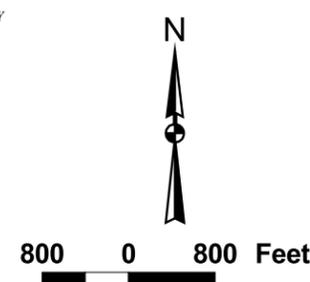
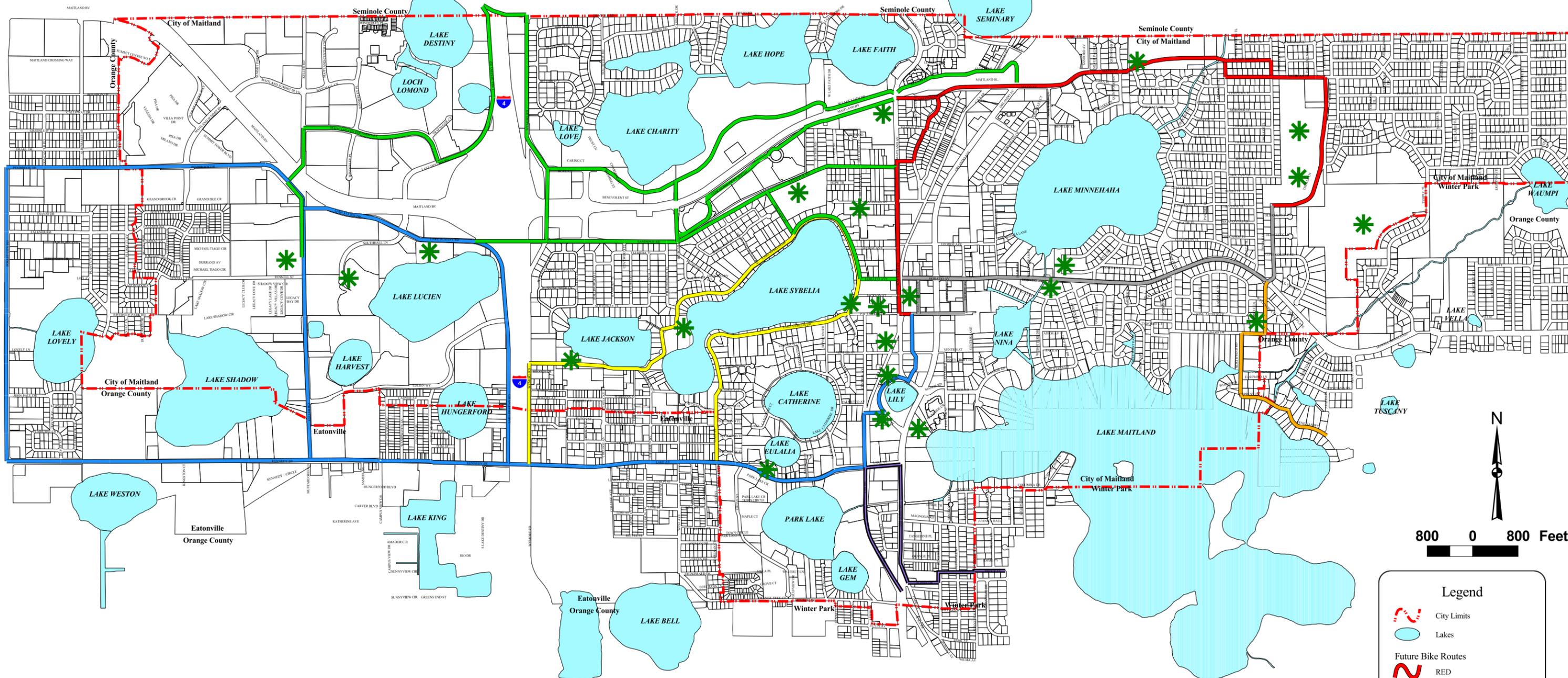


Map E

2030 Bicycle Plan

“Future Land Use Map Series – Map 5M1, Year 2030”

Future Land Use Map Series - Map 5M1
Year 2030
FUTURE BICYCLE FACILITIES
MAITLAND, FLORIDA



Legend

- City Limits
- Lakes
- Future Bike Routes**
- RED
- WHITE
- GREEN
- ORANGE
- YELLOW
- BLUE
- PURPLE
- Parks, Schools and Attractions



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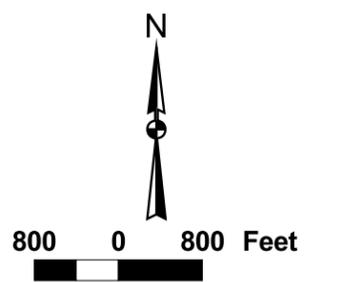
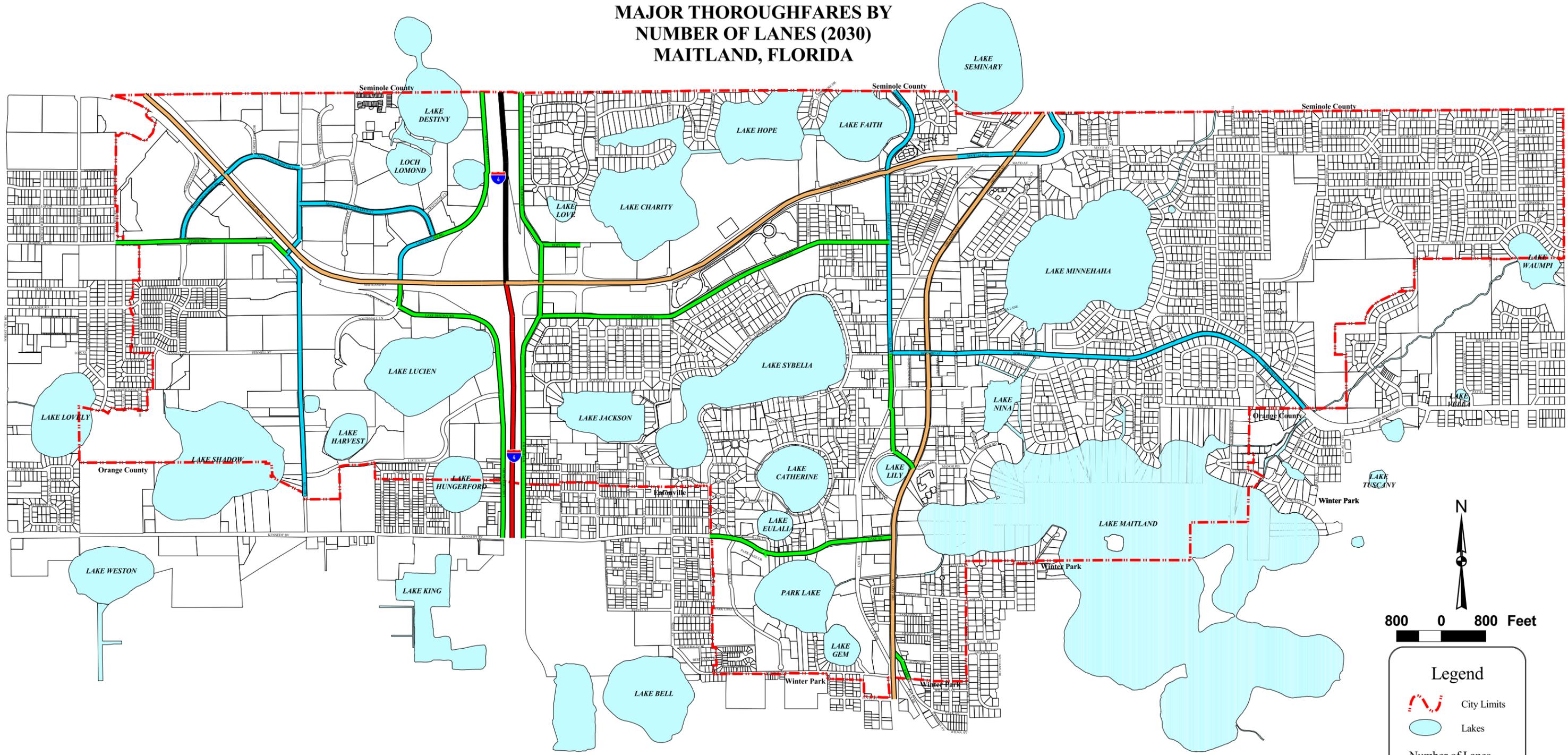
Source: City of Maitland Community Development Department, October 2004, 2010
 Orange County Property Appraiser GIS-2004

Map F

2030 Planned and Programmed Roadway Improvements

“Future Land Use Map Series – Map 5H, Year 2030”

**Future Land Use Map Series - Map 5H
Year 2030
MAJOR THOROUGHFARES BY
NUMBER OF LANES (2030)
MAITLAND, FLORIDA**



Legend

- City Limits
- Lakes

Number of Lanes

- 2
- 4
- 6
- 8
- 6+4

*NOTE: All other roadways inside the city limits are the responsibility of the City of Maitland.
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*Source: City of Maitland Community Development Department, October 2004, 2010
Orange County Property Appraiser GIS-2004*

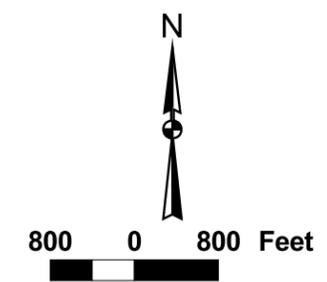
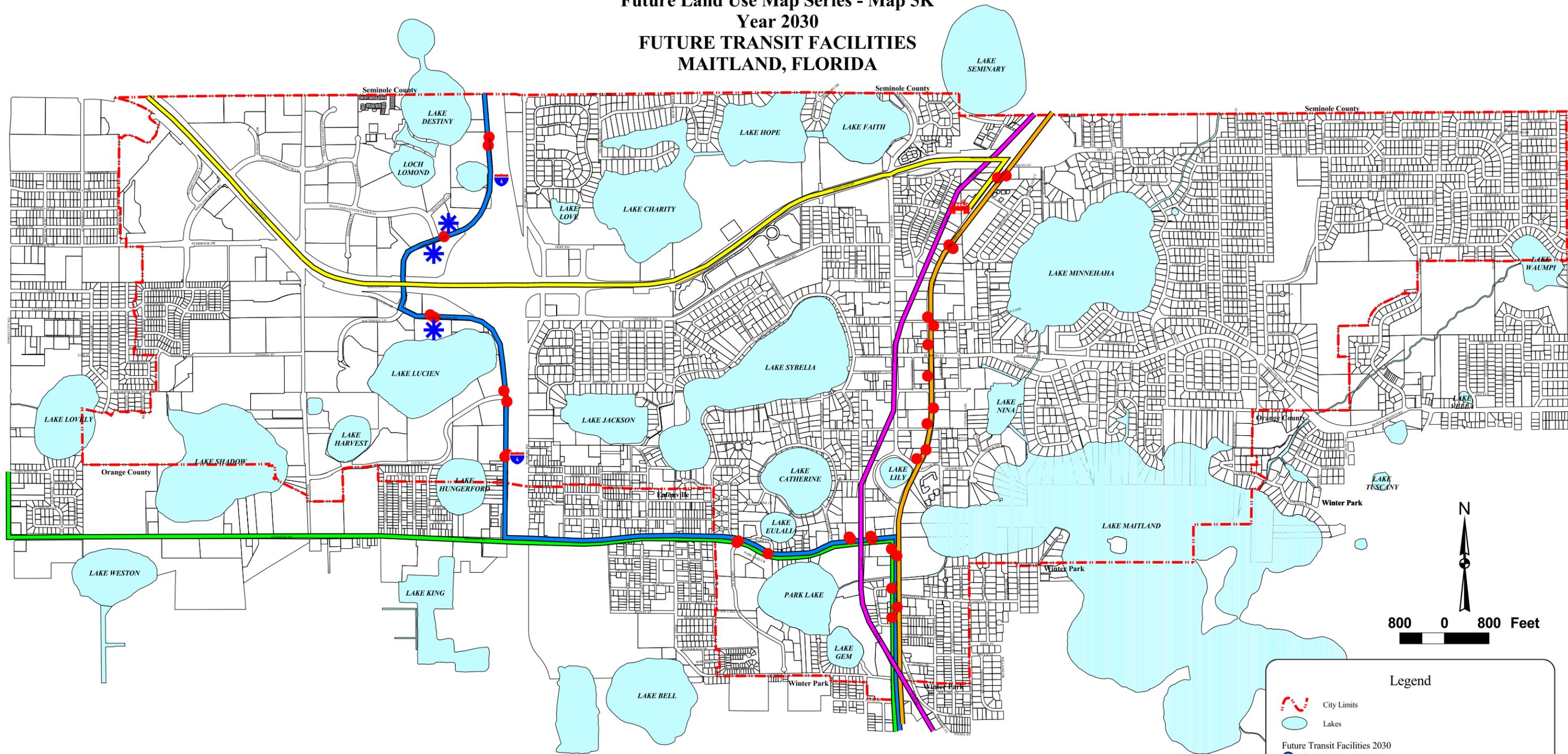


Map G

2030 Transit Plan

“Future Land Use Map Series – Map 5K, Year 2030”

Future Land Use Map Series - Map 5K
Year 2030
FUTURE TRANSIT FACILITIES
MAITLAND, FLORIDA



Legend

- City Limits
- Lakes
- Future Transit Facilities 2030**
- Link 1
- Link 9
- Link 102
- Sun Rail
- Sunrail Station
- Potential Rail/ Bus Connection corridor from SunRail Station to West
- Bus Stops
- Busstop Shelters

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Source: City of Maitland Community Development Department, October 2004, 2010
 Orange County Property Appraiser GIS-2004

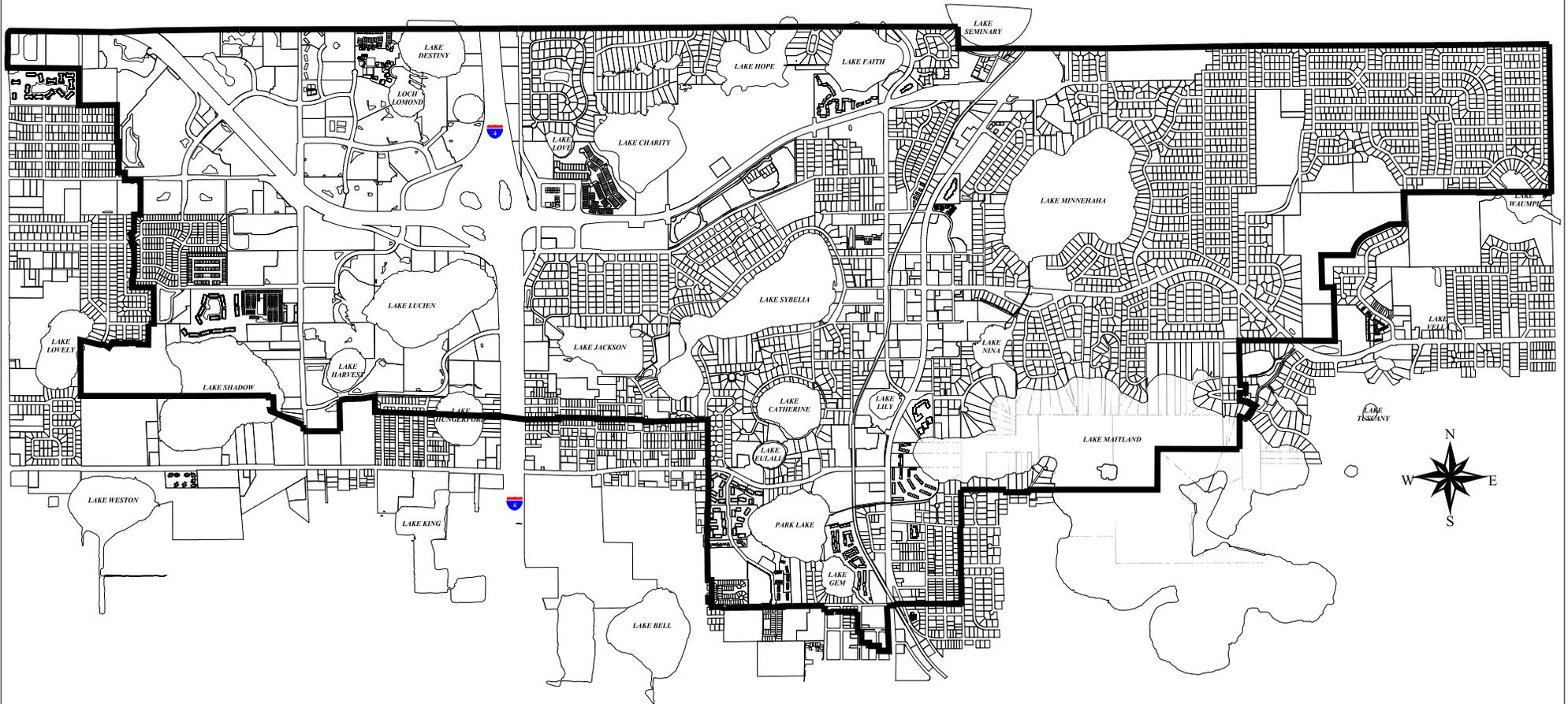


Map H

Mobility District

“Future Land Use Map Series – Map 1-CA, Year 2030”

**Future Land Use Map Series - Map 1-CA
Year 2030
MOBILITY FEE DISTRICT MAP
MAITLAND, FLORIDA**

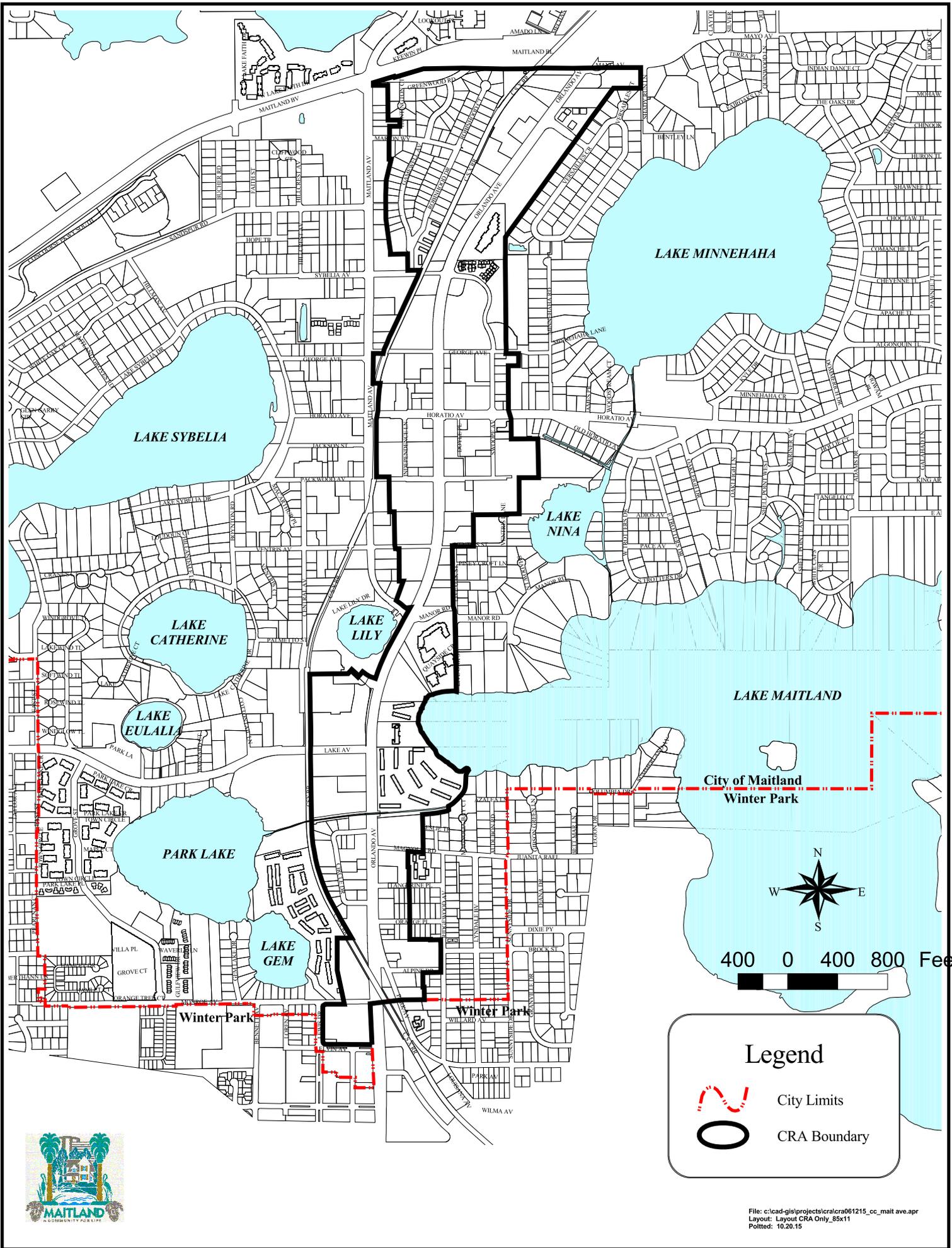


LEGEND

 MOBILITY FEE DISTRICT

Map I

Community Redevelopment Area



Legend

-  City Limits
-  CRA Boundary



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